BOReal Ecosystem-Atmosphere Study (BOREAS) biometry and auxillary sites: overstory and understory data

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Abstract

As part of BOREAS (BOReal Ecosystems–Atmosphere Study), close to 100 sites were established across a transect spanning the boreal forest of Manitoba and Saskatchewan. Most of the sites are concentrated in two major study areas near the boreal forest's northern (Nelson House, Manitoba) and southern (Prince Albert, Saskatchewan) limits. Additional sites have been placed to extend the transect as far southwest as Rosthern, Saskatchewan, and as far northeast as Gillam, Manitoba.

This report—second of a series of three—provides details regarding overstory and understory vegetation at the sites. The first section of the report discusses field and analysis methods. The second section discusses overstory data, providing estimates of stand basal area, stem density, volume, and above-ground biomass on both a plot and site basis, and detailed information on tree species, DBH, canopy class, tree ring counts, sapwood and bark thickness, and crown dimensions for individual trees. The final section presents understory vegetation cover data, listing species categorized as shrubs, herbs, mosses, and lichens. The other two reports in the series provide details regarding site locations, and data covering soils and detritus.

Preface

As a contribution to the Boreal Forest Transect Case Study (BFTCS) and the BOReal Ecosystem–Atmosphere Study (BOREAS), the Canadian Forest Service (CFS) has prepared three reports describing basic forest characteristics at close to 100 sites in a transect spanning the boreal forest from Northern Manitoba to southern Saskatchwean. The purpose of the work carried out by CFS is two-fold. The first objective was to collect data relevant to ongoing CFS work in ecological monitoring and carbon budget modeling. The second objective was to provide information on basic forest characteristics, for use by other project scientists in BFTCS and BOREAS. The infomration collected includes basic stand data for comparison with remotely sensed data, and input data for various forms of modeling (e.g. distributed hydrological modeling, forest growth, etc.). As a result, the reports reflect these two goals: analysis of data for a specific CFS research project, and provision of a detailed data base.

The CFS work has been divided intro three basic reports. This first document, *Biometry and auxiliary sites: locations and descriptions*, provides information on the site locations and gives descriptions of the sites, which ensures that future researchers will be able to locate the sites for comparative studies.

The second report, *Biometry and auxiliary sites: overstory and understory*, summarizes the data collected on the vegetation at each of the study sites. The overstory section provides information on individual trees (species, height, DBH, and evidence of poor tree health) as well as values calculated at the stand level, such as the basal area, stem density, total stem volume, and total biomass density. The understory section lists species by percentage cover on each of the plots within a site, as well as the average cover for all plots at a site.

The last report in the series is *Biometry and auxiliary sites: soils and detritus data*. It provides more detailed information on two sets of data collected at the study sites: soils descriptions (both landform and horizon characteristics), and duff and woody debris (distribution by size and species, as well as mass estimates). The soil descriptions include the results of various laboratory tests, such as carbon, particle size, density, and nutrients. Estimates of total soil carbon are provided. Duff measurements include mean depths, densities, and organic content. Both duff and woody debris measurements are used to estimate carbon totals.

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Acknowledgements:

In a field-based project of this size, many people share the credit for successfully completing the work. Although the authors are solely responsible for the content of this series of reports, the results have depended on the efforts of a large number of people. This work has involved a number of stages: initial site selection, involving many people from the BOREAS project; discussions regarding data needs for the overall BOREAS community and development of methodology to meet those needs; collection of the field data; analysis of field data; preparation and laboratory analysis of samples obtained in the field; documentation of procedures; and, finally, preparation of the reports.

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[1] Indicates non-Canadian Forest Service personnel.

Introduction

The Boreal Forest Transect Case Study (BFTCS), as discussed by Price and Apps (1995), is a multi-disciplinary ecological study that focuses around a 1000 km transect crossing the climatically-sensitive boreal forest biome. The transect is oriented along an ecoclimatic gradient, ranging from agricultural grasslands in southern Saskatchewan through the boreal forest to tundra in northern Manitoba. The BFTCS has been selected as one of a number of transect studies in various global ecosystems, under the guidance of the Global Change and Terrestrial Ecosystems (GCTE) Core Project of the International Geosphere-Biosphere Programme (IGBP) (Koch *et al*, 1995).

BFTCS was originally proposed by the Canadian Forest Service (CFS) as an extension to the BOReal Ecosystem-Atmospheric Study (BOREAS), to address longer term issues of global change in the boreal zone. BOREAS is a major international field experiment integrating land surface climatology, tropospheric chemistry, and terrestrial ecology. For BOREAS, two major study areas have been established near the boreal forest's northern (Nelson House, Manitoba) and southern (Prince Albert, Saskatchewan) limits. The BFTCS transect extends beyond these core regions, to the grasslands southwest of Prince Albert and the tundra north of Gillam, Manitoba. Observation of the BOREAS sites is being performed from the ground, from the air, and from space, and combined with an extensive modelling program. The aim of the project is to improve understanding of the biological and physical processes and states that govern the exchanges of energy, water, heat, carbon, and trace gases between boreal forest ecosystems and the atmosphere. Particular reference is given to those processes and states that may be sensitive to global change. The summer of 1994 was a major period of detailed field work. An overview of the project and preliminary results of the 1994 work are described in Sellers *et al*. (1995).

BOREAS entails measurements at a variety of temporal and spatial scales. Within the project, site were selected to meet varying data needs, and are organized in a hierarchical fashion based on the type of observations being made. Three distinct site classes can be described. The first class is sites with detailed mass and energy exchange observations carried out using instrumented towers. These sites are categorized as "tower flux" or "TF" sites. The second class of sites provide less sophisticated tower access to the forest canopy, for biophysical measurements and sampling. These sites are labelled "terrestrial ecology" or "TE" sites. The third class of sites represent the lowest level of ground-based observation, with no special provision for instrumentation. This last class is intended to provide additional sites for verification of various remote sensing data. These sites are described as "auxiliary sites" (focused within the limits of the major study areas) or "transect sites" (more generally spread across the boreal forest, following the BFTCS transect from southwest of Prince Albert, Saskatchewan, to Gillam, Manitoba).

As a contribution to BFTCS and BOREAS, CFS has prepared three reports describing basic forest characteristics at close to 100 sites in the transect. The field data in these reports were collected during the summers of 1993 and 1994. The purpose of the work carried out by CFS is two-fold. The first requirement is to collect data relevant to ongoing CFS work in ecological monitoring and carbon budget modelling. The work will be used in validating portions of the Canadian Forest Sector carbon budget model used in Kurz and Apps (1995). The second requirement is to provide information on basic forest characteristics, for use by other project scientists in BFTCS and BOREAS. These needs include basic stand data for comparison with remotely-sensed data, and input data for various forms of modelling (e.g. distributed hydrological modelling, forest growth, etc.). As a result, the reports reflect these two goals: analysis of data for a specific research project (CFS work), plus provision of a detailed database for use as a resource by people with differing needs.

The CFS reports have been divided on the basis of related needs. The first document, *Biometry and Auxiliary Sites: Locations and Descriptions*, provides information on the site locations and gives cursory descriptions of the sites visited. One requirement is that the site locations be well-documented, so that future researchers can relocate them if desired. This report, *Biometry and Auxiliary Sites: Overstory and Understory*, summarizes the data collected on the vegetation at each of the study sites. The data are divided into two main sections. The section on the overstory provides information on individual trees (species, height, dbh, and evidence of poor tree health) as well as values calculated at the stand level, such as the basal area, stem density, total stem volume, and total biomass density. The understory section lists species by percentage cover on each of the plots within a site, as well as the average cover for all plots at a site. Understory species are listed in four classes: shrubs, herbs, mosses, and lichens. These sections are preceded by a detailed discussion of the methodology used, along with some comparative analysis. The last report in the series, *Biometry and Auxiliary Sites: Soils and Detritus Data*, provides more detailed information on two sets of data collected at the study sites: soils descriptions (both landform and horizon characteristics) and woody debris (distribution by size and species, as well as mass estimates).

Using this Report

This report is divided into three sections. This first section provides a discussion of the sampling and analysis methods used. It includes general information on field techniques, along with some general analysis and a description of the data contained in the other two sections of the report. Section two provides detailed data on the overstory for each site. Section three provides tabulations of understory observations for each site. Within these two sections, sites are organized into four groups: Tower sites, Northern Study Area (NSA) Auxiliary sites, Southern Study Area (SSA) Auxiliary sites, and Transect sites.

Site codes in this report are based on the Canadian Forest Service identifiers used in the first report in this series: *Biometry and Auxiliary Sites, Locations and Descriptions*. BOREAS investigators usually identify most of the sites using the BOREAS Information System (BORIS) identifiers. Table 1 provides a cross-reference list of the CFS site codes and BORIS identifiers for the sites included in this report. For further details regarding the BORIS identifier terminology, refer to the *Locations and Descriptions* report.

The site selection procedure is described in detail in the *Locations and Descriptions* report. Initial site selection was based on air photographs and forest cover maps. This information allowed identification of stands showing reasonable homogeneity within a stand of no less than roughly 100(100 m. Subsequent aerial and ground observation provided additional information.

Each stand selected for biometry was assigned a site code (explained below). If a particular site exhibited increased likelihood of variability (e.g. an uneven-aged mixedwood stand), then the stand was spatially subdivided into sampling strata. This was denoted by appending suffixes of a/b/c to the site code (explained below). While generally this was done based on information from air photographs, occasionally it was done in the field when it was observed that conditions had changed since the air photograph had been taken. Within each stand, one or more points were selected in the field. These points provided a centre for overstory and understory sample plot placement, with various measurements being carried out over a 15-20 m radius of the central point. Generally, the different sampling points were located within 100-200 m of each other, but distances can range from less than 100 m to more than 500 m. The *Locations and Descriptions* report provides instructions on finding sampling points (plots), along with maps of each site showing forest cover map information and plot locations.

In this report, the following terminology is used to describe the site/stand sampling hierarchy:

Site: a stand identified and selected for sampling purposes.

Stratum: a sampling stratification. this usually coincides with the usage of suffixes a/b/c: stratum 1 of site MW-1 is called MW-1a; stratum 2 is called MW-1b, etc. Multiple strata occur when the initially-identified stand was subdivided, as discussed above. This should not be confused with the use of "stratum" to indicate layers within a plant community, which is the common meaning in ecology (as opposed to forestry). Cauboue *et al.* (1996) list both meanings.

Plot: a fixed geographical sampling point within a stratum or stand, where measurements of overstory and understory characteristics are taken. Plot numbers were assigned within each site. If a site has more than one stratum, plot numbers may be spread across strata - e.g. plots 1 and 3 in stratum 1 (site XXX-Na), and plot 2 in stratum 2 (site XXX-Nb). A sample plot can be a variable area (e.g. an overstory sample using point-sampling methods), or a fixed area (e.g a 5 m by 5 m grid for understory vegetation).

At each plot, an overstory vegetation sample was selected using either point-sampling methods or a fixed area plot. (Details are discussed later.) Each selected tree was assigned a unique number within the sample for that point, and species, DBH, dead/alive status, health, and canopy class (explained below) were recorded. From this sample, trees were selected representing dominant, co-dominant, and suppressed portions of the canopy. This sub-sample was cored for age determination, sapwood thickness and number of rings, and bark thickness. Tree height, height to the base of the live crown, and crown diameter were also estimated. Understory sampling was based on fixed-area plots, usually 5 x 5 m, and consisted of species identification and percentage cover. These values were recorded for three height layers in the understory.

Table 1: Coss-reference from BORIS ID to Canadian Forest Service (CFS) site identifiers

Northern study area tower and auxiliary sites (MAN)		**Southern study area tower and auxiliary sites** (SASK)		**Transect sites**	
BORIS ID	CFS code	BORIS ID	CFS code	BORIS ID	CFS code
				(SASK)	
Q1V2M	MW-2	B9B7A	AIM-13		
S9P3A	AIH-14	C3B7X	TE-OA		
T0P5M	MW-1	D0H4X	TF-YA	A1A	B-AM-1
T0P7S	BMM-8	D0H6S	BMM-1	A2P	NI-J-1
T0P8S	BMH-7	D6L9A	ADH-2	H1E4S	M-BD-1
T2Q6A	TE-OA	D9G4A	AMH-16	H2D1M	PA-M-1
T3R8X	TE-OBS	D9I1A	AIH-3	H2D1S	PA-BM-1
T3U9S	BIM-12	D9I1M	TE-MW	H3D1M	PA-M-2
T4U5A	AIM-1	E7C3A	AMM-12	O1P	F-JM-1
T4U91-S	BIM-1	F1N0M	Jail House	O2S	F-BM-1
T4U92-S	BIH-1	F5I6P	JIH-4	O3S	F-BD-1
T5Q7S	BMH-6	F7J0P	JMH-5	O5P	F-JM-2
T6R5S	BIH-9	F7J1P	JMH-A2	O6P	F-JD-1
T6T6S	BIL-2	F7J1P	JMH-A1	O7S	F-BM-2
T7Q8X	TE-OJP	F8L6X	TF-YJP		
T7R9S	BDH-3	G1K9P	JMM-6	(MAN)	
T7S9P	JIM-4	G2I4S	BMH		
T7T3S	BML-21	G2I4S	BIH	O8M	SO-M-1
T8Q9P	JIH-2	G2L3X	TE-OJP	O9P	N-JM-1
T8S9P	JDH-3	G2L7S	B?L	P7V1A	P-AM-1
T8T1P	JDM-1	G4I3M	MW-1	Q3V3P	P-JM-1
T9Q8P	JIL-1	G4K8P	JMM-5	R8V8A	T-AM-1
V5X7A	AIH-30	G6K8S	BMH-9	T8S4A	S-AD-1
W0Y5A	AIM-20	G7K8P	JMM-8a		
		G8I4X	TE-OBS		
		G8K8P	JMM-8b		
		G8L6P	JDM-8		
		G9I4S	BDL-20		
		G9L0P	JMH-10		
		I2I8P	JIH-7		

Site Codes

The site code consists of three parts. The first part lists the province in which the site is located: either MAN (Manitoba) or SASK (Saskatchewan). The second part of the site code lists the site identifier in the Canadian Forest Service (CFS) database. This identifier is an alphanumeric string of up to 14 characters, generally giving information about the overstory at the site.

Interpretation of the identifier depends upon whether the site is an auxiliary site, a transect site, or a tower site.

Auxiliary sites:

Typically, the site identifier begins with a three letter code. The code describes the dominant species, the stand age/maturity, and the productivity of the stand. Both age and productivity assessments were based on a preliminary, qualitative examination of the sites during early BOREAS field visits. This code is followed by a number designating the stand, and optionally followed by a letter indicating a sampling stratum within a site.

Species code:	A - aspen B - black spruce J - jack pine
Age/maturity code:	D - recently Disturbed (young) I - Immature M - Mature
Productivity code:	L - Low M - Medium H - High

Exceptions: Sites with no single dominant species are designated as mixed-wood stands, and are assigned the two letter site code MW. These stands have not been graded for age or productivity. One mixedwood site in the SSA has been given the name "Jail House", due to its location.

Examples: JIH-5 refers to stand 5 of immature, high productivity jack pine.
MW-1b refers to mixed-wood site 1, stratum b.

Transect sites:

Transect site identifiers begin with a one or two letter code indicating the general geographic location of the site. The abbreviations are as follows:

B	Batoche	P	Paint Lake
F	Flin Flon	PA	Prince Albert National Park
G	Gillam	S	Sapochi River
M	Montreal Lake	SO	Soab Creek
N	Nelson House	T	Thompson
NI	Nisbet		

The location code is then followed by a two-letter code indicating the dominant species and stand age, following the codes used for the transect sites. Mixedwood sites are given the single letter M, with no age class.

Examples B-AM-1 refers to mature aspen site 1 near Batoche, Sask.
PA-M-1 refers to mixed-wood site 1 near Prince Albert National Park.
P-AM-1 refers to mature aspen site 1 near Paint Lake, Man.

Tower sites:

Tower site identifiers begin with a two or three-letter code indicating the nature of the tower measurements carried out at the site, as follows:

TE	Terrestrial Ecology tower (BOREAS)
TF	Flux tower (BOREAS)
POM	Hydrological sites (John Pomeroy, NHRI)[1]

The site code is then completed by a two or three-letter code indicating the species and age, using the following abbreviations:

MW	Mixed-wood	OJP	Old Jack Pine
OA	Old Aspen	YA	Young Aspen
OBS	Old Black Spruce	YJP	Young Jack Pine

Examples: TE-OA is a terrestrial ecology tower in an old aspen site.
POM-YJP is a hydrological tower in a young jack pine site.

For all sites, the site code is completed with a number (in brackets) indicating the sampling stratum. Most sites consist of a single sampling stratum; presence of multiple strata are the result of variability within a site. In most cases, the presence of sampling strata within a site is also indicated by the use of a, b, or c suffixes in the site identifier, as discussed earlier. The example site identifier MW-1b also has a stratum number of 2. However, some sampling strata are not keyed as a/b: for example SASK BIH and SASK BMH are two strata within one site. At one time, these had been designated as BIHa and BIHb, but field examination revealed a significant difference in stand age.

Overstory Section

The overstory consists of vegetation taller than breast height (1.3 m). Typically, tree species are the only ones included, although occasionally shrub species were also measured. Each site is represented by three tables. The first, *Stand values*, is a summary of information at the plot and stand level. It includes the date of measurements at each plot, information about the sampling method used (point or fixed-area sample), and estimates of basal area, stem density, stem volume, and biomass. The second table, *Individual tree values*, provides the detailed information (species, DBH, and canopy class) on each tree in the sample. The third table, *Field data from cored/aged trees*, provides additional information for the sub-sample selected for coring (or other age estimates): species, DBH, canopy class, number of rings, tree height, height to the base of the live crown, crown width, sapwood thickness and number of rings, and bark thickness. The details of each value presented are discussed below.

Stand values

Date of Measurements

This entry provides the date (year, month and day) on which data were collected. In many cases, all plots at one site were visited on the same day. However, in some cases the measurements are spread over two or three days. In a few cases, sites with multiple strata had measurements taken at only one or two plots in 1993, and the remaining plots were visited in 1994.

Point Sampling Basal Area Factor (BAF), or Fixed Plot Area.

This entry provides information on sampling methods. Each plot will have either a Point Sampling BAF or a Fixed Plot Area, depending on which of the two sampling methods was used. (If different plots at a site used different methods, two lines will be present in the table.) Understanding the sampling techniques is critical for understanding the various data tables, so the following paragraphs provide a detailed explanation.

Two sampling methods were used to select trees for the overstory data: *point sampling* and *fixed-area plots*. The two methods have different biases, and proper comparison requires a thorough understanding of the mathematics behind each. We will begin by reviewing the principles of fixed-area plots, and then show how point-sampling theory can be derived from these expressions.

Two of the most commonly-derived stand-level characteristics are *basal area* and *stem density*. Basal area is the cross-sectional area of tree stems in a stand (at breast height, 1.3 m) expressed per unit area of forest (m^2ha^{-1}). For tree *i* in a sample of trees (selected by any method), the contribution to stand basal area is calculated from:

$$BA_i = \frac{\pi\left(\frac{DBH_i}{2}\right)^2}{A_i} \qquad \textbf{(1)}$$

where BA_i is the basal area, DBH_i is the diameter at breast height, and A_i is the area of the sample plot that was used to select the tree. With DBH in cm and plot area in m^2 we get cm^2m^{-2}, which is numerically equivalent to m^2ha^{-1}.

Stem density is simply the number of trees (or stems) found in a unit area of forest. Units are ha^{-1}. For tree *i*, the contribution to stand stem density is calculated from:

$$Stem\ density_i = \frac{1}{A_i} \qquad \textbf{(2)}$$

Values of basal area and stem density for a stand are obtained by summing equations (1) and (2) for all trees in the sample:

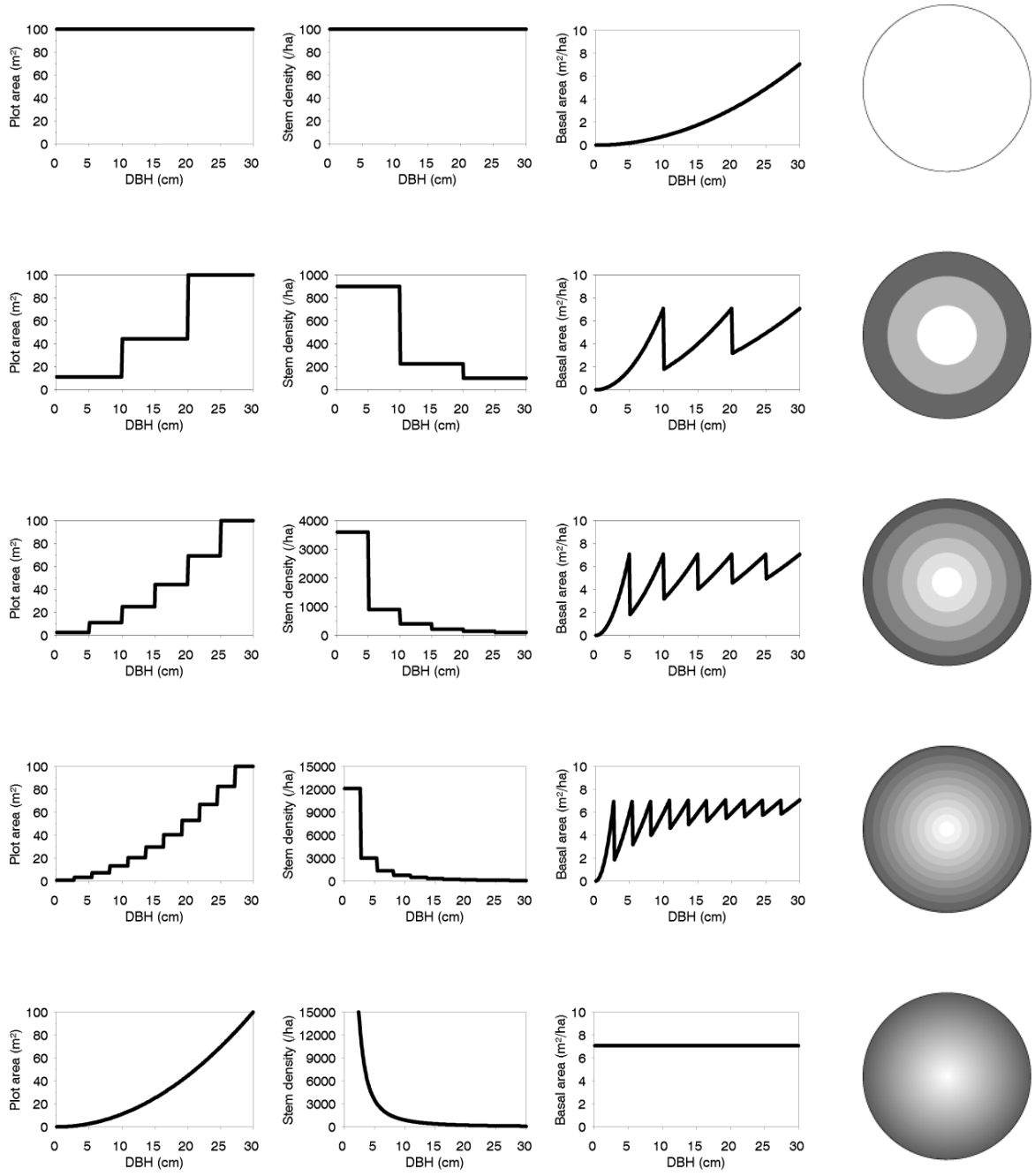
$$BA = \sum_{i=1}^{n} \left[\frac{\pi \left(\frac{DBH_i}{2} \right)^2}{A_i} \right] \quad \textbf{(3)}$$

$$Stem\ density = \sum_{i=1}^{n} \left[\frac{1}{A_i} \right] \quad \textbf{(4)}$$

For a fixed-area sample, the sampling area (typically square, but can be circular) is marked out on the ground and data is collected on all trees within the plot. All trees are selected using the same plot area, and A_i in equations (1-4) is constant: basal area for the stand is simply calculated by summing the cross-sectional area of all sampled trees and dividing by plot area, and stem density for the stand is calculated as n/A.

Fixed-area sampling works well when trees are of a fairly uniform diameter. When a range of diameters are found, however, stem density is often inversely related to tree diameter: there are few large trees, and many small trees. To get an adequate sample of large trees, a large plot area is required, and the number of small trees in the sample becomes unwieldy. Point-sampling overcomes this difficulty, but the reasoning may not be intuitive. In the next few pages, we will derive point-sampling theory from fixed-area sampling theory. We will consider three variations: a single fixed-area plot, a series of nested fixed-area plots of varying sizes, and finally a point sample.

To begin, we presume that we are in a forest with a range in tree sizes up to 30 cm DBH. A single, large fixed-area plot would result in many small trees to deal with. Instead, we use three different plot sizes, for three ranges of DBH. Our largest plot will be 100 m^2 (a circular plot with a radius of about 5.64 m), used for trees in the range 20-30 cm DBH. For trees from 10-20 cm DBH, we will use a plot of two-thirds radius (3.76 m), and for trees less than 10 cm DBH we will use a plot radius of one-third (1.88 m). The number of small trees in the sample will be reduced, while maintaining an adequate number of large trees. Equations (1-4) are used to calculate individual tree values and stand values of basal area and stem density, but A_i will vary from tree to tree.



. In a given stand, a smaller BA

Figure 1. Graphs showing dependence on DBH of plot area, stems per hectare, and basal area per hectare for an individual tree, for five types of sample design. The top row represents a single fixed area plot. The second, third, and fourth rows represent a series of nested fixed area plots (area varies with DBH) of three, six, and 11 sizes. The last row represents an infinite nesting of plot sizes — i.e., a continuous distribution of plot sizes versus DBH — at which point the sampling method becomes a point sample. The circles on the right show the nested plot arrangements.

The number of nested plot sizes can be increased. For example, six circular plots could be nested together, for six ranges of DBH. One could do 11 plots, or 25, or any number, but setting out and marking a number of plots becomes impractical: not only are different plot sizes required, but many trees will need DBH measurements to determine whether or not they are in the plot assigned to them. Little work is saved. Interestingly, however, at the limit where we have an infinite number of plot sizes for an infinite number of DBH classes, the method reduces to one that is very practical: plot radius becomes proportional to tree radius (i.e., plot radius divided by tree radius is a constant). This practical limit is the basis for the point sampling method.

Figure 1 shows a series of graphs and diagrams demonstrating the use of multiple nested plots. Each row in the figure represents a sample design: each represents a different number of nested plots, ranging from one plot (a fixed-area sample) to an infinite number of plots (a point sample). The graph on the left in each row shows the plot area to be used for trees of a particular DBH. In the case of the first row, all trees are sampled in a plot 100 m^2 in size, so the graph is a horizontal line. In the second row, we can clearly see the three plot areas for the three DBH classes: 0-10, 10-20, and 20-30 cm DBH. The third, fourth, and fifth rows represent six, 11, and an infinite number of plot sizes. In the last row, the graph has become a smooth function — a parabola, since a constant ratio between plot radius and tree radius implies a quadratic function between plot area and tree radius.

The second column of figure 1 shows a graph of the number of stems per hectare (calculated from equation 2) that a tree of any particular DBH represents. Again, the first row is a constant value - each tree is one stem in the fixed plot area — while the graph in the second row has three steps, the graph in the third row has 6, etc. Each time the plot area is increased, a single tree will represent fewer stems per hectare. The last row is again a smooth function — this time an inverse one.

The third column provides graphs of basal area per hectare for each tree as a function of DBH, calculated from equation 1. The first row is a simple quadratic function, showing tree basal area as a function of diameter (with a constant plot area). The second through fourth rows show a series of three, six, and 11 quadratic (or parabolic) sections, with step changes at each change in plot area. The most interesting plot in the last column is the fifth one: although the graphs had been becoming more complex with each row, the last one is a simple straight line. This happens because the point sample uses a plot area that is a quadratic function of DBH, and the basal area per trees is also a quadratic function of DBH (equation 1), and the ratio of the two is a constant. This has an important implication: when a tree is selected using point sampling, it represents the same basal area per hectare *regardless of DBH*.

The last column of figure 1 shows diagrams of the sample plot arrangements: a single circle representing the fixed-area plot, followed by nested circles of three, six, 11, and finally an infinite number of shades of grey representing the varying plot areas in the nested sample designs.

Point sampling is easily implemented in the field. The basic principle is that each tree is selected using a circular plot with a radius r that is proportional to its DBH. The constant of proportionality is called the plot radius factor (PRF), and thus for tree i we can write:

$$PRF = \frac{r_i}{DBH_i} \quad \text{or} \quad r_i = PRF \times DBH_i \qquad \textbf{(5)}$$

With DBH is in centimetres and plot radius is in metres, PRF is in m cm^{-1}.

At first glance, it would appear that each tree in a point sample must be measured for DBH, and then its distance to plot centre measured to see if it exceeds the appropriate plot radius. Fortunately, this is generally not the case. This can be seen by considering the case of a tree that is on the edge of its plot, and considering the angle subtended by the tree when viewed from plot centre: since the diameter of the tree divided by the distance from plot centre is a constant, the angle is also a constant. If the tree is closer to plot centre, it will subtend a larger angle (i.e. appear larger), and if it lies outside the plot it will subtend a smaller angle (i.e. appear smaller). Hence, trees can be easily identified as "in" or "out" of their respective plots by visually comparing the width of the tree stem (viewed from plot centre) to a known angle. This is shown diagrammatically in figure 2.

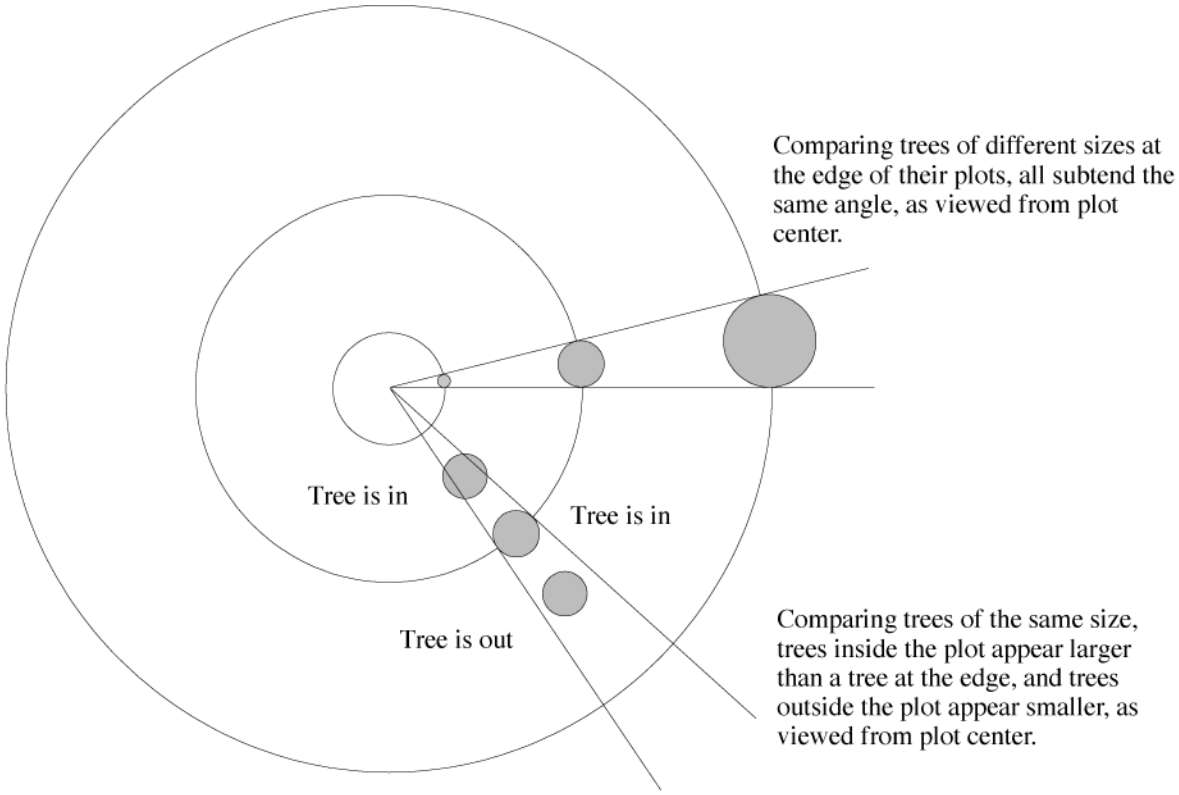


Figure 2. Diagram showing how trees are selected as being in or out of a point sample.

In discussing figure 1, it was seen that the basal area per tree (equation 1) is constant in a point sample. From equation 5, the plot area for tree *i* will be:

$$A_i = \pi r_i^2 = \pi PRF^2 DBH_i^2 \quad \textbf{(6)}$$

and from equations 1 and 6, the basal area per tree will be:

$$BA_i = \frac{\pi\left(\frac{DBH_i}{2}\right)^2}{\pi PRF^2 DBH_i^2} = \frac{1}{4PRF^2} \quad \textbf{(7)}$$

The term on the right side of equation 7 is referred to as the *Basal Area Factor*, or BAF. Since PRF is in m cm^{-1}, BAF will have units of cm^2m^{-2} (equivalent to m^2ha^{-1}). In a point sample containing *n* trees, equation 3 (stand basal area) is reduced to:

$$BA = n\ BAF \quad \textbf{(8)}$$

In the example in figure 1, the point sample PRF is 0.188 m cm^{-1} (e.g 5.64 m ÷ 30 cm, or 3.76 m ÷ 20 cm, or 1.88 m ÷ 10 cm, etc.) and the BAF is 7.07 m^2ha^{-1}.

Numerous instruments are available that allow a quick selection of trees for point sampling. All that is needed is an apparatus that creates a visual image of the necessary angle. For example, one of the authors of this report has a thumb that, held at arms length, has a BAF of 4.6 m^2ha^{-1}. (If held closer than arms length, it subtends a greater angle and has a larger BAF.) In this study, a Speigel Relascope was used in 1993, and wedge prisms were used in 1994. The Speigel Relascope in use was calibrated in $feet^2acre^{-1}$. with scales of 5, 10, 20, and greater BAF. (All values were converted to m^2ha^{-1} for analysis.) Each wedge prism has its own BAF, so several prisms are carried to provide a range of BAFs. In 1994, prisms with BAFs of 2 and 3 m^2ha^{-1}, and 10 $feet^2acre^{-1}$ (2.296 m^2ha^{-1}) were used.

In a given stand, the prism (or relascope scale) is chosen to provide an adequately large sample. In the case of stand basal area, the precision of the measurement is limited to +/- one BAF. Therefore, the relative error in BA is dependent solely on the number of trees in the sample. In practice, about 15 trees is considered adequate for an error of less than +/-5%. In a given stand, a smaller BAF will provide a larger sample.

In 1993, a number of instances were encountered where the lowest BAF on the relascope (5 $feet^2acre^{-1}$) still yielded a very large number of trees. To reduce the sample size to more manageable numbers, two approaches were used. The first involved using the bar between the 10 and 20 $feet^2acre^{-1}$ markings, which is narrower than the 5 $feet^2acre^{-1}$ bar width. Calculation of the angles involved provides a BAF of 0.394 m^2ha^{-1} for this bar. All subsequent calculations are performed normally, using this BAF.

The second method used to reduce sample sizes was to tally trees in half a circular plot - i.e. "sweep" through an arc of 180°, instead of a full 360°. This should yield a sample half the size. Plots where this procedure was used have the BAF marked with a footnote saying "Half sweep: point sample only covers 180° arc". Calculations with these samples is not quite as straightforward. It must be kept in mind that the relationship between plot radius and DBH remains the same as it does for afull 360° sample, so the sample BAF is used as-is in determining PRF. When the final summation is complete, the stand-level value (basal area, stem density, volume, or

biomass) must be doubled to account for the fact that only half a sample was taken. Although this factor of two can be applied to the equations for individual trees, one should not follow the temptation to think of a "half sweep" as being equivalent to a full sweep with twice the BAF. The PRF is not the same, so interpretations regarding plot size and tree spacing will not be the same. One must use the actual BAF, rather than its doubled value, to get the correct PRF. For sites where "half sweeps" were performed, the listed BAF is the actual value used for selecting trees, and subsequent calculation of stand values accounted for the 180° arc. The assumption is that the other 180° arc would have provided another sample of trees with identical statistical properties.

One other oddity occurs at one site visited in 1993: at plot 1 in Manitoba site JIH-2 (BORIS ID T8Q9P), the two species present were sampled using different BAFs. The overstory at this site consisted of older dead *Pinus banksiana* with a younger growth of (live) *Picea mariana*. A smaller BAF was selected for use on the more closely-spaced *Picea mariana*. Calculation of stand values for this plot can still be completed using equations 1-7: all that must be kept in mind is that the BAF varies from tree to tree. Once calculations of basal area, stems per hectare and such are done for each tree, the sums for stand values are completed as usual. Since the two species represent the dead and living components of this stand, it actually turns out that calculations on dead trees use one BAF, and calculations on live trees use another.

In selecting trees for a point sample, it may be difficult to decide whether trees close to the edge of their plots should be included or excluded. If this is the case, the distance from plot centre to the tree centre is measured. Using the tree's DBH and the appropriate PRF, this distance can then be compared to the radius of the plot as calculated by equation 5, and the tree place "in" or "out" of the plot after-the-fact. (For "half sweeps", this calculation is one where correct interpretation of the BAF and PRF is critical.) Trees that were marked as questionable in the field, but were determined to be "out" upon subsequent calculation are not included in the "Individual tree values" tables.

Point samples provide a rapid estimate of stand basal area. However, calculation of stem density is more complicated, and the presence of very small trees in the sample can be problematic. In figure 1, the graph of stems per hectare for the point sample (second column, fifth row) shows that small DBH values give extremely high stem densities. This is because the plot area for small DBH is also small, which statistically implies that there must be a lot of small trees present if one is found in the point sample. One small tree can bias the estimate of stem densities, if that one tree is not actually representative of the stand.

Point samples also have some practical limitations in dense stands of small trees. In this study, all measurements in 1993 were carried out using point samples. To overcome the difficulties, the 1994 measurements switched from point samples to fixed-area plots when dense stands of small trees were encountered. Mixing stand-level statistics between point and fixed-area samples is not a major problem, but one must keep in mind that the two methods have slightly different biases.

In summary, the tabulated data show either the BAF used for a point sample, or the area used for a fixed-area sample. These values are then used to calculate the stand-level statistics from the individual tree data in the sample. Where "half sweeps" occur, they are marked by footnotes. Where more than one BAF has been used (for different species) at the same plot, this is also marked by a footnote.

Live Basal Area

This value is calculated by taking all live trees in the sample and applying equation 3 (or its simplified version, equation 8, in the case of point samples). A value is provided for each plot, as well as the mean for all plots in the site.

Dead Basal Area

This value is calculated using the same method as Live Basal Area, but for dead trees in the sample. It has been given in order to provide a rough estimate of the amount of standing deadwood.

Live Stem Density

This value is calculated using equation 4, for all live trees in the sample.

Live Stem Volume

This value represents an estimate of the total volume of wood in tree stems for the stand (expressed on a per-hectare basis). This volume excludes branches and foliage, but includes the entire stem (i.e. it is not restricted to "merchantable timber", as is commonly done for commercial surveys). A value is provided for each plot, plus a mean for the site. From each plot sample, stand stem volume is calculated from:

$$V = \sum_{i=1}^{n} (V^{i} \text{ x } \textit{stems per hectare}_{i}) \qquad \textbf{(9)}$$

where V_i is the volume of the individual tree in the sample, and each tree volume is multiplied by the number of stems per hectare that the tree represents (equation 2). In the case of fixed-area plots, the number of stems per hectare is a constant. However, in point samples, each tree represents a number of stems per hectare dependent on its DBH, and this weighting must be included before summing volumes to get the stand volume. This weighting by stems-per-hectare is required for any stand-level statistic generated from point samples, such as volume or biomass (discussed later). Stand basal area appears as an exception, but this is only because tree basal area and stems per hectare cancel each other.

The stem volume of each individual tree is estimated using a numerical integration of a taper equation presented in Gal and Bella (1994, equation 6, p. 6). The equation is of a form originally presented in Kozak (1988), with the tree diameter (inside bark) expressed as a function of DBH and tree height. Gal and Bella fitted coefficients in the equation for 12 Saskatchewan timber species (Gal and Bella, 1994, table 5, p.7). In this study, a few trees were of species not covered in the Gal and Bella report: *Alnus crispa*, *Prunus* sp., and *Salix* sp. In addition, two *Populus* sp. trees could not be identified to the *tremuloides* or *balsamifera* species level, and one tree is listed as "unidentified". All of these trees were used with the Gal and Bella coefficients for *Populus tremuloides*. The choice of the *Populus tremuloides* coefficients is easily justified for the *Populus* sp. trees. For other trees, the *Populus tremuloides* coefficients were chosen because they gave a tree form in the middle of the range of all the species covered. Strictly speaking, *Alnus crispa* and *Salix* sp. are shrubs rather than trees. The 73 observations of *Alnus crispa* occur at three sites: SASK AMM-12 plot 1 (1), SASK F-JD-1 plot 2 (34), and SASK TF-YA plot 1 (16) and plot 2 (22). The latter two sites are young, and the *Alnus crispa* intermingles with the overstory. The 49 observations of *Salix* sp. are a bit more spread out: 48 occur in Saskatchewan sites, with the largest groupings occurring at two sites—at SASK M-BD-1 plot 1 (4), plot 2 (6) and plot 3 (12),

and SASK TF-YA plot 2 (6) and plot 3 (4). The other 18 observations are spread between nine plots at seven sites. In view of the small number of trees represented by species without proper taper equations, the use of the *Populus tremuloides* equations for taper should not cause a significant error. Figure 3 shows an example of the various tree forms based on the taper equations. Table 2 lists the tree species encountered, together with the numbers of trees of each species.

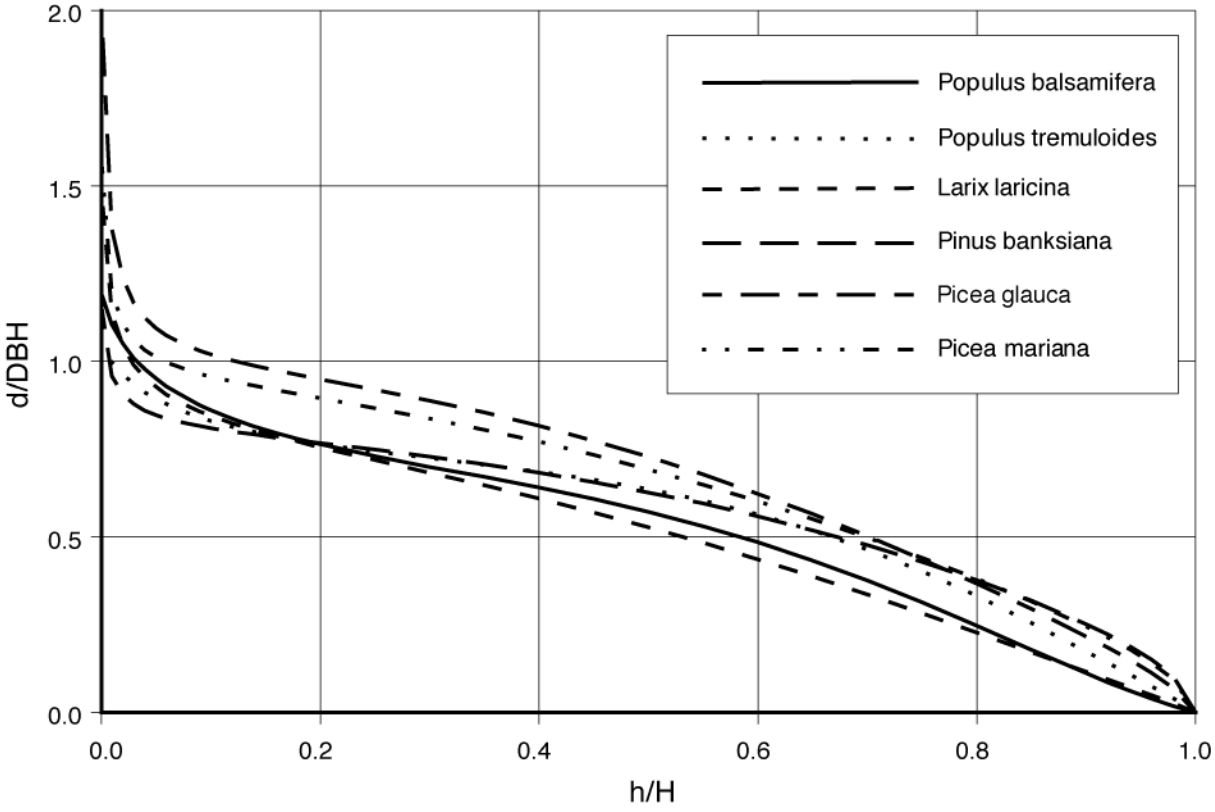


Figure 3. Taper forms for six tree species. Diameter inside bark (d) is expressed as a fraction of DBH, and height (h) is expressed as a fraction of total tree height (H). The examples are for a 20-cm DBH tree.

Calculation of stem volume for each tree requires a height value, but only about 18% of the trees in the database have measured heights. For the remaining trees, heights were estimated using relationships developed from the trees with measured heights. Many studies have considered in detail the various methods of relating tree height to DBH. One recent comprehensive study in an area close to the region encompassed in this study is the work of Huang *et al.* (1992). Significant variations were noted when comparing height-to-DBH relationships for data from this study to the Huang *et al.* results. To account for this variation, relationships specific to this database were developed. The method has already been described in Halliwell *et al.* (1995), but will be discussed in expanded form here.

Table 2. Tree species, along with frequency of occurrence, in overstory data base.

Species	Database abbreviation	Total number of occurrences
Abies balsamea	Abba	34
Alnus crispa	Alcr	73
Betula papyrifera	Bepa	65
Larix laricina	Lala	65
Pinus banksiana	Piba	1782
Picea glauca	Pigl	144
Picea mariana	Pima	2312
Picea sp.	Pisp	2
Populus balsamifera	Poba	69
Populus sp.	Posp	2
Populus tremuloides	Potr	1497
Prunus sp.	Prsp	2
Salix sp.	Sasp	49
unidentified tree	Unid	1

Trees with measured heights were categorized on the basis of species and province, and scatter diagrams produced on log-log axes. From these diagrams, linear equations were estimated. The scatter diagrams showed no noticeable difference between provinces, or between the different species in either the *Picea* or *Populus* genera. As a result, six equations - listed in table 3 - were fitted to cover the species present. *Pinus banksiana* and *Picea* sp. show a marked inflection at small DBH, prompting the use of two linear segments rather than one. The limits for each segment are given in table 3. For *Alnus crispa*, the *Abies balsamea* coefficients were used. This is an arbitrary decision, but the comments regarding *Alnus crispa* and the taper equations also applies here. For *Prunus* sp., the *Populus tremuloides* coefficients were used. *Salix* sp. used $ln(\text{height}) = 0.5\,ln(\text{DBH}) + 0.59$, and the unidentified tree used $ln(\text{height}) = 0.9\,ln(\text{DBH}) + 0.2$, but these relationships represent approximations intermediate to other equations, rather than fitted equations. Although some species have small sample sizes, this corresponds to infrequent occurrence in the overall data set. Figure 4 shows the scatter diagrams for the three most common species, for both provinces.

In examining tree heights on a site to site basis, it was noticed that particular plots tended to exhibit tree heights that were systematically greater than or less than the mean regional trends. Since every plot has a few trees with known heights, it was decided that calculated heights should take the plot bias into account. Each measured tree height was expressed as a ratio of the "expected" height (calculated from DBH), and the ratios averaged for each species within the plot. For example, if a sample had 15 *Picea mariana* trees, and three had measured heights that were 0.8, 0.95, and 0.65 times the height estimated from their DBH, then an adjustment factor of 0.8 was used as a multiplier for the other 12 heights calculated from DBH. A different adjustment factor was determined for each species. If no heights were measured for a particular species, its adjustment factor was presumed to be 1. Figure 5 is a scatter diagram of estimated versus measured height, for all trees (with measured heights) in the database. The agreement is generally good, with a Mean Bias Error of 0.18 m, and a Root Mean Square Error of 1.47 m.

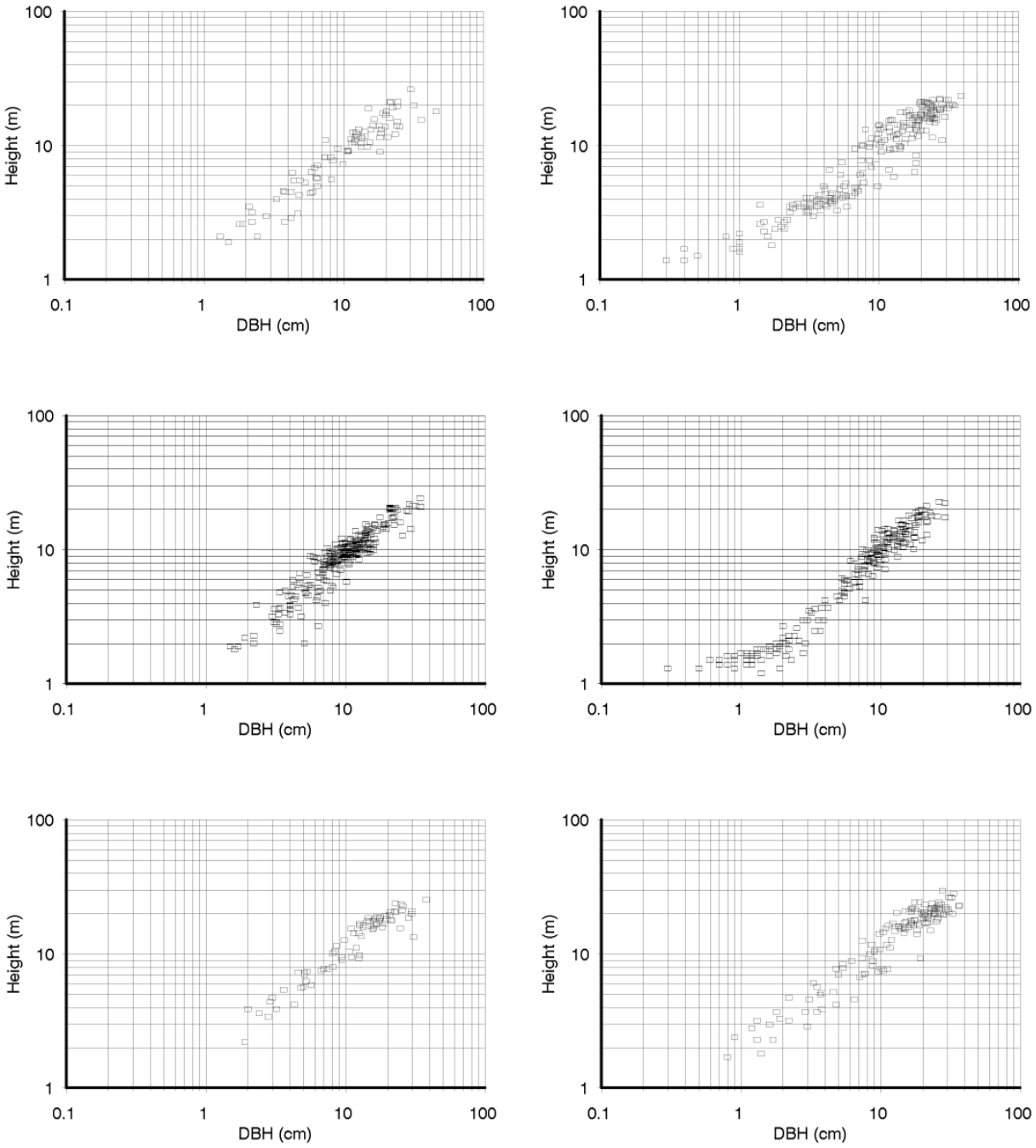


Figure 4. Measured tree height versus DBH, for Manitoba sites (left) and Saskatchewan sites (right). The species are (top to bottom) *Pinus banksiana*, *Picea mariana*, and *Populus tremuloides.*

Table 3. Height (m) versus DBH (cm) relationships. Equation fitted is of form *ln* (height) = a *ln* (DBH) + b. N is the number of trees in each sample.

Species	N	Coefficients a	b	
Abies balsamea	5	0.82	0.27	
Betula papyrifera	10	0.67	0.74	
Larix laricina	20	1.06	-0.38	
Picea glauca, mariana	526	0.94	0.04	(DBH>1.86)
		0.28	0.45	(DBH<1.86)
Pinus banksiana	310	0.86	0.19	(DBH>3.51)
		0.39	0.78	(DBH<3.51)
Populus balsamifera, tremuloides	234	0.80	0.52	

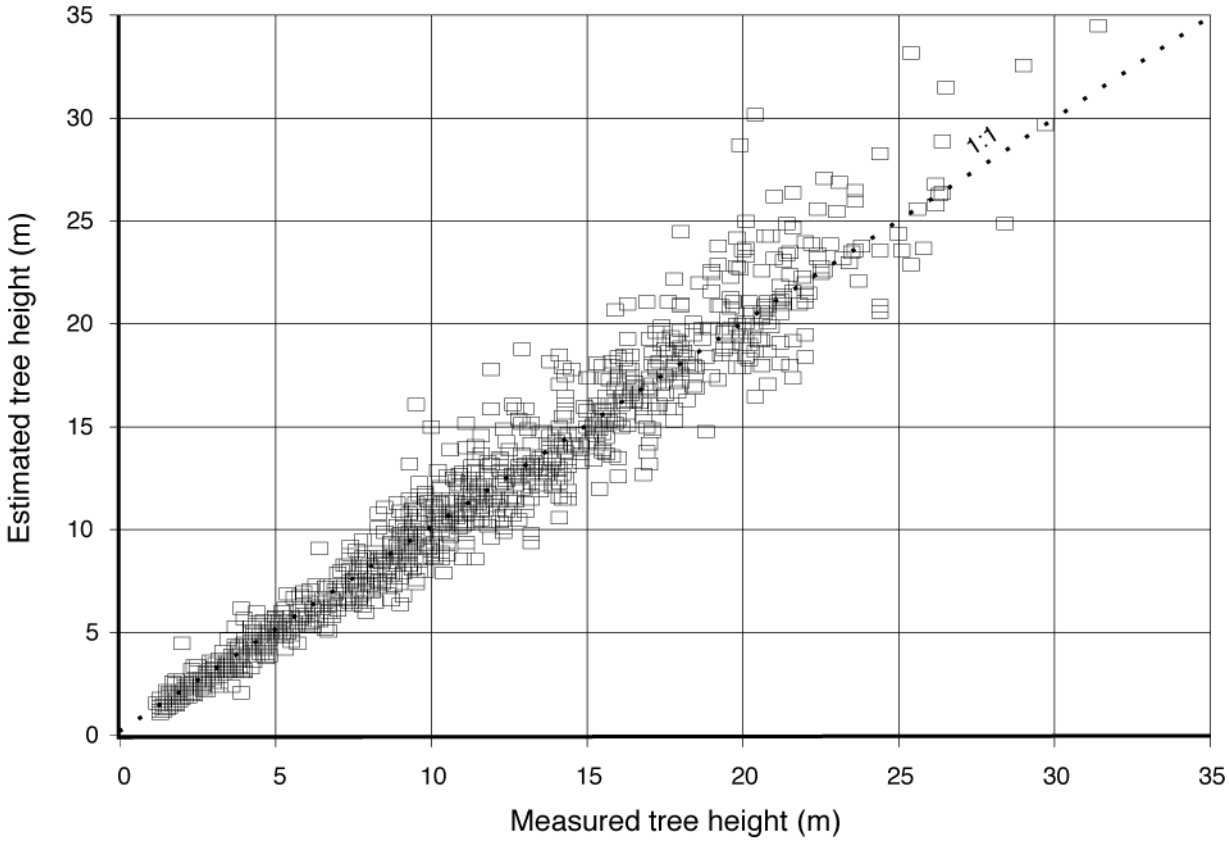


Figure 5. A comparrison between measured and estimated tree heights.

The calculated stem volumes represent inside-bark quantities. Halliwell *et al.* (1995) calculated volumes for the same stands, using an assumption of conical trees. To compare the two approaches, calculations were performed for "ideal" trees, for *Picea glauca* and *Populus balsamifera*. The "ideal" trees covered the range from 1 to 50 cm DBH, with heights calculated using the coefficients in table 3. In each case, the volumes obtained using the two methods formed an almost-perfectly-linear relationship. The volumes (inside bark) from the Gal and Bella taper equations for *Picea glauca* and *Populus balsamifera* were 8% greater and 9% less (respectively)

than the volume (outside bark) calculated using the simple conic shape. *Picea glauca* has thin bark and a pronounced upper bulge, leading to the increase in volume in comparison to a cone. *Populus balsamifera* has a shape much closer to a cone, but thick bark, hence the volume using the taper equation (inside bark) is less than that from the cone (outside bark). The departures of each tree shape from the ideal cone can be seen in figure 3.

No stem volumes are calculated for dead trees in the stand, since many of these are broken and height information is not available.

Biomass

This value represents the total above-ground biomass (excluding foliage) for the overstory in each plot, along with a stand mean. The calculation is similar to the stem volume estimates: a biomass value is calculated for each live tree in the sample, this number is multiplied by the number of stems per hectare the tree represents, and the values are then summed. The biomass values are determined using regression equations presented in Singh (1982). Singh provides three forms of equations: third and fifth degree polynomials using DBH, and a linear form using DBH^2H. The linear form was selected for this study, since it is more reasonable to extrapolate this function outside the range of tree sizes used in Singh. (The polynomial forms show undesirable characteristics for small trees.)

Again, some of the species in this study are not included in the Singh report. Coefficients were used as given by Singh, except for *Alnus crispa* ($5.0 + 0.015\ DBH^2H$), and the following genera when not identified to the species level: *Picea* sp. ($4.5 + 0.016\ DBH^2H$), and *Populus* sp., *Prunus* sp., *Salix* sp., and the unidentified tree (all $5.0 + 0.016\ DBH^2H$). These additional biomass equations are simply selected as being in an appropriate middle range of the existing regressions.

Harvest of over 120 trees was carried out at 14 sites in both the NSA and SSA, in August 1994, for determination of allometric relationships (Gower *et al*., in prep.). Currently, only total stem masses are available. These measured masses are compared to values calculated using equations from Singh (1982) in figure 6. The comparison is very good, justifying the use of the Singh equations in the overall study. There appears to be little to gain by using the limited number of harvested trees to revise the Singh equations.

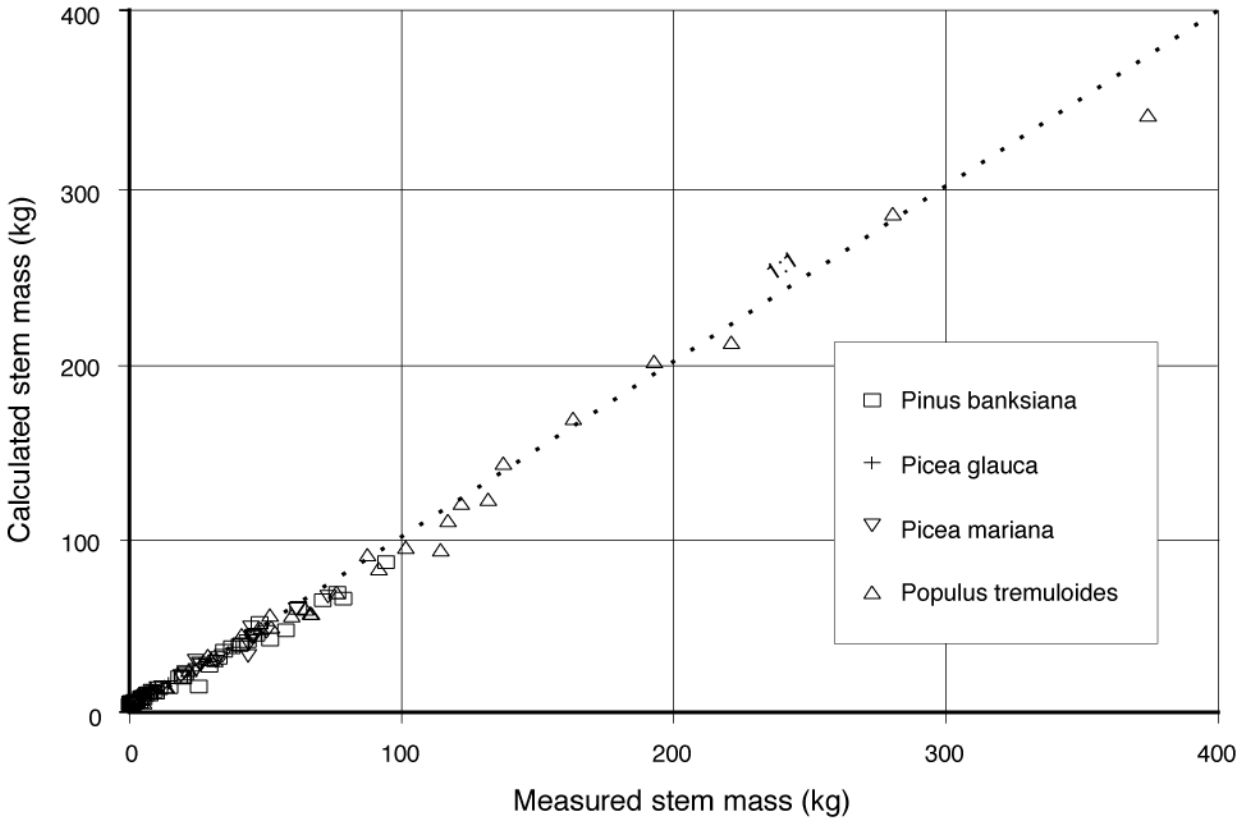


Figure 6. A comparison between measured stem mass and calculated stem mass, for the trees harvested in the allometry program.

Figure 6 does show a slight bias for small trees, where calculated values tend to be slightly above the measured values. Singh does not present equations for total stem mass alone: only stem >2 cm is tabulated. Instead, equations for total above-ground biomass (excluding foliage), branches <2 cm, wood on branches >2 cm, and bark on branches >2 cm were combined to give a total stem mass. Unfortunately, this means that the intercept of the combined equation involves four regression intercepts, leading to a large possible error. The intercepts for wood and bark in branches >2 cm are typically negative. This is consistent with trees having no mass in branches >2 cm until after they have grown to be several centimetres diameter at breast height. Unfortunately, when subtracting these equations from the total biomass equation, it gives the appearance that small trees weigh more without their branches than they do when branches are included. Obviously, this is unreasonable, and the problem is related to the combination of four equations to get a single expression.

The biomass values tabulated for each site should not suffer from this problem, since the calculation is based on a single equation from Singh. However, in stands with large numbers of small trees, the intercepts in Singh's equations do play an important role. This is particularly true for point samples, where small DBH values equate to large numbers of stems per hectare. Further study to obtain allometric relationships for small trees would be beneficial.

Biomass is by definition restricted to live trees. No equivalent calculation of mass was made for dead trees.

Stem density and biomass distributions (graphs)

For each site, a graph is provided displaying the distribution of stem density and biomass in 5 cm DBH increments (from 0 to 50 cm, with the last class representing DBH >50 cm). On the vertical scale, values are expressed as a percentage of the stand average. These percentages were calculated along with the site totals, which were discussed above. For each tree in the sample, the stem density and biomass (expressed per hectare) were summed in 5 cm DBH class increments at the same time as they were summed to get plot totals. Separate sums were kept for hardwood and softwood species. The graphs stack the hardwood (dark) and softwood (light) bars in each DBH class. One graph is provided, derived from the stand averages.

These graphs provide a quick visual indication of the DBH distribution within a site. The stem density graph indicates the number of trees in various sizes. The biomass graph indicates which sizes of trees represent the major stores of energy or carbon.

Individual tree values

This table provides details for each tree in the samples. Each plot is identified by number, along with an indication of whether it is a fixed-area plot or a point sample. For each tree, the following data are provided:

Tree number

As each tree was selected in the field, it was assigned a number for identification on tally sheets. In the case of point samples, trees that are "questionable" (i.e. it is unsure whether they are "in" or "out", as discussed earlier) were still tallied and assigned a number. If they were subsequently determined (by calculation) to be "out", they are not included in the table. As a result, tree numbers are not always sequential.

Species

The species name is indicated by a four-letter code comprised of the first two letters of the genus and species names. The species in the database (abbreviations and full names) are listed in table 2. Full names of all species present at the site are also indicated by footnotes at the end of each table.

DBH

The diameter of the tree in cm at breast height (1.3 m above the ground), measured using a diameter tape.

Canopy class

A qualitative assessment of the competitive status of the tree with regard to the height of the canopy. Within the table, a four-letter abbreviation is used with the following meanings:

supp	suppressed -- crown well below canopy level
inte	intermediate -- crown slightly below canopy level
codo	codominant -- crown at canopy level
domi	dominant -- crown above canopy level
juve	juvenile -- crown well below canopy level, young tree
brok	broken -- tree crown broken off

In practice, nearly all sub-canopy trees were classed as "suppressed". Since detailed examination of tree age or possible causal factors of reduced tree height was not carried out, "suppressed" should not be considered an indicator of a causal mechanism. Some trees may be assigned combination classes - e.g. j/in (for juvenile/intermediate). All abbreviations listed in the table are expanded into full form in footnotes. In a number of cases, dead trees were not assigned a canopy class.

Alive/dead

All trees listed in the table were alive at the time of measurement, unless marked by a footnote as dead.

Tree health

All trees were examined for the presence of pathogens or other signs of impaired health - e.g. insect or other damage, disease, and forks or leans that were judged to be abnormal (and therefore indicative of damage at some point in the past). For all live trees, the presence of such factors is indicated by a footnote.

Field data from cored/aged trees

At each plot, a few trees were selected from the sample for more detailed measurements. These trees were usually chosen to cover the range of species and canopy classes in the sample. The cores or disk samples collected from these trees will be subject to detailed analysis, but the data presented here focus on measurements taken at the time of sample collection. Some of these field data will not be as reliable as a subsequent laboratory analysis. A percentage of core samples will always be lost due to deterioration, however, in which case the field measurements are the only data available. In addition, some tree ages were estimated by other means (see below), so the data presented here encompasses more sites than will be available from the core analysis. The detailed core analyses are expected to be published separately.

Normally, each tree was cored at breast height (1.3 m) - although in practice the coring height varies from about 1.1 to 1.4 m. In 1993, typically one core was collected from each tree. In 1994, two cores were taken from opposite sides of the tree. The 1994 data also included the exact height at which the tree was cored, although these data are not presented here. When two cores were taken, the data in the table are the average of the two cores. Unless otherwise indicated (by footnotes), the data are based on a core nominally at breast height.

In the case of point samples, trees were occasionally cored that were actually "out" of the sample (as determined afterwards). As a result, the tree would not appear in the "Individual tree values" table. All relevant data is therefore supplied in the "cored trees data". For trees that are included in both tables, the repetition of data is a convenience to the reader.

Tree number, species, DBH, and canopy class

These columns are identical to the data described under "Individual tree values".

Number of rings

Whenever possible, the trees were cored using an increment borer. For some small trees, the trees were cut down and a disk collected from the stem. (These disks were typically taken at the base of the tree or at stump height, as discussed below.) This entry in the table lists the total number of rings in the core or stem sample, from pith to bark. If a tree is sampled at the base, this count would be an estimate of the total age of the tree. For trees sampled at breast height, the total

age would be the number of rings in the core plus the number of years it takes the tree to reach breast height.

Any departures from the "standard" - a core collected at breast height - are indicated by footnotes after the ring count. The following exceptions occur:

- core or stem sample taken at stump height. In this case, the sample is from a point on the tree slightly above ground level (nominally 0.3 m, but in practice in the range 0.2 to 0.4 m).
- core or stem sample taken at base of tree. The sample was collected at ground level (0.0 to 0.1 m height).
- age estimated by counting whorls. In the case of young coniferous trees, each year the tree produces a growth leader and a new set of branches at the point where last year's growth ceased. Each set of branches is referred to as a whorl. An approximate age estimate can be obtained by counting the number of whorls.

In all cases, the numbers presented must be considered as rough estimates. Problems with false rings or missing rings require more detailed analysis than is possible in the field. This is particularly true for certain species, such as *Populus tremuloides*. Recent work in Manitoba (D. MacIsaac, CFS, pers. comm.) indicates that tree age can be significantly underestimated when counting whorls: even for young trees (mean ages of classes ranging from 10 to 18 years), mean differences of 1 to 2 years were common and relative errors of up to 30% (whorl count underestimates) were noted. As tree age increases, self-pruning will increase the absolute error in age. MacIsaac noted little error for *Pinus banksiana*, and larger errors for *Picea glauca* and *Picea mariana.*

Height

Individual tree heights (in m) were measured using a Suunto clinometer. This procedure involves moving a known distance away from the base of the tree (measured with a tape measure), and measuring the angles of elevation of the tree top and base. By taking an angular measurement of the base of the tree, the height measurement is automatically corrected to account for terrain slope and observer height.

Any lean in a tree introduces an error in the height estimate. For trees leaning towards or away from the observer, the error is a function of the angle of lean. Simple trigonometry shows that a 5% lean causes less than 1% error in the tree height, and a 10% lean causes a 3% error. As a result, most of the error in tree heights is likely due to errors in clinometer usage and visually delineating tree tops in a crowded canopy, rather than tree lean. The measurements are probably accurate to within 1-2 m.

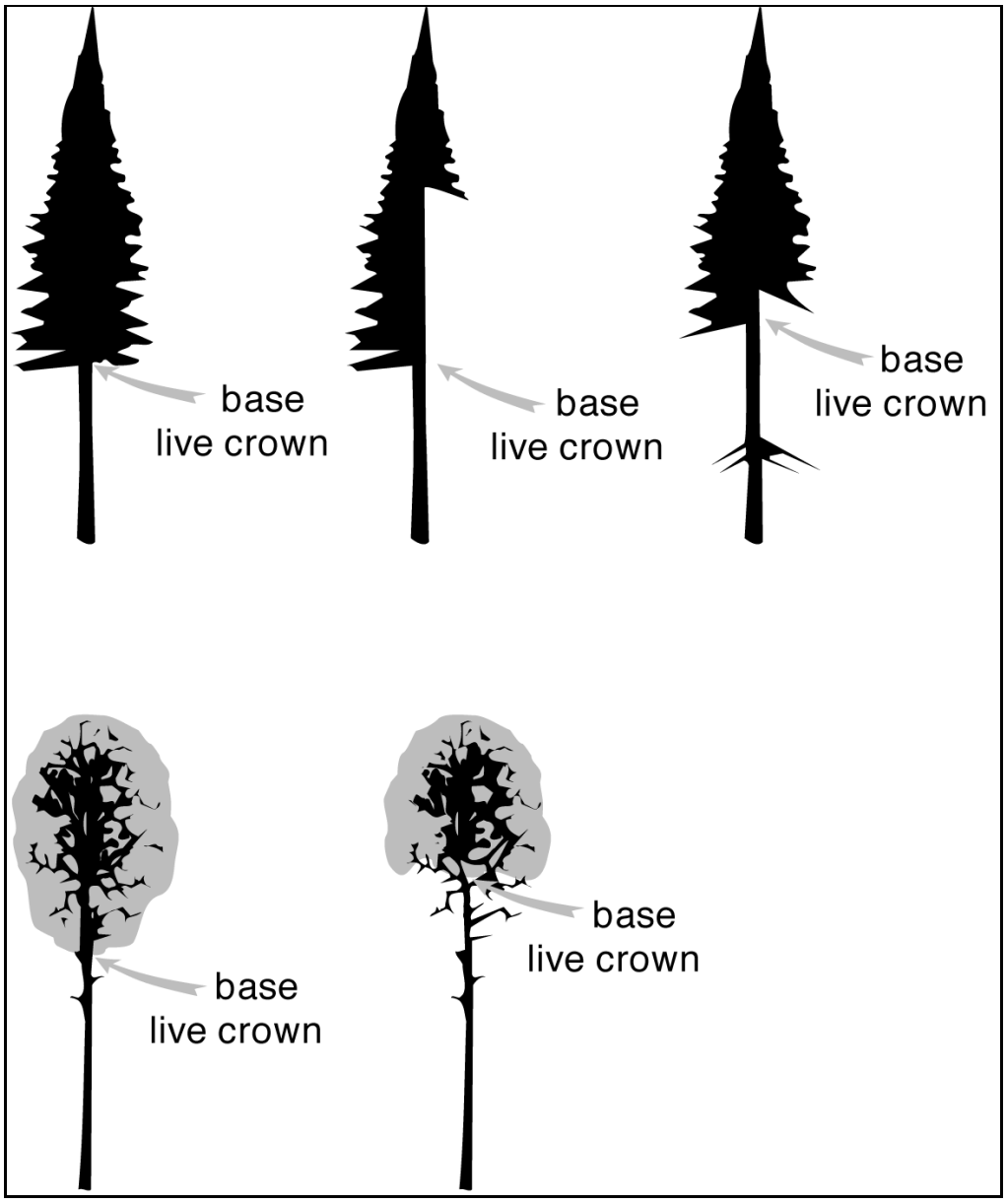


Figure 7. Examples of the determination of the base of the live crown.

Crown Base

The height (in m) from the ground to the base of the live crown. This is measured using the same method as was used for tree height. The base of the live crown is defined as the lowest point on the tree where live branches form a complete crown. At times, particularly in damaged or diseased crowns, this location is subject to judgement by field personnel. For example, epicormic branches are usually not included as part of the main crown. Figure 7 shows some examples for both deciduous and coniferous trees.

Crown Width

The width (in m) of the live crown, estimated as the average of two perpendicular diameters (through the bole of the tree) measured on the ground, vertically below the crown edges. The observer identifies the two points for each diameter visually, and measures the distance with a tape measure.

Sapwood thickness

The thickness (in cm) of the sapwood in the core extracted using the increment borer (or disk sample). Usually, the sapwood was defined in the field as the part of the core that has a higher water saturation, determined visually by a higher translucence. For *Populus tremuloides* and *Populus balsamifera*, it was often easier to use colour to distinguish sapwood (white) from heartwood (brown).

Number of sapwood rings

The number of annual growth rings in the sapwood region of the core extracted by the increment borer (or disk sample).

Bark thickness

The thickness (in mm) of the region from the bark to the cork cambium on extracted cores (or disk samples).

Plot overstory characteristics

The actual overstory present in each plot sometimes differed from what was originally interpreted during site selection. In some cases, the site name can be somewhat misleading. For example, in spite of several Black Spruce (*Picea mariana*) sites being classed as "recently-disturbed", none of these sites was younger than 40-50 years except one (SASK BDH-4), and that one was actually almost entirely young *Pinus banksiana*. Such occurrences can be attributed to the data available at the time of name selection - e.g. the limits of aerial photographs in the absence of supporting field data. A complete site reclassification would be possible, but not perhaps as useful in this report as it might seem: each site has its own unique character, and this is only evident upon examination of the detailed data. In addition, there is often significant variation between plots, which makes a classification based on sites more difficult.

Table 4 represents an attempt to identify associations in overstory species of *plots* in the overstory database. The associations provided are a simple qualitative (and therefore subjective) analysis of the data on a plot-by-plot basis, using the basal area (by species) as the criterion. It represents only one possible association, and should not be considered exhaustive. A thorough site classification system would consider all aspects of overstory and understory vegetation, soils, drainage, etc. Examples of such classifications, suitable for the study area, include Beckingham and Archibald (1996), Beckingham, Corns and Archibald (1996), Beckingham, Nielsen and Futoransky (1996), Corns and Annas (1986), and Zoladeski *et al.* (1995). Such a reclassification is beyond the scope of this report, and a primary reason for provision of all basic data in this report is to allow readers of the report to apply their own classifications as needed.

In general, table 4 divides the plots into four general groups, by species domination, indicated by letters in the class name: *Populus tremuloides* (A - trembling aspen), *Picea mariana* (B - black spruce), *Pinus banksiana* (J - jack pine), or with no strong dominant species (M - mixed). Within each of these groups, a number provides further details: young stands (0), pure stands with more than 90% of the basal area represented by the dominant species (1), and other variants (2-9).

The mixed stands are those where no single species comprises more than 70% of the basal area. The use of basal area is arbitrary: in the case of point samples, each tree in the sample represents the same basal area and the percentages also then represent the proportion of the number of trees of that species found in the sample. Where tree sizes at a plot vary, a count based on stem density for each species would provide somewhat different results.

The variants were chosen in an effort to lump together minor species in a fashion that indicates whether the stand is slightly drier or wetter than normal (where "normal" is a qualitative, subjective term). The classification of individual sites and plots in this report is not provided, since the associations presented here are simply intended as an illustration of the variety of plots encountered and as an example of what can be done with the data. The number of plots in each class is not included in table 4; however, this information is included in table 5, which is discussed in the following section.

Table 4. Description of plot overstory associations

Group	Description
A0	Young Aspen. Range from 10-30 years old. Usually more than 90% Populus tremuloides, with occasional Salix or Alnus sp.
A1	Pure aspen stands. More than 90% Populus tremuloides. Other species present include Betula papyrifera, Pinus banksiana, Picea glauca, and Populus balsamifera.
A2	More than 70% Populus tremuloides, with the next most common species being Populus balsamifera. Other species may be present in smaller amounts. Sampled only in Saskatchewan.
A3	More than 70% Populus tremuloides, with the next most common species being Pinus banksiana. Picea sp. may be present in smaller amounts. Sampled only in Manitoba.
A4	More than 70% Populus tremuloides, with the next most common species being Picea glauca. Other species may be present in smaller amounts. Sampled only in Saskatchewan.
B1	Pure black spruce stands. More than 90% Picea mariana. Other species present include Betula papyrifera, Larix laricina, Pinus banksiana, Picea glauca, Populus balsamifera, Populus tremuloides, and Salix sp.
B2	More than 70% Picea mariana, with the next most common species being hardwoods (either Betula papyrifera or Populus tremuloides).
B3	More than 70% Picea mariana, with the next most common species being Pinus banksiana. Occasional Populus balsamifera also found.
B4	More than 70% Picea mariana, with the next most common species being Larix laricina. Occasional Populus tremuloides also found.
J0	Young Jack Pine. Typically 15-25 years old, with more than 90% Pinus banksiana, but occasional plots have high proportions of Populus tremuloides or Alnus crispa. Other species may be present in small amounts.
J1	Pure jack pine stands. More than 90% Pinus banksiana. Most plots contain no other species, but a few plots in Saskatchewan contain small amounts of Picea mariana.
J2	More than 70% Pinus banksiana, with the next most common species being Populus balsamifera or Populus tremuloides (or both). Sites in Saskatchewan also contain a small amount of Picea mariana.
J3	More than 70% Pinus banksiana, with the next most common species being Picea mariana. The site in Manitoba also had a small amount of Betula papyrifera.
J4	More than 70% Pinus banksiana, with the next most common species being Picea glauca. Sampled at two sites, both located in Saskatchewan. One site had a small amount of Populus tremuloides.
M1	Mixed Pinus banksiana and Picea mariana. Small amounts of hardwoods may also be present.
M2	Mixed Pinus banksiana and hardwoods (Populus tremuloides, Betula papyrifera). May also contain small amounts of Picea mariana.
M3	Mixed Picea mariana and Populus tremuloides. May also contain small amounts of other hardwoods.
M4	Mixed hardwoods: usually Populus balsamifera and Populus tremuloides, but may contain Betula papyrifera. May also contain small amounts of Picea glauca.
M5	Mixed Abies balsamea, Picea glauca, and Populus tremuloides. Sampled only in Saskatchewan.
M6	Mixed Picea glauca and Populus tremuloides. Picea glauca predominates, and other species may be present. Sampled only in Saskatchewan.
M7	Predominantly Picea glauca, with Picea mariana and a small amount of Abies balsamea. Sampled at only one plot, in Saskatchewan.
M8	Picea glauca with Pinus banksiana and a small amount of Populus tremuloides. Sampled at only one plot, in Saskatchewan.
M9	Mixed Picea mariana and Larix laricina. Sampled only in Saskatchewan.

Understory Section

In general, sampling of understory vegetation was carried out using fixed-area plots. In 1993, these plots were also supplemented with line intersect measurements for some of the taller vegetation. Since methods varied slightly between the two years, a detailed discussion is necessary.

For sampling purposes, the understory vegetation was examined in three height classes. The shortest class covered the height layer from the surface to 0.05 m, and was expected to be dominated by lichens, mosses, and short herb species. The second (intermediate) height layer was expected to be dominated by herbs and shorter shrubs. In the 1993 measurements, this layer was taken to be 0.05 to 1.0 m in height. In 1994, it extended from 0.05 to 1.5 m. The third layer extended one metre above the second - 1.0 to 2.0 m in 1993, or 1.5 to 2.5 m in 1994 - and was expected to be dominated by taller herbs and shrubs. In 1993, this tallest layer was also measured using the line-intersect method, providing a second estimate of cover.

Fixed-area plots were established within a short distance of the plot centre used for overstory sampling, at a location away from any line-of-travel or other sampling (to avoid unnecessary trampling). Plot size varied, depending on needs. In 1993, one plot (usually 2(2 m or 5(5 m) was established, and the percentage cover for each species was estimated visually for each of the three height classes. In 1994, the normal practice was to set up a 5 m by 5 m plot for the tallest class, and then mark off a 2 m by 2 m plot in the corner to be used for the two shorter classes, leading to a nested arrangement of plots (according to height class). (Differences in plot areas and height classes between 1993 and 1994 are the result of a lack of suitable documentation of the 1993 practices at the time, rather than an intentional change in sampling design. For this document, original sources have been used to establish what was done in 1993.) When plot size is known in advance, a template can be carried that represents a known percentage of the plot area - e.g. 1%, 2%, 5%, etc. This aids in the accurate estimation of small percentages. For larger percentages, it is common to use rounded values - e.g. 10%, 20%, 30%, 50%, etc. Small values can be considered accurate to within 1-2%, but larger values have larger absolute errors. An entry of 50% is likely equivalent to 45-55%. For high percentage covers (e.g. 95%), it is common to use the template to estimate the area *not* covered by the species in question.

The 1993 line-intersect measurements involved setting out a tape measure along two lines - usually 10 m long - at right angles. A count of the number of 10 cm sections that a species intersected would provide an estimate of the percentage cover for that species. The line intersect estimates have been used in this report only where information on a species was not available from the fixed-area plot. The use of the line-intersect value is indicated by a footnote.

Each site has one table showing the understory vegetation observations. The first row in the table provides the date of measurements. The table is then organized by height class (tallest to smallest), with the actual heights for the layer (varies depending on year) and the plot size indicated. Within each layer, species are grouped into shrubs, herbs, mosses, and lichens. Within each of these groups, plants are listed in descending order of mean cover. Individual plot values are listed, with plot numbers corresponding to plot numbers for the overstory data. An entry of zero indicates that the species was not observed at that plot. The mean cover for the site is the arithmetic average of all plots at the site. Differences in plot size have been ignored in calculating the site mean.

Each plant is listed by genus and species. The names conform to those used in Johnson *et al.* (1995). In many instances, plants could only be identified to the genus level. In these cases the genus name is followed by "sp." to indicate an unknown species. In other instances, plants could

be identified as forbs, grasses, mosses, etc., but not as a particular genus. These are indicated in the tables as "Forb sp.", "Grass sp.", etc. In a few cases plants remained completely unidentified and are labelled "Unknown".

In examining the site tables, it must be recognized that plants identified to the species level at one plot may only be identified to the genus level at another plot within the same site. For example, at Manitoba site AIH-14, *Alnus crispa* is identified at plot 3 (50%), but plots 1 and 2 list *Alnus* sp. (15 and 2%, respectively). Plots 1 and 2 may contain *Alnus crispa*, but we cannot know for sure: the entry of "0" for those plots is only an indication that nothing was identified as *Alnus crispa*. We do not even know if the *Alnus* sp. entries at plots 1 and 2 are the same species. In calculating the mean cover for *Alnus* sp. (6%), the *Alnus crispa* at plot 3 has not been included. To get a total mean cover for all *Alnus* sp., one should add all entries for *Alnus* - i.e. 17% for *Alnus crispa* plus 6% for *Alnus* sp., to get 23%. This has not been done in these tables, in order that the data represent the lowest possible level of aggregation. In some instances, it is likely reasonable to assume that the sp. entries are of the same species as identified at other plots in the same site. This is left to the reader, however, in order to avoid misleading the reader with regard to the accuracy of the data.

In 1993, estimates were made for bare ground, litter, etc. These values were not recorded in 1994. In this case, absence of an entry cannot be treated as evidence of the absence of this surface cover. As a result, the reported data do not include any of the 1993 estimates for bare ground and such.

Different field crews also had different habits in reporting small percentage covers. In many instances, covers were reported in descending increments of 2%, 1%, and trace. In other instances, the increments were 2%, 1%, and <1%, or 2% and <2%, or occasionally just <3% or <5%. For analytical purposes, entries of "<5%" were assigned a value of 3%, entries of "<3%" were assigned a value of 2%, "<2%" became 1%, and "<1%" or "trace" became 0.1%. Within the data tables, any value less than 0.5% (i.e. a plot value of 0.1% or a mean value <0.5%) is indicated by "pr", meaning "present". An indication that a species is "present" may also be the result of observers identifying the plant outside the sample plot and mentioning it on the tally sheets, without an estimate of its coverage. Such entries are included, since in some instances the presence of a particular plant - even in very small quantities - may be of ecological importance. The tabulated data do not distinguish between species present inside the plot (in trace quantities) and species lists as "present" because they were observed outside the plot.

In interpreting the vegetation cover amounts, a further caveat is needed. In many instances, all plots within a site were visited on the same day, or within 1-2 days. In these cases, comparison between plots is straightforward. However, in some instances the plots were visited some time apart - for example, many of the multi-strata sites had only one or two plots measured in 1993, with the remaining plots examined in 1994. With a large time-span between measurement dates, observations of species with strong seasonal or year-to-year growth may not be directly comparable. Comparisons between sites that were visited some time apart must also keep this in mind.

Table 5 provides a list of all species encountered in the study, as well as an indication of how frequently the species are seen in the data set for each of the plot overstory associations presented in table 4. The table is organized into shrub, herb, moss, and lichen classes, with individual species listed alphabetically within each class. An alternative presentation could show how mean percentage cover varies within overstory classes, but table 5 is intended to examine presence or absence. In some cases, a species may be an important indicator even though it is only present in small quantities. A small mean cover percentage could arise from a high cover at one plot out of several, instead of small percentages at several plots, so a mean cover tabulation does not indicate how the species is distributed amongst the plots. An option would be to present a mean

cover value using only plots where the species is present, but this can still lead to ambiguities. Since all data is provided on a site-by-site basis, the reader may examine the data in any manner desired, and extensive summary tables would be redundant.

Table 5 provides an indication of what understory species can be expected in particular overstory types. For example, the various *Pyrola* species (wintergreens) are commonly found with hardwoods (plots dominated by *Populus tremuloides*, types A0 to A4; or mixedwood stands with hardwoods, types M2-M6), and are rare in the stands dominated by coniferous trees. The table also shows that *Pyrola virens* has a somewhat different distribution from other *Pyrola* species.

Table 5. Frequency of occurrence of understory species, by plot overstory group. Value indicates the percentage of plots in that class in which the species is present. (The total number of plots in the class is given in brackets.) Overstory groups are defined in table 4.

	Overstory Class (value in brackets indicates number of plots in the class)																						
Species	A0 (8)	A1 (35)	A2 (5)	A3 (6)	A4 (5)	B1 (78)	B2 (2)	B3 (11)	B4 (11)	J0 (20)	J1 (43)	J2 (4)	J3 (4)	J4 (2)	M1 (14)	M2 (4)	M3 (5)	M4 (6)	M5 (3)	M6 (4)	M7 (1)	M8 (1)	M9 (3)
Shrubs																							
Abies balsamea	0	0	0	0	20	1	0	0	0	0	7	0	0	0	0	0	0	0	33	75	100	100	0
Alnus crispa	25	31	60	67	0	10	50	0	0	20	26	50	25	0	0	50	20	33	0	25	0	0	0
Alnus rugosa	0	3	0	0	0	1	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0
Alnus sp.	0	34	0	50	40	9	0	18	9	0	7	0	0	0	36	25	40	17	0	0	0	0	0
Amelanchier alnifolia	25	14	0	0	0	0	0	0	0	10	12	0	0	0	0	0	0	0	0	0	0	0	0
Andromeda polifolia	0	0	0	0	0	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Arctostaphylos rubra	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arctostaphylos sp.	0	3	0	0	0	6	0	0	0	5	12	0	0	0	0	0	0	0	0	0	0	0	0
Arctostaphylos uva-ursi	12	29	20	0	0	12	0	27	18	45	51	25	25	50	0	0	20	33	0	50	0	0	33
Betula glandulosa	0	0	0	0	0	10	0	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	67
Betula papyrifera	0	6	40	0	20	3	50	9	0	5	5	50	50	0	0	0	40	17	0	0	0	0	0
Betula sp.	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
Cornus stolonifera	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
Corylus cornuta	25	14	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	33	50	0	0	0
Elaeagnus commutata	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empetrum nigrum	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Kalmia polifolia	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Larix laricina	0	0	0	0	0	4	0	9	9	0	0	0	25	0	0	0	0	0	0	0	0	0	67
Ledum groenlandicum	0	9	20	17	40	78	0	27	82	10	14	0	75	100	57	0	40	33	0	0	0	100	67
Linnaea borealis	38	60	60	67	100	27	50	36	36	10	51	75	25	50	21	75	40	67	100	50	0	100	0
Lonicera dioica	25	6	20	0	0	0	0	0	0	0	0	0	0	0	7	25	0	0	0	0	0	0	0
Lonicera involucrata	12	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
Lonicera sp.	0	6	0	0	0	1	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lonicera villosa	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oxycoccus microcarpus	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Picea glauca	12	14	20	0	60	0	0	0	9	0	2	0	0	100	7	25	0	0	0	0	100	100	0
Picea mariana	25	17	20	50	0	86	100	91	91	30	26	50	100	0	57	25	80	17	0	0	0	0	100
Picea sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
Pinus banksiana	25	0	0	17	0	0	0	0	0	75	30	25	0	0	7	0	0	0	0	0	0	0	0
Populus balsamifera	0	3	40	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Populus sp.	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Populus tremuloides	75	60	40	67	40	1	0	9	0	25	5	50	0	0	14	50	40	100	33	0	100	0	0
Potentilla fruticosa	0	0	0	0	0	1	0	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Potentilla tridentata	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Prunus pensylvanica	0	6	0	0	0	0	0	0	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0
Prunus virginiana	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhamnus alnifolia	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5 (continued).

Species	Overstory Class (value in brackets indicates number of plots in the class)																								
	A0 (8)	A1 (35)	A2 (5)	A3 (6)	A4 (5)	B1 (78)	B2 (2)	B3 (11)	B4 (11)	J0 (20)	J1 (43)	J2 (4)	J3 (4)	J4 (2)	M1 (14)	M2 (4)	M3 (5)	M4 (6)	M5 (3)	M6 (4)	M7 (1)	M8 (1)	M9 (3)
Shrubs (continued)																							
Ribes glandulosum	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ribes lacustre	12	3	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Ribes sp.	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ribes triste	0	3	20	0	0	3	50	0	0	0	0	0	0	0	7	0	0	0	0	25	0	0	0
Rosa acicularis	88	63	80	50	60	23	0	18	27	25	16	25	25	50	14	50	0	67	33	50	0	0	0
Rosa sp.	0	14	20	33	0	10	0	9	27	0	0	0	0	0	0	0	0	17	0	0	0	0	0
Rosa woodsii	0	17	0	17	0	12	50	9	0	0	5	0	0	0	7	0	40	17	0	0	0	0	0
Rubus chamaemorus	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Rubus idaeus	62	17	40	0	20	3	0	0	0	0	5	25	0	0	0	0	0	0	0	0	0	0	0
Rubus pubescens	38	43	60	33	20	5	50	0	0	5	5	25	0	0	21	25	20	83	33	0	0	0	0
Rubus sp.	0	3	0	17	40	3	0	0	0	0	5	25	0	0	0	0	0	0	0	50	0	0	0
Salix bebbiana	0	6	0	0	0	0	50	9	0	5	2	25	0	0	0	0	0	0	0	0	0	0	0
Salix glauca	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Salix sp.	38	37	20	33	20	44	50	36	55	20	9	0	50	0	0	0	20	33	0	0	0	0	0
Shepherdia canadensis	0	3	0	0	0	6	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Symphoricarpos albus	12	14	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	33	0	0	0	0	0
Symphoricarpos occidentalis	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Symphoricarpos sp.	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vaccinium caespitosum	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vaccinium myrtilloides	25	6	0	17	0	9	0	36	27	65	60	0	0	100	36	0	0	0	0	0	0	0	0
Vaccinium sp.	0	3	20	0	0	1	0	9	0	10	2	0	25	0	14	25	0	0	0	0	0	0	0
Vaccinium uliginosum	0	0	0	0	0	8	0	18	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Vaccinium vitis-idaea	12	14	0	17	0	68	50	36	55	25	51	25	25	100	43	50	40	17	33	0	0	0	0
Viburnum edule	75	51	80	67	20	14	50	27	18	0	5	25	0	50	21	50	20	67	67	50	0	0	0
Viburnum sp.	12	6	0	17	20	0	0	0	0	5	5	0	25	0	0	0	0	0	0	0	0	0	0
Herbs																							
Achillea millefolium	0	11	0	0	0	1	0	9	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Achillea sp.	0	9	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actaea rubra	12	9	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Agropyron repens	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
Agropyron subsecundum	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agrostis sp.	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allium sp.	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anemone multifida	0	0	0	0	0	0	0	0	0	5	9	0	0	0	0	0	0	0	0	0	0	0	0
Anemone patens	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Antennaria sp.	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Apocynum androsaemifolium	0	6	0	0	0	0	0	0	0	5	14	0	0	0	0	0	0	0	0	0	0	0	0
Aralia nudicaulis	75	43	40	17	80	0	0	0	0	0	12	25	0	0	7	75	0	50	67	0	0	0	0

Table 5 (continued).

Species	Overstory Class (value in brackets indicates number of plots in the class)																								
	A0 (8)	A1 (35)	A2 (5)	A3 (6)	A4 (5)	B1 (78)	B2 (2)	B3 (11)	B4 (11)	J0 (20)	J1 (43)	J2 (4)	J3 (4)	J4 (2)	M1 (14)	M2 (4)	M3 (5)	M4 (6)	M5 (3)	M6 (4)	M7 (1)	M8 (1)	M9 (3)
Herbs (continued)																							
Arnica cordifolia	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arnica sp.	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artemisia campestris	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aster ciliolatus	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Aster conspicuus	25	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Aster laevis	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Aster sp.	0	26	40	0	0	3	0	0	9	10	9	0	0	0	0	0	0	0	0	0	0	0	0
Calamagrostis canadensis	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	33	0	0	0	0
Calamagrostis sp.	50	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calypso bulbosa	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campanula rotundfolia	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0
Carex concinna	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	20	0	0	0	0	0	0
Carex sp.	0	11	0	0	0	14	0	0	55	15	2	0	0	0	0	0	0	17	0	0	0	0	67
Carex vaginata	0	0	0	0	0	1	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cerastium sp.	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comandra sp.	0	3	0	17	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comandra umbellata	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Compositae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Cornus canadensis	88	69	100	83	80	46	50	36	9	25	23	50	25	100	29	75	40	67	33	100	100	0	0
Disporum trachycarpum	25	3	0	0	0	0	0	9	0	5	2	0	0	0	7	0	0	0	33	0	0	0	0
Drosera rotundifolia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Drosera sp.	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elymus canadensis	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elymus innovatus	0	3	0	0	0	0	0	0	0	15	2	0	25	0	7	0	0	0	0	0	0	0	0
Elymus sp.	0	3	0	0	0	3	0	9	9	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Epilobium angustifolium	88	66	20	67	20	19	50	36	18	25	14	25	25	50	36	50	20	50	0	0	0	0	0
Equisetum arvense	12	0	0	0	20	4	0	0	0	5	0	0	0	0	7	0	0	0	0	0	0	0	0
Equisetum pratense	0	6	0	0	20	22	0	9	0	0	0	0	0	0	7	0	0	17	0	0	0	0	0
Equisetum scirpoides	0	0	0	0	0	10	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equisetum sp.	0	9	40	0	20	19	0	27	55	15	7	0	0	0	0	50	0	33	0	0	0	0	33
Equisetum sylvaticum	0	0	0	0	0	14	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Eriophorum sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	33
Festuca sp.	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Forb sp.	0	14	20	33	0	9	50	18	18	0	16	0	50	0	14	0	0	0	0	25	0	0	33
Fragaria sp.	0	20	40	17	0	9	0	9	0	5	0	0	0	0	7	0	0	17	0	0	0	0	0
Fragaria vesca	0	9	0	0	20	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fragaria virginiana	50	9	0	17	20	0	50	0	0	0	2	0	0	0	7	0	0	17	33	0	0	0	0
Galeopsis tetrahit	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galium boreale	12	17	20	0	20	0	0	9	9	25	12	0	0	0	0	0	0	17	0	0	0	0	0

Table 5 (continued).

Species	Overstory Class (value in brackets indicates number of plots in the class)																								
	A0 (8)	A1 (35)	A2 (5)	A3 (6)	A4 (5)	B1 (78)	B2 (2)	B3 (11)	B4 (11)	J0 (20)	J1 (43)	J2 (4)	J3 (4)	J4 (2)	M1 (14)	M2 (4)	M3 (5)	M4 (6)	M5 (3)	M6 (4)	M7 (1)	M8 (1)	M9 (3)
Herbs (continued)																							
Galium triflorum	25	11	20	0	20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0
Gentiana sp.	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Geocaulon lividum	0	6	0	0	0	3	0	0	0	0	5	25	0	0	0	0	0	0	0	0	0	100	0
Goodyera repens	0	0	0	0	0	0	0	0	0	0	2	25	0	0	0	25	0	0	0	0	0	0	0
Grass sp.	38	37	60	17	20	22	0	27	27	35	35	0	50	50	7	25	0	33	0	0	0	0	0
Gymnocarpium dryopteris	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Heracleum lanatum	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heuchera richardsonii	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iris sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Juncus sp.	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Koeleria cristata	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lathyrus ochroleucus	50	37	40	17	20	1	0	9	9	0	0	0	0	0	0	0	0	33	33	0	0	0	0
Lathyrus sp.	12	0	0	17	20	0	0	9	0	5	0	0	0	0	7	0	0	17	0	0	0	0	0
Lathyrus venosus	0	11	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Listera cordata	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0
Lycopodium annotinum	0	3	0	0	20	0	0	0	0	5	7	0	0	0	7	25	0	17	0	0	0	0	0
Lycopodium clavatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0
Lycopodium complanatum	0	3	0	17	0	0	0	0	0	0	14	25	0	0	0	25	20	0	0	0	0	100	0
Lycopodium obscurum	0	0	0	0	20	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Lycopodium sp.	0	0	0	0	0	0	0	9	0	0	0	25	0	0	0	25	0	0	0	50	0	0	0
Maianthemum canadense	12	49	60	33	60	8	50	18	0	15	37	50	0	0	7	50	0	50	33	75	100	100	0
Menyanthes trifoliata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Mertensia paniculata	25	34	60	50	20	15	50	0	0	15	5	0	0	0	14	25	20	50	33	25	0	0	0
Mitella nuda	12	34	60	83	40	17	50	0	27	10	2	0	0	0	29	25	0	50	67	50	0	0	33
Orchid sp.	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Orchis rotundifolia	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Parnassia sp.	0	0	0	0	0	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petasites palmatus	75	49	60	67	60	32	50	45	36	15	0	0	0	0	14	0	0	33	33	0	0	0	0
Petasites sagitattus	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petasites sp.	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0
Pyrola asarifolia	50	51	40	33	0	3	0	0	0	5	7	25	25	0	21	50	60	67	33	25	0	0	0
Pyrola secunda	12	14	20	0	20	6	0	0	0	0	0	0	0	0	0	25	20	17	0	25	0	0	0
Pyrola sp.	12	9	0	50	0	6	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Pyrola virens	0	3	0	0	20	3	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	100	0
Ranunculus sp.	0	0	0	0	0	1	0	0	9	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Sarracenia purpurea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Senecio sp.	12	11	0	0	0	1	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
Smilacina stellata	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	25	0	0	0	25	0	0	0
Solidago sp.	0	0	0	0	0	0	0	9	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0

Table 5 (continued).

Species	Overstory Class (value in brackets indicates number of plots in the class)																							
	A0 (8)	A1 (35)	A2 (5)	A3 (6)	A4 (5)	B1 (78)	B2 (2)	B3 (11)	B4 (11)	J0 (20)	J1 (43)	J2 (4)	J3 (4)	J4 (2)	M1 (14)	M2 (4)	M3 (5)	M4 (6)	M5 (3)	M6 (4)	M7 (1)	M8 (1)	M9 (3)
Herbs (continued)																							
Sonchus arvensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
Spiranthes romanzoffiana	0	0	0	17	0	1	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
Streptopus roseus	0	3	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taraxacum officinale	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thalictrum venulosum	12	6	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Thermopsis rhombifolia	0	9	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Trientalis borealis	12	17	40	0	20	3	0	0	0	0	5	25	0	0	14	25	0	17	0	25	0	100	0
Unidentified	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Vicia americana	50	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vicia sp.	0	9	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Viola renifolia	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0
Viola sp.	25	11	40	0	20	0	0	0	0	5	5	25	0	0	7	0	0	17	0	0	0	0	0
Mosses																							
Aulacomnium palustre	0	0	0	0	0	4	50	0	36	5	0	0	0	0	0	0	0	0	0	0	0	0	67
Aulacomnium sp.	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brachythecium salebrosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Brachythecium sp.	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	33	0	0	0	0
Dicranoweisia crispula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Dicranum polysetum	0	0	0	17	0	8	0	9	9	0	21	50	25	0	14	25	40	0	0	0	0	0	0
Dicranum sp.	0	14	40	17	20	33	0	64	36	5	47	25	25	50	43	50	0	33	33	0	0	0	33
Ditrichum flexicaule	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hylocomium splendens	25	34	0	50	20	72	100	82	82	5	16	75	75	0	57	75	100	33	100	75	100	100	0
Mnium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0
Moss sp.	12	40	40	0	40	8	0	18	0	20	5	0	0	0	14	25	0	33	33	75	0	0	0
Pleurozium schreberi	25	31	20	33	40	92	50	100	91	0	67	100	100	100	86	75	100	33	100	100	100	100	33
Polytrichum commune	0	9	0	17	20	1	0	18	0	20	5	0	0	0	21	0	0	0	0	0	0	0	0
Polytrichum sp.	12	3	0	17	0	19	50	0	9	30	7	0	0	0	0	0	0	0	0	0	0	0	33
Polytrichum strictum	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Ptilidium ciliare	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Ptilium crista-castrensis	12	6	0	0	0	13	0	27	18	5	12	50	0	0	36	50	60	17	33	0	100	100	0
Sphagnum angustifolium	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Sphagnum fuscum	0	0	0	0	0	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphagnum magellanicum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Sphagnum sp.	0	0	0	0	0	31	50	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Sphagnum warnstorfii	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Tomenthypnum nitens	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	67

Table 5 (continued).

Species	Overstory Class (value in brackets indicates number of plots in the class)																						
	A0 (8)	A1 (35)	A2 (5)	A3 (6)	A4 (5)	B1 (78)	B2 (2)	B3 (11)	B4 (11)	J0 (20)	J1 (43)	J2 (4)	J3 (4)	J4 (2)	M1 (14)	M2 (4)	M3 (5)	M4 (6)	M5 (3)	M6 (4)	M7 (1)	M8 (1)	M9 (3)
Lichens																							
Cladina mitis	12	17	0	0	0	60	0	27	36	55	67	75	25	50	50	0	0	0	33	0	0	0	0
Cladina rangiferina	0	0	0	0	0	0	0	0	0	0	12	0	0	0	7	25	0	0	0	0	0	0	0
Cladina sp.	0	0	0	0	40	10	0	27	27	0	26	0	0	0	0	0	0	0	0	0	0	0	0
Cladina stellaris	0	0	0	0	0	10	0	9	0	0	23	0	25	0	29	0	0	0	0	0	0	0	0
Cladonia borealis	0	0	0	17	0	3	0	9	0	5	5	0	0	0	7	0	0	0	0	0	0	0	0
Cladonia cariosa	0	0	0	17	0	3	0	0	0	15	2	0	0	50	0	0	0	0	0	0	0	0	0
Cladonia carneola	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cenotea	0	0	0	0	0	1	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cervicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Cladonia cornuta	0	9	0	17	0	5	0	0	9	5	16	0	0	0	7	0	0	0	0	0	0	0	0
Cladonia crispata	0	3	0	0	0	5	0	0	0	0	12	0	0	50	0	0	0	0	0	0	0	0	0
Cladonia deformis	0	0	0	0	0	1	0	0	0	10	5	0	0	0	7	0	0	0	0	0	0	0	0
Cladonia ecmocyna	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia gracilis	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia multiformis	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia pyxidata	12	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia sp.	12	6	0	17	0	4	0	9	9	55	5	0	0	0	14	0	0	17	0	0	0	0	0
Cladonia squamosa	0	9	0	0	0	0	0	0	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0
Cladonia uncialis	12	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	0	0	0	0	0	0	0
Lichen sp.	12	14	20	0	0	9	0	18	36	25	19	0	25	0	21	25	0	17	33	50	0	0	0
Peltigera aphthosa	25	17	20	17	20	44	100	55	27	10	26	25	50	0	0	0	40	33	0	25	0	0	0
Peltigera canina	0	0	0	0	0	3	0	9	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0
Peltigera didactyla	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera malacea	0	3	0	0	0	0	0	9	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera sp.	0	9	0	0	0	8	0	18	36	20	5	0	25	0	7	0	0	0	0	25	0	0	0
Stereocaulon sp.	0	0	0	0	0	0	0	0	0	5	0	0	0	0	7	0	0	0	0	0	0	0	0

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Overstory Data

Data are listed by site, with three tables (plot summary, individual trees, and cored trees) and a graph per site.

Sites are organized into four groups:

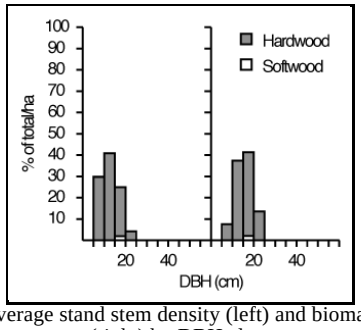
Within each group, sites are listed alphabetically by full site name (province, site code).

SITE CODE: MAN TE-OA (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/08	94/07/08	94/07/08	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	29.8	20.7	32.1	27.6
Basal area, dead (m^2 ha^{-1})	6.9	2.3	4.6	4.6
Stem density, live (ha^{-1})	1969	2176	1925	2023
Stem volume, live (m^3 ha^{-1})	201	124	225	183
Biomass (t ha^{-1})	117	72	128	105

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr [c]	16.0	codo	7	Potr	17.9	codo	14	Potr	19.3	domi
2	Potr	13.0	inte	8	Potr	21.4	domi	15	Potr	17.3	codo
3	Potr [c]	11.7	inte	9	Potr	21.6	domi	16	Potr	20.3	domi
4	Potr [d]	6.0	supp	10	Potr [c]	6.4	supp	17	Potr [d]	6.8	supp
5	Potr	15.7	codo	11	Potr	16.1	codo	—[e]	—	—	—
6	Potr [d]	12.8	codo	13	Potr	22.4	domi	—	—	—	—
Plot 2 (point sample)											
1	Potr [c]	14.1	codo	5	Potr	8.8	codo	9	Potr	8.4	inte
2	Potr [c]	10.4	codo	6	Potr	14.9	domi	10	Potr	15.2	domi
3	Potr	13.4	domi	7	Potr [c]	11.0	codo	—	—	—	—
4	Potr	9.8	codo	8	Potr [d]	8.2	inte	—	—	—	—
Plot 3 (point sample)											
1	Potr	13.4	codo	7	Potr [c]	12.1	inte	13	Potr	14.1	inte
2	Potr	16.8	domi	8	Potr [c]	14.4	inte	14	Potr [d]	9.1	supp
3	Potr	14.5	codo	9	Potr	17.8	domi	15	Potr	16.0	codo
4	Potr	15.6	codo	10	Potr	15.7	domi	16	Piba	15.8	codo
5	Potr	16.0	codo	11	Potr [d]	4.5	supp	—	—	—	—
6	Potr	12.4	inte	12	Potr	13.3	inte	—	—	—	—

[a] Piba = *Pinus banksiana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	16.0	codo	85	15.6	12.9	3.0	1.9	31	7
2	Potr	13.0	inte	74	13.5	8.0	2.5	3.4	50	5
5	Potr	15.7	codo	70	15.2	9.0	3.6	4.4	48	4
8	Potr	21.4	domi	68	17.7	10.8	4.1	6.0	39	7
13	Potr	22.4	domi	57	20.8	13.0	4.4	8.1	47	9
Plot 2										
3	Potr	13.4	domi	65	16.3	15.1	3.4	5.0	43	5
4	Potr	9.8	codo	27	12.7	10.3	2.1	1.6	15	5
6	Potr	14.9	domi	58	17.4	12.7	3.4	4.4	31	4
9	Potr	8.4	inte	—[c]	10.5	9.0	1.3	2.0	19	3
10	Potr	15.2	domi	58	16.0	13.5	2.8	4.4	43	4
Plot 3										
1	Potr	13.4	codo	57	15.7	11.9	1.9	3.7	34	4
2	Potr	16.8	domi	65	18.8	13.1	2.2	4.5	42	4
6	Potr	12.4	inte	55	14.2	11.5	1.8	4.1	43	4
9	Potr	17.8	domi	67	18.7	12.7	2.8	4.6	41	6

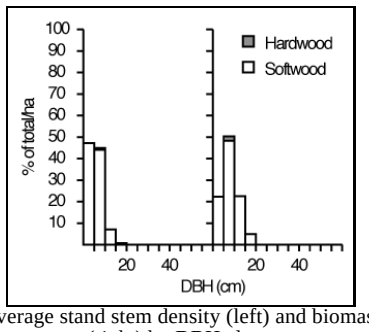
[a] Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: MAN TE-OBS (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/10	94/07/10	94/07/10	na [a]
Point sampling BAF (m^2 ha^{-1})	3.000	3.000	2.296	na
Basal area, live (m^2 ha^{-1})	51.0	18.0	45.9	38.3
Basal area, dead (m^2 ha^{-1})	3.0	0.0	4.6	2.5
Stem density, live (ha^{-1})	11603	13785	9486	11624
Stem volume, live (m^3 ha^{-1})	181	34	184	133
Biomass (t ha^{-1})	117	55	116	96

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima[c]	14.6	domi	7	Pima	8.2	codo	13	Pima	10.0	codo
2	Pima	5.7	inte	8	Pima[c]	7.1	codo	14	Pima	7.3	codo
3	Pima	4.7	inte	9	Pima[d]	6.5	supp	15	Pima	8.2	inte
4	Pima	6.2	inte	10	Pima[c]	7.7	codo	16	Pima	12.2	domi
5	Pima	10.9	codo	11	Pima[c]	9.1	codo	17	Pima[c]	9.3	codo
6	Pima[c]	6.4	inte	12	Pima[c]	7.1	codo	18	Pima	7.3	inte
Plot 2 (point sample)											
1	Pima	8.0	domi	3	Pima	3.2	supp	5	Pima[c]	4.0	inte
2	Pima	4.0	inte	4	Pima	3.3	supp	6	Pima[c]	5.7	codo
Plot 3 (point sample)											
1	Pima[c]	10.3	codo	9	Lala	11.7	codo	17	Pima	7.8	inte
2	Pima	8.8	codo	10	Lala[c]	16.6	domi	18	Pima[d]	7.7	inte
3	Potr[c]	9.7	codo	11	Lala[c]	13.3	domi	19	Pima	8.8	inte
4	Pima[c]	9.2	codo	12	Pima	4.5	inte	20	Pima	5.8	inte
5	Pima[c]	11.8	codo	13	Pima	6.4	inte	21	Pima	8.6	inte
6	Lala[c]	15.0	domi	14	Pima	4.8	inte	22	Pima	6.5	inte
7	Pima[c]	12.5	codo	15	Pima[d]	2.9	supp	—[e]	—	—	—
8	Pima	6.8	inte	16	Pima[c]	10.0	codo	—	—	—	—

[a] Lala = *Larix laricina*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	14.6	domi	154	11.3	4.3	1.2	1.0	40	4
3	Pima	4.7	inte	135[c]	5.7	4.6	0.6	—[d]	—	—
5	Pima	10.9	codo	160	9.4	6.2	0.7	1.0	38	8
13	Pima	10.0	codo	135	9.4	6.7	0.9	0.9	44	3
16	Pima	12.2	domi	127	10.1	7.5	0.7	0.9	18	5
Plot 2										
1	Pima	8.0	domi	86	5.4	1.8	1.0	1.5	66	3
2	Pima	4.0	inte	89[c]	3.8	1.5	0.9	8.3	36	3
3	Pima	3.2	supp	74[c]	2.9	1.3	0.5	—	—	—
4	Pima	3.3	supp	88[c]	3.3	1.4	0.3	—	—	—
6	Pima	5.7	codo	86	5.2	2.8	0.8	0.4	21	4
Plot 3										
1	Pima	10.3	codo	74	9.2	5.4	1.5	1.4	32	3
2	Pima	8.8	codo	72	9.6	7.5	0.6	0.7	27	3
6	Lala	15.0	domi	80	11.4	6.9	2.0	1.9	32	4
10	Lala	16.6	domi	79	13.7	7.8	2.2	2.2	35	4
19	Pima	8.8	inte	77	8.3	5.7	1.0	1.0	29	3

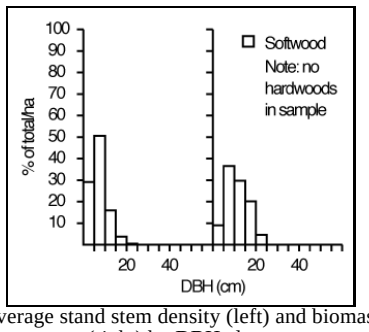
[a] Lala = *Larix laricina*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed
[c] Core or stem sample taken at base of tree. [d] Dashes indicate no measurement taken.

SITE CODE: MAN TE-OJP (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/09	94/07/09	94/07/09	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	20.7	13.8	32.1	22.2
Basal area, dead (m^2 ha^{-1})	6.9	4.6	2.3	4.6
Stem density, live (ha^{-1})	3908	508	7710	4042
Stem volume, live (m^3 ha^{-1})	81	82	109	91
Biomass (t ha^{-1})	51	42	77	57

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba [c]	8.5	codo	6	Piba [d]	6.9	supp	10	Piba [c]	7.7	inte
2	Piba [d]	3.9	supp	7	Piba [c]	4.4	supp	11	Piba	10.7	codo
3	Piba [c]	12.1	domi	8	Piba [c]	8.3	codo	12	Piba [d]	5.9	supp
4	Piba [c]	10.6	codo	9	Piba	13.6	domi	13	Piba [c]	12.0	domi
Plot 2 (point sample)											
2	Piba	15.7	codo	5	Piba [c]	18.5	codo	8	Piba	18.0	domi
3	Piba	19.9	domi	6	Piba [d]	12.0	codo	9	Piba	18.7	codo
4	Piba [d]	12.6	codo	7	Piba [c]	22.8	codo	—[e]	—	—	—
Plot 3 (point sample)											
1	Piba [c]	8.6	codo	6	Piba [c]	8.1	codo	11	Piba [c]	7.3	inte
2	Piba [d]	3.1	supp	7	Piba [c]	3.8	supp	12	Piba [c]	5.7	inte
3	Piba	11.3	codo	8	Piba	6.2	inte	13	Piba [c]	7.2	inte
4	Piba	13.4	domi	9	Piba	8.9	domi	14	Piba	11.5	domi
5	Piba [c]	8.8	codo	10	Piba	8.0	codo	15	Piba [c]	10.7	codo

[a] Piba = *Pinus banksiana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health [d] Tree is dead [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Piba	12.1	domi	59	11.0	5.0	1.9	2.6	32	4
4	Piba	10.6	codo	53	9.0	6.0	1.8	2.3	30	4
7	Piba	4.4	supp	51 [c]	5.5	1.6	0.3	—[d]	—	—
9	Piba	13.6	domi	47	11.3	7.3	1.8	2.9	28	5
13	Piba	12.0	domi	41	10.6	5.0	2.0	2.8	27	3
Plot 2										
1	Piba	20.7	codo	54	11.6	8.6	3.5	2.8	30	8
2	Piba	15.7	codo	47	13.2	6.8	1.7	2.6	28	3
3	Piba	19.9	domi	50	13.8	5.6	3.3	3.6	35	7
8	Piba	18.0	domi	60	14.0	6.2	3.1	2.7	33	7
9	Piba	18.7	codo	56	13.2	3.2	2.3	2.5	31	6
Plot 3										
4	Piba	13.4	domi	60	9.8	6.0	2.2	2.0	31	4
6	Piba	8.1	codo	59	8.2	4.4	1.1	1.6	40	3
8	Piba	6.2	inte	40	6.8	4.2	0.5	0.7	19	3
14	Piba	11.5	domi	54	10.4	6.0	1.5	2.6	27	4
15	Piba	10.7	codo	47	9.2	6.0	1.2	1.9	30	3

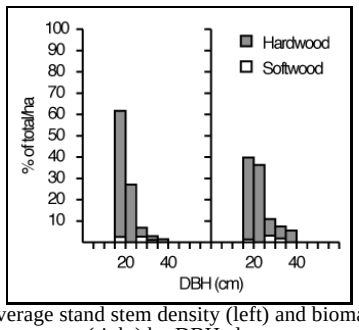
[a] Piba = *Pinus banksiana* [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Core or stem sample taken at base of tree [d] Dashes indicate no measurement taken

SITE CODE: SASK POM-MW (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/10/16	94/10/16	94/10/16	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	34.4	34.4	29.8	32.9
Basal area, dead (m^2 ha^{-1})	6.9	0.0	0.0	2.3
Stem density, live (ha^{-1})	1162	1222	695	1026
Stem volume, live (m^3 ha^{-1})	318	298	243	286
Biomass (t ha^{-1})	181	170	142	165

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	20.7	domi	7	Potr	22.2	codo	13	Potr	16.3	inte
2	Potr[c]	13.0	inte	8	Bepa[c]	13.0	codo	15	Potr	22.6	codo
3	Potr	15.0	codo	9	Potr	19.3	codo	16	Potr	20.4	codo
4	Potr	16.9	codo	10	Pigl	26.1	inte	17	Potr	21.8	codo
5	Potr	22.6	codo	11	Potr	19.3	codo	18	Potr	19.6	codo
6	Potr	16.0	inte	12	Potr	23.0	inte	20	Potr[c]	14.0	supp
Plot 2 (point sample)											
1	Potr	23.4	codo	6	Potr	21.3	codo	11	Potr[d]	16.4	inte
2	Potr	22.3	codo	7	Potr	23.2	codo	12	Potr	18.8	inte
3	Potr	23.4	codo	8	Potr[d]	15.6	inte	15	Pigl	19.0	inte
4	Potr	25.3	codo	9	Potr	17.2	codo	17	Potr	17.6	codo
5	Potr	16.7	inte	10	Potr	17.5	inte	18	Potr[d]	16.6	inte
Plot 3 (point sample)											
1	Potr	15.1	inte	8	Potr	36.4	codo	13	Potr	21.1	codo
2	Potr	35.6	codo	9	Potr	26.3	domi	14	Potr	26.9	codo
4	Potr	33.0	codo	10	Potr	32.2	domi	15	Potr	22.8	codo
5	Pigl[d]	26.9	inte	11	Potr	17.2	inte	—[e]	—	—	—
7	Pigl[d]	30.3	inte	12	Potr	17.9	inte	—	—	—	—

[a] Bepa = *Betula papyrifera*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Tree is dead
[d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	20.7	domi	—[c]	23.4	17.8	3.2	3.6	—	1
5	Potr	22.6	codo	53	21.6	16.0	3.9	3.6	28	4
6	Potr	16.0	inte	—	20.8	17.2	1.9	3.3	25	2
10	Pigl	26.1	inte	57	17.6	1.6	5.5	5.0	18	2
Plot 2										
4	Potr	25.3	codo	51	22.4	14.4	4.7	3.5	—	7
15	Pigl	19.0	inte	—	13.8	1.8	—	3.8	22	4
17	Potr	17.6	codo	—	21.6	16.6	3.6	3.8	22	5
Plot 3										
5	Pigl	26.9	inte	55	17.1	2.1	4.4	4.1	25	6
8	Potr	36.4	codo	—	22.6	15.0	7.2	4.7	28	11
9	Potr	26.3	domi	—	24.4	19.6	4.4	4.7	33	5

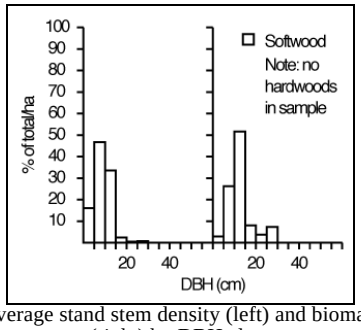
[a] Pigl = *Picea glauca*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK POM-OBS (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Average
Date of measurements (y/m/d)	94/10/15	94/10/15	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	36.7	55.1	45.9
Basal area, dead (m^2 ha^{-1})	2.3	4.6	3.4
Stem density, live (ha^{-1})	2696	9872	6284
Stem volume, live (m^3 ha^{-1})	209	299	254
Biomass (t ha^{-1})	112	164	138

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	14.6	codo	9	Pima	12.5	codo	16	Pima	10.0	inte
2	Pima	14.8	codo	10	Pima	11.9	codo	17	Lala[c]	21.8	domi
4	Pima	15.8	codo	11	Pima	13.7	codo	19	Pima	12.7	codo
5	Pima[d]	11.1	supp	12	Pima	18.8	domi	20	Pima	8.6	inte
7	Pima	17.5	codo	13	Lala	25.1	domi	21	Pima[c]	25.4	domi
8	Pima	13.0	codo	15	Pima	8.7	inte	—[e]	—	—	—
Plot 2 (point sample)											
1	Pima	14.3	domi	10	Pima	13.2	domi	20	Pima[c]	6.4	inte
2	Pima	13.8	codo	11	Pima	12.3	codo	21	Pima	14.0	domi
3	Pima	3.8	supp	12	Pima	10.0	codo	22	Pima	6.1	inte
4	Pima	7.1	inte	13	Pima	10.6	codo	23	Pima	10.8	codo
5	Pima[c]	9.3	codo	14	Pima	9.0	codo	24	Pima[c]	10.2	codo
6	Pima	11.2	codo	16	Pima	12.0	domi	25	Pima	9.8	inte
7	Pima[d]	6.2	supp	17	Pima	6.2	inte	26	Pima	8.9	inte
8	Pima[c]	7.6	inte	18	Pima	10.6	codo	27	Pima	13.3	domi
9	Pima[c]	8.8	inte	19	Pima[d]	6.6	supp	—	—	—	—

[a] Lala = *Larix laricina*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
7	Pima	17.5	codo	61	13.6	8.8	2.6	2.4	23	1
13	Lala	25.1	domi	65	21.2	14.7	3.6	4.4	23	3
17	Lala	21.8	domi	65	19.4	9.8	4.3	3.4	21	1
20	Pima	8.6	inte	48	9.5	5.9	1.9	1.7	22	1
21	Pima	25.4	domi	88	17.6	8.8	4.3	2.4	24	1
Plot 2										
1	Pima	14.3	domi	54	12.6	4.9	2.2	1.6	20	5
6	Pima	11.2	codo	53	11.3	7.4	1.8	1.7	25	5
12	Pima	10.0	codo	48	12.0	8.5	1.3	1.0	17	3
14	Pima	9.0	codo	57	11.9	8.1	1.0	1.0	25	1
22	Pima	6.1	inte	51	8.3	5.6	1.1	0.9	23	1

[a] Lala = *Larix laricina*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate

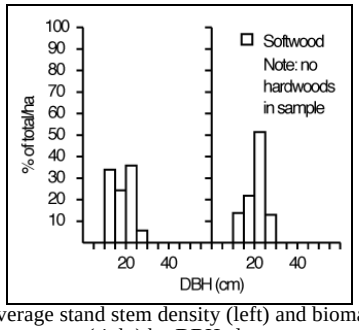
.

SITE CODE: SASK POM-OJP (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Average
Date of measurements (y/m/d)	94/10/14	94/10/14	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	34.4	45.9	40.2
Basal area, dead (m^2 ha^{-1})	2.3	13.8	8.0
Stem density, live (ha^{-1})	1060	1879	1470
Stem volume, live (m^3 ha^{-1})	292	414	353
Biomass (t ha^{-1})	146	203	175

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	21.0	codo	10	Piba[c]	21.9	codo	18	Piba	25.3	codo
2	Piba[c]	19.9	codo	11	Piba[c]	12.1	supp	19	Piba	21.6	codo
4	Piba	20.0	codo	12	Piba	18.8	codo	20	Piba	24.0	domi
5	Piba[d]	13.7	supp	13	Piba	20.2	codo	21	Piba[c]	22.6	domi
8	Piba	27.3	domi	14	Piba	20.7	codo	—[e]	—	—	—
9	Piba[c]	21.2	codo	16	Piba[c]	26.0	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba[d]	5.1	supp	10	Piba	20.7	codo	20	Piba[c]	21.0	codo
2	Piba[c]	14.6	inte	11	Piba[d]	8.4	supp	21	Piba	11.7	inte
3	Piba	14.3	codo	12	Piba	22.2	domi	24	Piba	17.0	codo
4	Piba	19.6	codo	13	Piba	14.7	codo	25	Piba[d]	12.6	supp
5	Piba	23.4	domi	14	Piba[c]	20.9	inte	26	Piba[d]	7.5	supp
6	Piba	22.3	codo	15	Piba[c]	24.3	inte	27	Piba[c]	13.2	codo
7	Piba[d]	12.4	supp	16	Piba[c]	22.4	codo	28	Piba[c]	19.8	codo
8	Piba[d]	20.0	supp	17	Piba	18.5	codo	29	Piba	16.3	codo
9	Piba	27.0	codo	19	Piba[c]	16.0	codo	—	—	—	—

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	21.0	codo	65	21.2	13.2	3.0	3.4	42	2
4	Piba	20.0	codo	71	20.2	12.4	3.2	2.3	36	4
8	Piba	27.3	domi	71	22.2	13.8	3.5	2.5	37	8
16	Piba	26.0	codo	70	19.2	12.2	3.6	3.2	24	13
21	Piba	22.6	domi	55	20.6	15.6	3.0	3.0	30	4
Plot 2										
3	Piba	14.3	codo	64	17.6	12.6	1.8	2.2	39	1
4	Piba	19.6	codo	68	20.8	16.4	2.2	2.2	41	1
5	Piba	23.4	domi	64	20.9	16.9	3.1	3.5	32	3
12	Piba	22.2	domi	65	21.0	14.0	3.8	2.1	36	1
21	Piba	11.7	inte	59	15.2	8.0	1.0	1.5	31	2

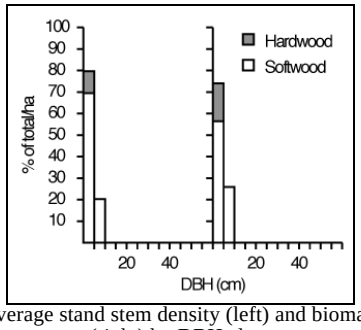
[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: SASK POM-YJP (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/10/17	94/10/17	94/10/17	na [a]
Fixed plot area (m^2)	30	30	30	na
Basal area, live (m^2 ha^{-1})	6.3	3.0	10.8	6.7
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	6000	2333	11333	6556
Stem volume, live (m^3 ha^{-1})	10	4	18	11
Biomass (t ha^{-1})	31	11	42	28

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Piba	1.0	inte	7	Piba	0.3	inte	13	Poba	1.5	inte
2	Piba	1.0	inte	8	Piba	6.8	domi	14	Poba	0.7	inte
3	Piba	0.4	inte	9	Piba	5.4	domi	15	Poba	1.4	inte
4	Piba	0.4	inte	10	Piba	6.4	domi	16	Piba [c]	4.6	codo
5	Piba [c]	3.6	codo	11	Piba	0.9	inte	17	Piba	3.6	codo
6	Piba	5.0	codo	12	Piba	4.4	codo	18	Piba [c]	4.8	codo
Plot 2 (fixed area plot)											
1	Piba	5.9	codo	4	Piba	5.5	domi	7	Potr	2.2	codo
2	Poba	0.9	inte	5	Piba [c]	4.2	codo	—[d]	—	—	—
3	Piba [c]	3.4	inte	6	Piba	3.7	codo	—	—	—	—
Plot 3 (fixed area plot)											
1	Piba [c]	5.8	domi	13	Piba	2.9	codo	25	Piba [c]	0.8	inte
2	Piba [c]	5.6	domi	14	Piba	3.1	codo	26	Piba	4.8	codo
3	Piba	3.2	codo	15	Piba	1.9	inte	27	Piba	1.4	codo
4	Piba [c]	1.5	inte	16	Piba	6.7	domi	28	Piba	3.1	codo
5	Piba	0.4	inte	17	Piba	4.6	codo	29	Piba	2.9	codo
6	Piba	4.5	domi	18	Piba	5.8	domi	30	Piba	0.5	inte
7	Piba	3.7	domi	19	Piba	2.0	inte	31	Piba	1.0	inte
8	Potr	1.6	inte	20	Piba	1.5	inte	32	Piba	1.0	inte
9	Piba	2.2	inte	21	Piba	1.5	inte	33	Piba	5.4	domi
10	Piba	3.8	codo	22	Piba	4.4	domi	34	Piba	5.6	domi
11	Piba	2.8	codo	23	Piba	2.3	codo	—	—	—	—
12	Piba	3.3	codo	24	Piba	1.0	inte	—	—	—	—

[a] Piba = *Pinus banksiana*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.

Field data from cored/aged trees

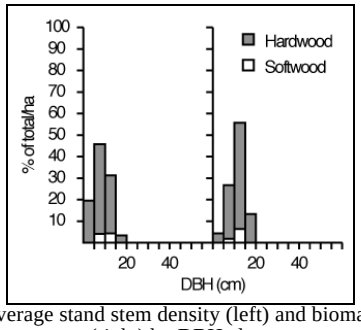
– no core or stem samples were collected from this site.

SITE CODE: SASK TE-MW (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/22	94/06/22	94/06/23	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	29.8	34.4	20.7	28.3
Basal area, dead (m^2 ha^{-1})	2.3	2.3	4.6	3.1
Stem density, live (ha^{-1})	4343	5561	2575	4160
Stem volume, live (m^3 ha^{-1})	179	140	100	140
Biomass (t ha^{-1})	108	100	60	89

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	8.8	inte	6	Potr	11.3	codo	11	Potr[c]	6.0	inte
2	Potr	11.4	codo	7	Pigl[c]	14.0	inte	12	Sasp[c]	4.9	inte
3	Potr	11.3	codo	8	Potr	12.7	domi	13	Potr[c]	15.3	domi
4	Potr	10.9	codo	9	Potr	13.4	domi	14	Potr[d]	7.0	codo
5	Potr	11.0	codo	10	Potr	14.1	domi	—[e]	—	—	—
Plot 2 (point sample)											
1	Poba	12.8	codo	7	Potr	11.1	codo	13	Poba[c]	5.8	inte
2	Potr	18.2	domi	8	Potr	13.0	codo	14	Pigl	13.4	inte
3	Potr	15.3	codo	9	Potr	14.1	domi	15	Potr	4.9	inte
4	Poba	8.6	inte	10	Pigl[c]	11.3	inte	16	Potr	9.5	codo
5	Poba[d]	9.8	inte	11	Potr	10.1	codo	—	—	—	—
6	Potr[c]	7.1	inte	12	Poba	7.3	inte	—	—	—	—
Plot 3 (point sample)											
1	Potr[c]	7.7	inte	5	Potr[d]	7.7	inte	9	Pima	7.6	inte
2	Potr	14.0	domi	6	Poba	12.4	codo	10	Potr[d]	5.4	inte
3	Potr	8.4	inte	7	Potr	13.0	codo	11	Potr	8.6	inte
4	Potr	13.0	codo	8	Potr	19.0	domi	—	—	—	—

[a] Pigl = *Picea glauca*, Pima = *Picea mariana*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, inte = intermediate. [c] Visual indications of poor health. [d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Potr	11.3	codo	51	16.3	13.9	1.8	2.4	32	4
4	Potr	10.9	codo	57	15.5	11.9	2.3	3.5	47	4
7	Pigl	14.0	inte	33	11.5	1.0	2.7	4.8	28	2
10	Potr	14.1	domi	42	15.5	14.3	2.4	3.4	21	5
Plot 2										
1	Poba	12.8	codo	50	12.6	7.4	1.5	2.1	32	10
2	Potr	18.2	domi	—[c]	15.0	11.0	2.6	3.2	17	5
10	Pigl	11.3	inte	30	9.1	1.0	2.7	2.8	19	5
Plot 3										
3	Potr	8.4	inte	—	10.0	6.4	1.3	1.9	20	2
6	Poba	12.4	codo	—	12.4	9.4	1.7	1.7	31	2
8	Potr	19.0	domi	—	16.3	10.9	2.0	4.1	37	4

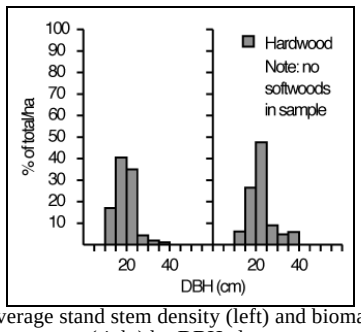
[a] Pigl = *Picea glauca*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK TE-OA (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/08	94/06/08	94/06/08	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	18.4	16.1	18.4	17.6
Basal area, dead (m^2 ha^{-1})	4.6	0.0	0.0	1.5
Stem density, live (ha^{-1})	547	304	736	529
Stem volume, live (m^3 ha^{-1})	180	132	121	144
Biomass (t ha^{-1})	104	79	70	85

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	24.6	domi	5	Potr [c]	11.7	supp	9	Potr	22.1	domi
2	Potr [c]	15.5	codo	6	Potr [d]	16.7	codo	10	Potr	23.1	domi
3	Potr	23.3	domi	7	Potr	17.0	codo	—[e]	—	—	—
4	Potr	23.6	domi	8	Potr	20.2	domi	—	—	—	—
Plot 2 (point sample)											
1	Potr [d]	28.6	codo	4	Potr [d]	24.5	codo	7	Potr [d]	29.3	codo
2	Potr [d]	38.8	domi	5	Potr	22.8	codo	—	—	—	—
3	Potr [d]	30.6	codo	6	Potr [d]	19.3	codo	—	—	—	—
Plot 3 (point sample)											
1	Potr	21.9	codo	4	Potr	18.5	codo	7	Potr	14.7	codo
2	Potr	14.7	codo	5	Potr	16.5	codo	8	Potr	19.2	codo
3	Potr	18.5	domi	6	Potr	24.9	codo	—	—	—	—

[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	24.6	domi	52	21.0	19.0	3.8	6.0	21	3
6	Potr	16.7	codo	60	20.5	19.5	2.8	4.4	26	4
7	Potr	17.0	codo	60	22.0	20.5	2.3	1.4	22	2
Plot 2										
1	Potr	28.6	codo	—[c]	19.6	12.2	5.2	3.9	24	8
4	Potr	24.5	codo	—	22.0	14.0	3.3	6.2	35	4
5	Potr	22.8	codo	—	15.0	23.4	2.7	4.3	39	4
Plot 3										
1	Potr	21.9	codo	—	18.4	12.3	3.9	3.7	30	7
6	Potr	24.9	codo	—	17.4	10.0	4.0	4.8	32	5
7	Potr	14.7	codo	—	14.4	10.2	2.8	4.2	33	3

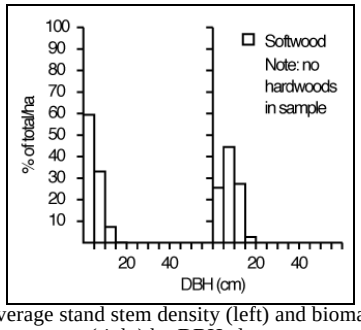
[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK TE-OBS (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/12	94/06/27	94/07/09	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	32.1	34.4	25.3	30.6
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	5220	17959	10824	11335
Stem volume, live (m^3 ha^{-1})	166	101	85	117
Biomass (t ha^{-1})	90	100	73	88

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	9.6	codo	6	Pima	9.6	codo	12	Pima	11.1	codo
2	Pima	9.5	codo	7	Pima	6.3	inte	13	Pima	9.8	domi
3	Pima	11.3	domi	8	Pima	8.0	codo	14	Pima	10.6	codo
4	Pima	6.0	inte	9	Pima	7.4	inte	15	Pima	11.9	codo
5	Pima	10.0	codo	10	Pima	12.3	codo	—[c]	—	—	—
Plot 2 (point sample)											
2	Pima	6.0	inte	7	Pima	4.8	inte	12	Pima	7.8	codo
3	Pima	9.1	domi	8	Pima	7.3	inte	14	Lala	11.7	domi
4	Pima	8.3	codo	9	Pima	3.8	inte	15	Pima[d]	6.5	inte
5	Pima	1.8	inte	10	Pima	7.1	inte	16	Lala	12.5	domi
6	Pima	8.9	domi	11	Pima	7.0	inte	17	Pima	8.7	codo
Plot 3 (point sample)											
1	Pima	3.0	supp	5	Pima	5.1	inte	9	Pima	14.6	codo
2	Pima	4.3	supp	6	Pima	9.0	inte	10	Pima	11.0	inte
3	Pima	3.1	supp	7	Lala	19.7	codo	11	Pima	10.2	inte
4	Pima	8.6	inte	8	Lala[d]	9.3	inte	—	—	—	—

[a] Lala = *Larix laricina*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken. [d] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Pima	11.3	domi	117	11.4	—[c]	—	2.8	94	4
8	Pima	8.0	codo	95	10.0	—	—	0.9	28	5
9	Pima	7.4	inte	70	10.1	—	—	0.8	20	3
10	Pima	12.3	codo	90	12.5	—	—	0.7	29	5
14	Pima	10.6	codo	95	11.5	—	—	1.1	34	4
Plot 2										
3	Pima	9.1	domi	87	7.9	4.9	0.9	1.0	30	4
6	Pima	8.9	domi	85	8.0	7.0	0.8	0.5	27	6
10	Pima	7.1	inte	79	5.3	4.4	1.0	0.6	27	4
16	Lala	12.5	domi	78	11.3	5.9	2.1	1.7	23	5
Plot 3										
5	Pima	5.1	inte	—[d]	4.2	1.8	1.0	—	—	—
7	Lala	19.7	codo	102	13.0	3.6	4.4	2.7	33	5
9	Pima	14.6	codo	94	14.2	5.8	1.6	1.7	38	3

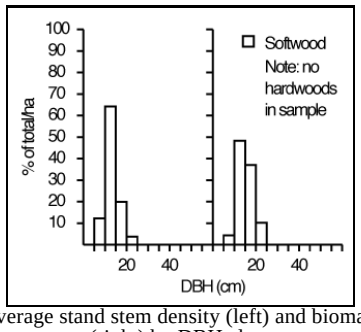
[a] Lala = *Larix laricina*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken. [d] Core or stem sample taken at base of tree.

SITE CODE: SASK TE-OJP (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/08	94/07/08	94/07/08	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	23.0	9.2	20.7	17.6
Basal area, dead (m^2 ha^{-1})	4.6	2.3	2.3	3.1
Stem density, live (ha^{-1})	1350	319	2072	1247
Stem volume, live (m^3 ha^{-1})	171	61	125	119
Biomass (t ha^{-1})	85	31	66	61

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba [c]	18.5	domi	5	Piba	10.1	inte	9	Piba	14.3	codo
2	Piba	12.9	codo	6	Piba	18.5	domi	10	Piba	20.0	domi
3	Piba [c]	16.4	codo	7	Piba [c]	16.3	codo	11	Piba [d]	18.3	supp
4	Piba	17.3	codo	8	Piba	12.6	codo	12	Piba [d]	17.0	codo
Plot 2 (point sample)											
1	Piba [c]	18.5	domi	3	Piba	18.8	domi	5	Piba	18.3	domi
2	Piba [c]	21.4	domi	4	Piba [d]	11.6	inte	—[e]	—	—	—
Plot 3 (point sample)											
1	Piba [c]	8.0	inte	5	Piba	14.2	domi	9	Piba	10.4	codo
2	Piba [d]	6.0	inte	6	Piba	10.8	codo	10	Piba	11.5	codo
3	Piba	10.8	codo	7	Piba	14.4	domi	—	—	—	—
4	Piba	14.0	domi	8	Piba	12.5	domi	—	—	—	—

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	18.5	domi	64	16.3	11.7	1.8	2.7	39	2
5	Piba	10.1	inte	29	14.2	10.8	0.8	1.2	11	4
9	Piba	14.3	codo	—[c]	14.2	10.2	2.1	2.7	35	4
Plot 2										
1	Piba	18.5	domi	56	14.4	6.2	2.7	2.0	31	4
3	Piba	18.8	domi	55	15.4	6.6	3.4	2.7	39	4
5	Piba	18.3	domi	73	14.4	8.4	3.6	3.3	41	7
Plot 3										
1	Piba	8.0	inte	38	13.2	5.9	2.2	1.0	26	2
3	Piba	10.8	codo	—	13.6	10.0	1.6	1.1	24	1
5	Piba	14.2	domi	—	9.5	6.6	2.0	2.3	44	3

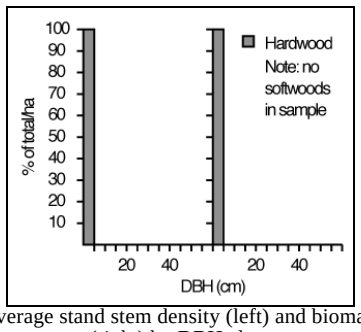
[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK TF-YA (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/11	94/07/11	94/07/11	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	3.6	7.2	10.8	7.2
Basal area, dead (m^2 ha^{-1})	0.0	0.2	0.1	0.1
Stem density, live (ha^{-1})	26800	41200	42800	36933
Stem volume, live (m^3 ha^{-1})	3	10	18	10
Biomass (t ha^{-1})	39	73	33	49

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Potr [c]	1.2	inte	24	Potr [c]	0.9	inte	47	Alcr	0.4	supp
2	Potr [c]	0.6	inte	25	Potr [c]	2.9	domi	48	Alcr	0.8	codo
3	Potr [c]	1.0	inte	26	Potr [c]	1.6	codo	49	Alcr	1.0	domi
4	Potr [c]	0.6	inte	27	Potr [c]	1.2	inte	50	Alcr	0.8	codo
5	Potr [c]	1.5	inte	28	Potr [c]	1.5	codo	51	Alcr	0.7	codo
6	Potr [c]	0.4	inte	29	Potr [c]	1.0	inte	52	Alcr	0.7	inte
7	Potr [c]	0.7	inte	30	Potr [c]	1.2	inte	53	Alcr	1.1	domi
8	Potr [c]	1.2	inte	31	Potr [c]	2.1	codo	54	Alcr	1.4	domi
9	Alcr	0.8	inte	32	Potr [c]	0.6	supp	55	Potr [c]	0.4	supp
10	Alcr [d]	0.6	inte	33	Potr [c]	0.7	supp	56	Potr [c]	0.5	inte
11	Alcr	0.8	inte	34	Potr [c]	2.5	domi	57	Potr [c]	1.0	inte
12	Alcr	1.0	inte	35	Potr [c]	0.7	inte	58	Potr [c]	1.3	codo
13	Potr [c]	0.3	supp	36	Potr [c]	1.5	inte	59	Potr [c]	0.9	inte
14	Potr [c]	1.2	codo	37	Potr [c]	1.5	inte	60	Potr [c]	0.8	inte
15	Potr [c]	1.6	codo	38	Potr [c]	2.8	domi	61	Potr [c]	1.2	codo
16	Potr [c]	0.6	inte	39	Potr [c]	2.7	domi	62	Potr [c]	2.0	codo
17	Potr [c]	1.2	supp	40	Potr [c]	1.0	inte	63	Potr [c]	0.9	inte
18	Alcr	0.7	codo	41	Potr [c]	1.3	inte	64	Potr [c]	1.9	codo
19	Potr [c]	0.6	inte	42	Potr [c]	1.0	inte	65	Potr [c]	2.6	codo
20	Potr [c]	1.1	inte	43	Potr [c]	2.2	codo	66	Potr [c]	1.4	codo
21	Potr [c]	0.9	inte	44	Alcr	0.6	inte	67	Potr [c]	1.8	codo
22	Potr [c]	0.9	inte	45	Alcr	1.1	codo	68	Potr [c]	1.4	supp
23	Potr [c]	0.4	supp	46	Alcr	0.4	supp	—[e]	—	—	—
Plot 2 (fixed area plot)											
1	Potr [c]	2.8	domi	37	Potr [c]	1.5	inte	73	Potr [c]	2.2	codo
2	Potr [c]	1.7	codo	38	Alcr	0.3	inte	74	Potr [c]	0.8	inte
3	Potr [c]	0.7	codo	39	Potr [c]	0.5	inte	75	Potr [c]	1.0	inte
4	Alcr	0.5	inte	40	Potr [c]	1.0	codo	76	Potr [c]	1.8	codo
5	Alcr	0.3	inte	41	Potr [c]	0.5	inte	77	Potr [c]	1.8	codo
6	Alcr	0.3	inte	42	Potr [c]	1.3	codo	78	Potr [c]	1.0	inte
7	Potr [d]	0.7	inte	43	Potr [c]	1.2	codo	79	Alcr	0.2	inte
8	Potr [d]	2.5	domi	44	Potr [c]	0.3	inte	80	Alcr	0.2	inte
9	Potr [c]	2.3	domi	45	Potr [c]	0.3	inte	81	Alcr	0.2	inte
10	Potr [c]	0.3	codo	46	Potr [c]	1.1	inte	82	Alcr	0.2	inte
11	Potr [c]	0.4	inte	47	Potr [c]	0.3	inte	83	Potr [c]	0.3	inte
12	Potr [c]	2.0	codo	48	Alcr	0.3	inte	84	Potr [c]	1.4	inte
13	Potr [d]	0.4	inte	49	Potr [c]	0.3	inte	85	Potr [c]	0.8	domi
14	Potr [c]	1.3	codo	50	Potr [c]	0.4	inte	86	Alcr	0.2	inte
15	Potr [c]	1.4	codo	51	Potr [d]	0.7	inte	87	Potr [c]	1.5	inte
16	Potr [c]	1.9	domi	52	Potr [c]	0.4	inte	88	Alcr	0.2	inte

SITE CODE: SASK TF-YA (1) continued

Individual tree values (continued)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (concluded)											
17	Potr[c]	0.6	inte	53	Potr[c]	0.3	inte	89	Alcr	0.3	inte
18	Potr[c]	1.0	inte	54	Potr[c]	0.6	inte	90	Alcr	0.3	inte
19	Potr[c]	3.5	domi	55	Potr[c]	2.2	codo	91	Potr[c]	1.7	codo
20	Alcr	0.4	inte	56	Potr[c]	2.2	codo	92	Potr[c]	0.8	codo
21	Alcr	0.4	inte	57	Potr[c]	2.6	domi	93	Potr[c]	2.8	domi
22	Alcr	0.4	inte	58	Alcr	0.4	inte	94	Potr[c]	1.3	codo
23	Alcr	0.3	inte	59	Sasp	1.0	inte	95	Potr[c]	0.6	inte
24	Potr[c]	1.0	codo	60	Sasp	2.0	codo	96	Alcr	0.1	inte
25	Potr[c]	2.1	domi	61	Sasp	2.4	codo	97	Potr[c]	1.3	codo
26	Potr[c]	2.2	domi	62	Sasp	1.8	codo	98	Potr[c]	1.5	codo
27	Potr[c]	2.2	codo	63	Sasp	1.7	codo	99	Potr[c]	1.8	codo
28	Potr[c]	1.9	domi	64	Sasp	2.2	codo	100	Potr[c]	1.0	inte
29	Potr[c]	0.3	inte	65	Potr[c]	3.5	domi	101	Potr[c]	1.8	codo
30	Alcr	0.2	inte	66	Potr[c]	2.0	codo	102	Potr[c]	1.2	codo
31	Potr[c]	3.2	domi	67	Potr[c]	3.2	domi	103	Alcr	0.6	codo
32	Potr[c]	2.2	codo	68	Potr[c]	1.2	codo	104	Potr[c]	1.2	codo
33	Potr[c]	1.4	codo	69	Potr[c]	0.8	inte	105	Alcr	0.5	inte
34	Potr[c]	0.3	inte	70	Potr[c]	2.7	codo	106	Potr[c]	0.5	inte
35	Potr[c]	3.7	domi	71	Potr[c]	1.4	codo	107	Potr[c]	1.0	codo
36	Potr[c]	1.1	inte	72	Potr[c]	1.0	inte	—	—	—	—
Plot 3 (fixed area plot)											
1	Potr[c]	1.4	inte	40	Potr[c]	1.3	codo	79	Potr[c]	1.5	supp
2	Potr[c]	2.2	codo	41	Potr[c]	1.8	codo	80	Potr[c]	1.6	inte
3	Potr[c]	1.0	inte	42	Potr[c]	3.0	domi	81	Potr[c]	2.5	codo
4	Potr[c]	1.7	codo	43	Potr[c]	2.5	domi	82	Potr[c]	3.5	domi
5	Potr[c]	1.2	inte	44	Potr[c]	2.4	domi	83	Potr[c]	3.0	codo
6	Potr[c]	2.3	codo	45	Potr[c]	1.8	codo	84	Potr[c]	0.7	inte
7	Potr[c]	0.6	inte	46	Potr[c]	1.6	codo	85	Potr[c]	3.0	codo
8	Potr[c]	3.3	codo	47	Potr[c]	0.9	inte	86	Potr[d]	0.4	supp
9	Potr[c]	1.2	inte	48	Potr[c]	0.4	supp	87	Potr[c]	0.6	inte
10	Potr[c]	1.3	inte	49	Potr[c]	1.1	inte	88	Potr[c]	2.5	codo
11	Potr[c]	1.0	inte	50	Potr[c]	1.6	inte	89	Potr[c]	0.7	inte
12	Potr[c]	1.6	inte	51	Potr[c]	1.7	codo	90	Potr[c]	1.5	inte
13	Potr[c]	1.4	inte	52	Potr[c]	0.5	supp	91	Potr[c]	1.0	inte
14	Potr[c]	1.9	codo	53	Potr[c]	2.7	domi	92	Potr[c]	1.0	inte
15	Potr[c]	3.8	domi	54	Potr[d]	0.3	supp	93	Potr[c]	2.5	codo
16	Potr[d]	0.8	supp	55	Potr[c]	3.2	domi	94	Potr[c]	2.5	codo
17	Potr[d]	0.6	supp	56	Potr[c]	1.4	inte	95	Potr[c]	2.0	codo
18	Potr[c]	1.5	inte	57	Potr[c]	1.0	inte	96	Potr[c]	2.0	codo
19	Potr[c]	1.2	inte	58	Potr[c]	0.6	inte	97	Potr[c]	1.3	inte
20	Potr[c]	1.4	inte	59	Potr[c]	1.0	inte	98	Sasp	0.4	inte
21	Potr[c]	0.9	inte	60	Potr[c]	2.6	domi	99	Sasp	0.3	inte
22	Potr[c]	0.5	supp	61	Potr[c]	3.0	domi	100	Sasp	0.2	inte
23	Potr[d]	1.4	inte	62	Potr[c]	2.2	codo	101	Sasp	0.3	inte
24	Potr[c]	0.6	supp	63	Potr[c]	0.6	supp	102	Potr[c]	1.8	codo
25	Potr[c]	0.7	supp	64	Potr[c]	3.1	domi	103	Potr[c]	1.2	inte
26	Potr[c]	0.5	supp	65	Potr[c]	0.4	supp	104	Potr[c]	0.6	inte
27	Potr[c]	0.3	supp	66	Potr[c]	0.5	supp	105	Potr[c]	1.3	inte
28	Potr[c]	3.0	domi	67	Potr[d]	0.5	supp	106	Potr[c]	3.0	codo
29	Potr[c]	1.3	codo	68	Potr[c]	1.9	codo	107	Potr[c]	1.5	inte
30	Potr[c]	2.4	codo	69	Potr[c]	0.7	supp	108	Potr[c]	0.7	inte
31	Potr[c]	2.7	domi	70	Potr[c]	2.5	codo	109	Potr[c]	0.6	inte
32	Potr[c]	1.8	inte	71	Potr[d]	0.6	supp	110	Potr[c]	1.6	codo
33	Potr[c]	2.8	domi	72	Potr[c]	1.0	supp	111	Potr[c]	0.7	inte

SITE CODE: SASK TF-YA (1) concluded

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (concluded)											
34	Potr[c]	1.4	inte	73	Potr[c]	1.1	supp	112	Potr[c]	1.1	inte
35	Potr[c]	2.7	domi	74	Potr[d]	0.3	supp	113	Potr[c]	1.0	inte
36	Potr[c]	0.6	inte	75	Potr[d]	0.2	supp	114	Potr[c]	1.8	inte
37	Potr[c]	2.8	domi	76	Potr[c]	2.0	codo	115	Potr[c]	0.5	supp
38	Potr[c]	2.2	codo	77	Potr[c]	3.0	domi	116	Potr[c]	0.3	supp
39	Potr[d]	0.3	supp	78	Potr[c]	1.2	supp	117	Potr[c]	1.2	inte

[a] Alcr = *Alnus crispa*, Potr = *Populus tremuloides*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
25	Potr	2.9	domi	8[c]	3.7	2.3	1.1	—[d]	—	—
58	Potr	1.3	codo	4[c]	2.3	1.5	0.5	—	—	—
68	Potr	1.4	supp	4[c]	1.8	1.1	0.5	—	—	—
Plot 2										
65	Potr	3.5	domi	10[c]	3.7	2.6	0.9	—	—	—
68	Potr	1.2	codo	6[c]	2.8	2.0	0.3	—	—	—
74	Potr	0.8	inte	5[c]	1.7	1.2	0.4	—	—	—
Plot 3										
14	Potr	1.9	codo	9[c]	3.3	2.2	0.5	—	—	—
15	Potr	3.8	domi	15[c]	3.9	2.5	1.2	—	—	—
21	Potr	0.9	inte	5[c]	2.4	1.4	0.5	—	—	—
40	Potr	1.3	codo	11[c]	3.2	2.2	0.5	—	—	—

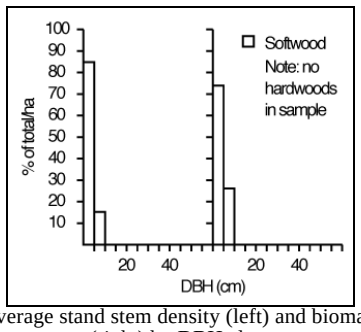
[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Core or stem sample taken at base of tree.
[d] Dashes indicate no measurement taken.

SITE CODE: SASK TF-YJP (1) Tower Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/09	94/07/09	94/07/09	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	18.2	6.0	15.0	13.1
Basal area, dead (m^2 ha^{-1})	0.1	0.0	0.0	0.0
Stem density, live (ha^{-1})	18400	16000	7600	14000
Stem volume, live (m^3 ha^{-1})	39	10	28	26
Biomass (t ha^{-1})	75	53	37	55

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Piba	3.5	codo	17	Piba [c]	1.2	supp	33	Piba	2.8	supp
2	Piba	1.2	inte	18	Piba	0.7	supp	34	Piba	2.4	codo
3	Piba	2.9	inte	19	Piba	7.3	domi	35	Piba	2.5	codo
4	Piba [c]	4.5	codo	20	Piba	4.8	domi	36	Piba	2.7	domi
5	Piba	0.6	supp	21	Piba	1.5	inte	37	Piba	3.0	domi
6	Piba	4.1	supp	22	Piba	3.8	codo	38	Piba	1.4	supp
7	Piba	6.1	supp	23	Piba [d]	1.3	supp	39	Piba	0.6	supp
8	Piba	0.4	supp	24	Piba	4.0	domi	40	Piba	3.4	codo
9	Piba	0.3	supp	25	Piba	2.8	supp	41	Piba	2.7	codo
10	Piba	6.2	domi	26	Piba	1.5	supp	42	Piba	6.4	domi
11	Piba	5.9	domi	27	Piba	6.0	domi	43	Piba	1.3	supp
12	Piba	6.0	domi	28	Piba	4.0	domi	44	Piba	0.4	supp
13	Piba	1.8	inte	29	Piba	5.5	domi	45	Piba	3.2	codo
14	Piba	0.8	inte	30	Piba	1.4	supp	46	Piba	0.3	supp
15	Piba	3.0	inte	31	Piba	0.3	supp	47	Piba	6.2	domi
16	Piba [c]	1.5	supp	32	Piba	2.3	supp	—[e]	—	—	—
Plot 2 (fixed area plot)											
1	Piba	1.7	codo	15	Piba	2.4	codo	29	Piba	2.0	codo
2	Piba	4.6	domi	16	Piba	1.9	codo	30	Piba	0.3	supp
3	Piba	0.6	supp	17	Piba	1.0	supp	31	Piba	0.4	supp
4	Piba	0.8	supp	18	Piba	1.6	supp	32	Piba	1.5	supp
5	Piba	1.1	supp	19	Piba	0.4	supp	33	Piba	1.0	supp
6	Piba	0.8	supp	20	Piba	2.4	codo	34	Piba	2.4	codo
7	Piba	2.7	codo	21	Piba	2.5	codo	35	Piba	0.4	supp
8	Piba	1.6	supp	22	Piba	4.7	domi	36	Piba	1.5	supp
9	Piba	0.4	supp	23	Piba	2.9	codo	37	Piba	0.7	supp
10	Piba	3.8	codo	24	Piba	1.1	inte	38	Piba	3.4	domi
11	Piba	2.1	codo	25	Piba	4.1	domi	39	Piba	1.5	codo
12	Piba	0.9	supp	26	Piba	0.6	supp	40	Piba	1.7	codo
13	Piba	4.1	domi	27	Piba	0.6	supp	—	—	—	—
14	Piba	3.1	domi	28	Piba	1.5	codo	—	—	—	—
Plot 3 (fixed area plot)											
1	Piba	7.5	domi	8	Piba	6.9	domi	15	Piba	6.5	domi
2	Piba	4.5	codo	9	Piba	5.0	domi	16	Piba	7.8	domi
3	Piba	2.2	codo	10	Piba	4.9	codo	17	Piba	4.8	codo
4	Piba	5.4	domi	11	Piba	4.0	codo	18	Piba	5.0	codo
5	Piba	3.5	codo	12	Piba	2.9	codo	19	Piba	3.6	codo
6	Piba	4.9	domi	13	Piba	3.4	codo	—	—	—	—
7	Piba	3.7	codo	14	Piba	4.6	codo	—	—	—	—

[a] Piba = *Pinus banksiana*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Visual indications of poor health

[d] Tree is dead.

[e] Dashes indicate no measurement taken.

SITE CODE: SASK TF-YJP (1) concluded

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Piba	2.9	inte	21[c]	3.7	1.1	—[d]	—	—	—
6	Piba	4.1	supp	20[c]	4.7	1.6	—	—	—	—
19	Piba	7.3	domi	22[c]	6.1	2.1	—	—	—	—
Plot 2										
11	Piba	2.1	codo	13[c]	3.1	0.5	0.4	—	—	—
19	Piba	0.4	supp	10[c]	1.9	0.4	0.3	—	—	—
25	Piba	4.1	domi	19[c]	4.1	1.3	0.8	—	—	—
Plot 3										
2	Piba	4.5	codo	19[c]	3.7	0.2	0.7	—	—	—
7	Piba	3.7	codo	19[c]	3.8	0.4	0.5	—	—	—
16	Piba	7.8	domi	16[e]	5.3	1.4	2.0	4.5	13	2

[a] Piba = *Pinus banksiana*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Core or stem sample taken at stump height.

[d] Dashes indicate no measurement taken.

[e] Core or stem sample taken at base of tree.

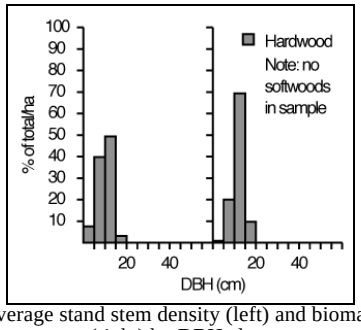
SITE CODE: MAN AIH-14 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/16	93/08/16	93/08/17	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	29.8	17.2	23.0	23.3
Basal area, dead (m^2 ha^{-1})	4.6	3.4	1.1	3.1
Stem density, live (ha^{-1})	3237	2454	3087	2926
Stem volume, live (m^3 ha^{-1})	193	100	149	147
Biomass (t ha^{-1})	113	69	86	89

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	12.6	domi	6	Potr	10.1	codo	12	Bepa [c]	9.9	inte
2	Potr	10.4	codo	7	Potr	11.2	codo	13	Potr	12.9	codo
3	Potr	10.6	codo	8	Potr	13.2	codo	14	Potr [d]	6.2	inte
4	Potr	6.9	inte	10	Potr	13.6	codo	15	Potr [c]	10.5	codo
5	Potr	12.7	domi	11	Potr [d]	9.7	inte	16	Potr	14.3	codo
Plot 2 (point sample)											
1	Potr	16.3	codo	10	Potr	9.7	codo	17	Bepa [d]	5.9	inte
2	Potr	15.3	codo	11	Bepa	8.3	inte	18	Potr	13.6	domi
3	Bepa	5.4	inte	12	Bepa	8.7	inte	19	Bepa [c]	9.3	codo
5	Potr	16.6	domi	14	Potr [c]	10.4	codo	20	Bepa [c]	10.7	codo
6	Potr	11.0	codo	15	Potr	10.7	codo	21	Bepa [d]	6.5	inte
8	Bepa	11.2	codo	16	Bepa	6.5	inte	22	Bepa [d]	11.3	codo
Plot 3 (point sample)											
1	Potr	11.4	codo	8	Potr [d]	4.6	—[e]	17	Potr	13.3	codo
2	Potr	4.7	codo	9	Potr	9.8	codo	19	Potr	13.9	codo
3	Potr	16.1	codo	11	Potr	12.5	codo	20	Potr	12.2	codo
4	Potr	11.1	codo	12	Potr	6.7	inte	21	Potr	14.0	codo
5	Potr	12.9	codo	13	Potr	16.4	domi	22	Potr	12.1	codo
6	Potr	7.8	codo	14	Potr [c]	7.1	supp	23	Potr [c]	10.9	codo
7	Potr	10.2	codo	15	Potr	12.3	codo	24	Potr	11.9	codo

[a] Bepa = *Betula papyrifera*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	12.6	domi	46	16.4	11.8	2.5	3.7	32	3
5	Potr	12.7	domi	44	17.0	10.4	2.7	3.0	30	3
Plot 2										
4	Bepa	10.2	inte	46	13.0	9.4	2.7	4.8	28	2
5	Potr	16.6	domi	43	17.0	10.4	3.9	3.4	24	3
6	Potr	11.0	codo	40	15.5	9.5	3.3	2.4	22	2
8	Bepa	11.2	codo	46	14.5	9.0	3.1	4.5	37	3
Plot 3										
1	Potr	11.4	codo	43	14.4	9.2	3.0	3.4	25	4
7	Potr	10.2	codo	36	16.4	14.4	3.5	2.2	22	2
13	Potr	16.4	domi	45	18.2	11.4	4.0	5.2	32	3

[a] Bepa = *Betula papyrifera*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate.

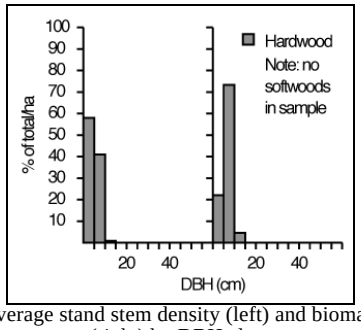
SITE CODE: MAN AIH-30 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/21	93/08/20	93/08/21	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	1.148	1.148 [b]	na
Basal area, live (m^2 ha^{-1})	20.7	11.5	27.6	19.9
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	6024	4543	19552	10040
Stem volume, live (m^3 ha^{-1})	65	33	86	61
Biomass (t ha^{-1})	40	21	57	39

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]
Plot 1 (point sample)											
3	Potr	8.8	codo	8	Potr	4.6	supp	11	Potr	7.6	codo
4	Potr	4.3	codo	9	Potr	7.5	inte	12	Potr	6.9	codo
7	Potr	10.2	domi	10	Potr	9.6	codo	13	Potr	8.1	codo
Plot 2 (point sample)											
1	Potr	5.7	codo	7	Potr	6.0	codo	12	Potr	8.7	codo
2	Potr	5.1	inte	8	Potr	7.7	codo	15	Potr	9.4	domi
4	Potr	4.4	codo	9	Potr	3.5	inte	— [c]	—	—	—
5	Potr	7.7	codo	10	Potr	6.7	codo	—	—	—	—
Plot 3 (point sample)											
1	Potr	4.2	inte	6	Potr	3.0	inte	13	Potr	6.1	codo
3	Potr	8.6	domi	8	Potr	6.3	codo	14	Potr	5.4	codo
4	Potr	5.0	codo	9	Potr	2.3	inte	15	Potr	3.7	inte
5	Potr	5.2	codo	10	Potr	6.0	codo	16	Potr	5.4	codo

[a] Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
13	Potr	8.1	codo	34	8.0	— [c]	1.5	1.2	13	4
Plot 2										
15	Potr	9.4	domi	29	9.5	6.5	3.5	3.2	20	2
Plot 3										
3	Potr	8.6	domi	37	11.5	8.0	2.5	3.0	18	2

[a] Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant.

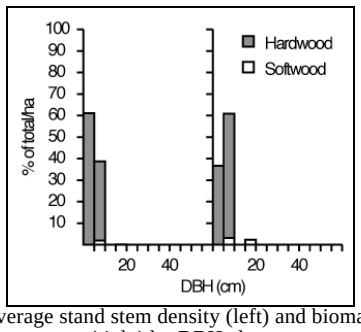
[c] Dashes indicate no measurement taken.

SITE CODE: MAN AIM-1 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/18	93/08/18	94/07/22	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	0.394	2.296	na
Basal area, live (m^2 ha^{-1})	3.4	5.9	9.2	6.2
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	3607	3179	3992	3592
Stem volume, live (m^3 ha^{-1})	4	16	30	17
Biomass (t ha^{-1})	8	11	19	13

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Bepa [c]	4.2	codo	2	Bepa	4.0	codo	4	Potr	2.8	codo
Plot 2 (point sample)											
1	Piba	15.4	domi	6	Potr	9.1	codo	11	Potr	4.9	codo
2	Potr	1.9	inte	7	Potr	5.1	codo	12	Pisp	5.0	inte
3	Potr	6.7	codo	8	Potr	5.9	codo	13	Potr	7.4	codo
4	Potr	6.1	codo	9	Potr	6.6	codo	14	Potr	5.8	codo
5	Potr	7.4	codo	10	Potr	6.4	codo	15	Potr	5.9	codo
Plot 3 (point sample)											
1	Potr	5.1	codo	3	Potr	5.3	codo	—[d]	—	—	—
2	Potr	8.1	domi	4	Potr	4.6	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pisp = *Picea* sp., Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Bepa	4.2	codo	18	3.3	1.9	1.0	0.8	8	2
3	Bepa	6.7	domi	23	—[c]	2.3	2.3	—	—	4
4	Potr	2.8	codo	12	3.4	1.6	0.7	—	—	2
Plot 2										
1	Piba	15.4	domi	30	10.6	5.3	3.3	2.0	13	2
2	Potr	1.9	inte	12	2.2	1.5	0.6	—	—	—
3	Potr	6.7	codo	22[d]	7.5	4.2	1.9	2.5	15	2
12	Pisp	5.0	inte	27	4.5	1.6	0.7	1.2	15	2
Plot 3										
1	Potr	5.1	codo	70	7.0	4.6	1.2	—	—	4
2	Potr	8.1	domi	43	10.1	5.4	1.4	2.9	36	4
3	Potr	5.3	codo	40	7.4	5.9	1.4	—	—	4
4	Potr	4.6	codo	38	7.3	4.3	1.5	—	—	4

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pisp = *Picea* sp., Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.
[d] Core or stem sample taken at base of tree.

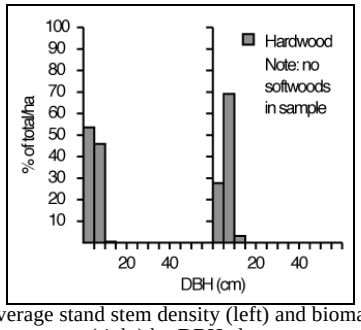
SITE CODE: MAN AIM-20 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/21	93/08/21	93/08/21	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	0.394 [b]	0.394	na
Basal area, live (m^2 ha^{-1})	16.1	10.2	5.1	10.5
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	7176	6386	1895	5152
Stem volume, live (m^3 ha^{-1})	48	23	15	29
Biomass (t ha^{-1})	31	16	9	19

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr [c]	9.5	domi	6	Potr	6.6	domi	11	Potr	5.2	codo
2	Potr [c]	5.1	codo	7	Potr	7.2	codo	12	Potr	3.6	inte
3	Potr [c]	4.3	codo	8	Potr	7.3	domi	13	Potr	4.4	codo
4	Potr	5.5	codo	9	Potr	5.0	codo	14	Potr	5.4	codo
5	Potr	5.9	codo	10	Potr	6.4	codo	—[d]	—	—	—
Plot 2 (point sample)											
1	Potr	4.8	codo	6	Potr	3.0	codo	11	Potr	7.6	domi
2	Potr	4.2	codo	7	Potr	3.7	codo	12	Potr	4.9	codo
3	Potr	5.1	codo	8	Potr	3.8	codo	14	Potr	5.7	domi
4	Potr	4.5	codo	9	Potr	6.1	domi	—	—	—	—
5	Potr	6.1	domi	10	Potr	4.4	codo	—	—	—	—
Plot 3 (point sample)											
1	Potr	7.7	domi	6	Potr	12.5	domi	11	Potr	7.5	codo
2	Potr	7.0	codo	7	Potr	8.0	domi	13	Potr	5.2	codo
3	Potr [c]	2.8	supp	8	Potr	11.1	domi	14	Potr	5.5	codo
4	Potr	5.2	codo	9	Potr	7.0	codo	—	—	—	—
5	Potr	7.5	codo	10	Potr	7.1	codo	—	—	—	—

[a] Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Visual indications of poor health. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	9.5	domi	23	9.0	4.5	2.8	3.3	18	3
2	Potr	5.1	codo	12 [c]	7.3	4.2	1.6	2.0	9	2
12	Potr	3.6	inte	18 + [c]	5.4	3.4	1.9	—[d]	—	2
Plot 2										
1	Potr	4.8	codo	10 +	5.6	2.4	1.0	—	—	—
11	Potr	7.6	domi	25	7.8	2.3	1.6	3.2	22	2
Plot 3										
2	Potr	7.0	codo	25	7.7	4.0	2.4	2.2	19	2
3	Potr	2.8	supp	20 +	3.4	1.9	1.1	—	—	—
6	Potr	12.5	domi	20	9.3	1.5	4.5	6.0	20	2
8	Potr	11.1	domi	—	9.5	4.3	2.8	—	—	—

[a] Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

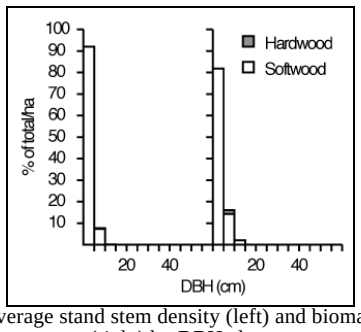
[c] Core or stem sample taken at base of tree. [d] Dashes indicate no measurement taken.

SITE CODE: MAN BDH-3a (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 5	Average
Date of measurements (y/m/d)	93/08/13	93/08/13	94/07/23	na [a]
Point sampling BAF (m^2 ha^{-1})	0.394	0.394	na	na
Fixed plot area (m^2)	na	na	25	na
Basal area, live (m^2 ha^{-1})	3.9	7.5	5.7	5.7
Basal area, dead (m^2 ha^{-1})	0.8	2.4	0.0	1.1
Stem density, live (ha^{-1})	7629	7187	9200	8005
Stem volume, live (m^3 ha^{-1})	4	15	12	10
Biomass (t ha^{-1})	24	28	32	28

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	3.5	codo	5	Pima	5.5	domi	9	Pima	2.6	codo
2	Pima	2.3	codo	6	Bepa [c]	3.4	—[d]	10	Pima	1.7	codo
3	Pima	2.5	codo	7	Pima [c]	2.4	—	11	Pima	1.9	codo
4	Pima	3.0	codo	8	Pima	2.5	codo	12	Pima	8.2	domi
Plot 2 (point sample)											
1	Piba [c]	12.1	domi	11	Pima	3.7	inte	22	Pima	8.0	domi
2	Pima	2.5	supp	12	Poba	6.9	codo	23	Pima	4.4	codo
3	Pima	1.5	supp	13	Pima	4.5	codo	24	Piba	14.8	domi
4	Pima	3.2	inte	14	Piba	11.5	domi	25	Piba [c]	8.0	codo
5	Poba [c]	4.0	inte	15	Pima	4.6	codo	26	Pima [c]	3.9	supp
6	Pima	6.3	codo	16	Pima	4.1	codo	27	Pima	3.7	inte
7	Pima	4.4	codo	17	Pima	3.5	inte	28	Pima	3.3	inte
8	Pima	4.2	inte	19	Piba [c]	7.5	domi	—	—	—	—
10	Pima	6.9	domi	21	Piba [c]	8.4	domi	—	—	—	—
Plot 5 (fixed area plot)											
1	Pima	8.0	domi	9	Pima	2.2	inte	17	Pima	0.6	supp
2	Pima	1.2	supp	10	Pima	2.0	inte	18	Pima	0.7	supp
3	Pima	2.1	inte	11	Pima	2.1	inte	19	Pima	0.9	supp
4	Pima	1.4	supp	12	Pima	2.2	inte	20	Pima	0.6	supp
5	Pima	0.6	supp	13	Pima	0.7	supp	21	Pima	1.4	supp
6	Pima	5.1	codo	14	Pima	0.4	supp	22	Pima	0.9	supp
7	Pima	6.4	codo	15	Pima	0.9	supp	23	Pima	2.3	inte
8	Pima	3.4	inte	16	Pima	1.4	supp	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*, Poba = *Populus balsamifera*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed [c] Tree is dead.
[d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	3.5	codo	32 [c]	—[d]	2.1	0.6	—	—	—
12	Pima	8.2	domi	37 [c]	5.2	1.9	1.2	—	—	—
Plot 2										
2	Pima	2.5	supp	59 [c]	—	—	—	—	—	—
3	Pima	1.5	supp	50 [c]	1.9	1.0	0.5	—	—	—
4	Pima	3.2	inte	63 [c]	2.8	1.8	0.5	—	—	—
6	Pima	6.3	codo	52	4.4	1.7	0.7	—	—	1
10	Pima	6.9	domi	41	6.7	5.0	0.7	—	—	1
12	Poba	6.9	codo	41	5.1	2.3	1.3	—	—	2
24	Piba	14.8	domi	76	9.8	3.7	2.9	2.2	30	1
Plot 5										
6	Pima	5.1	codo	63 [e]	2.0	0.6	0.7	—	—	4
7	Pima	6.4	codo	65 [e]	5.0	1.2	0.9	—	—	4
8	Pima	3.4	inte	62 [e]	2.9	0.7	0.5	—	—	4
9	Pima	2.2	inte	—[e]	2.1	1.2	0.5	—	—	—
23	Pima	2.3	inte	69 [e]	4.0	1.0	1.1	—	—	3

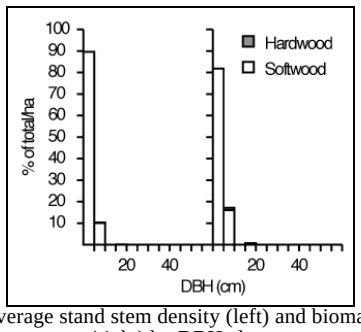
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Poba = *Populus balsamifera*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed
[c] Age estimated by counting whorls. [d] Dashes indicate no measurement taken. [e] Core or stem sample taken at base of tree.

SITE CODE: MAN BDH-3b (2) Northern Aux. Site

Stand values

Parameter	Plot 3	Plot 4	Plot 6	Average
Date of measurements (y/m/d)	93/08/13	93/08/13	94/07/24	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	0.394	na	na
Fixed plot area (m^2)	na	na	25	na
Basal area, live (m^2 ha^{-1})	12.6	10.6	2.5	8.6
Basal area, dead (m^2 ha^{-1})	0.0	1.2	0.0	0.4
Stem density, live (ha^{-1})	20257	6839	2400	9832
Stem volume, live (m^3 ha^{-1})	21	21	4	15
Biomass (t ha^{-1})	67	30	9	35

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (point sample)											
2	Pima	2.9	inte	7	Pima	4.3	codo	15	Pima	4.0	codo
4	Pima	1.7	juve	12	Pima	7.3	domi	16	Pima	2.4	inte
5	Pima	4.3	codo	13	Pima	3.0	inte	17	Pima	3.1	inte
6	Pima	1.9	juve	14	Pima	3.9	s/in	—[e]	—	—	—
Plot 4 (point sample)											
1	Pima	15.1	domi	13	Pima	5.1	codo	25	Pima	4.4	codo
2	Pima	4.8	s/in	14	Pima[c]	5.2	codo	26	Pima	6.5	codo
3	Bepa[c]	8.4	codo	16	Pima[d]	6.4	codo	27	Pima	2.7	inte
4	Pima	7.8	codo	17	Pima	6.1	codo	28	Pima	7.1	codo
5	Pima	7.1	codo	18	Prsp[d]	2.2	supp	29	Pima	1.9	supp
8	Pima[c]	3.1	j/in	19	Pima	5.0	codo	30	Pima[d]	4.9	codo
9	Pima	7.0	codo	20	Pima	5.3	codo	32	Pima	6.5	codo
10	Pima	3.0	inte	22	Pima	5.5	codo	34	Pima	4.0	inte
11	Pima	6.8	codo	23	Pima	5.0	codo	35	Pima	4.5	inte
12	Pima	6.0	codo	24	Pima	5.2	codo	38	Pima	4.6	codo
Plot 6 (fixed area plot)											
1	Pima	5.2	domi	3	Pima	1.7	inte	5	Pima	1.6	inte
2	Pima	3.7	codo	4	Pima	4.6	inte	6	Pima	3.3	codo

[a] Bepa = *Betula papyrifera*, Pima = *Picea mariana*, Prsp = *Prunus* sp. [b] codo = codominant, domi = dominant, inte = intermediate, juve = juvenile, supp = suppressed, j/in = juvenile/intermediate, s/in = suppressed/intermediate.
[c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 3										
1	Pima	3.1	inte	59[c]	3.6	2.5	0.4	—[d]	—	—
7	Pima	4.3	codo	79[c]	4.3	3.4	0.5	—	—	—
12	Pima	7.3	domi	51	5.9	1.7	1.1	1.0	22	1
Plot 4										
1	Pima	15.1	domi	111	10.1	3.5	1.9	4.5	10	2
2	Pima	4.8	s/in	98	3.2	1.7	0.6	—	—	2
4	Pima	7.8	codo	45	5.0	1.1	1.6	2.0	25	3
10	Pima	3.0	inte	66[c]	3.2	1.4	0.8	—	—	—
Plot 6										
1	Pima	5.2	domi	73[e]	4.8	4.0	0.8	—	—	4
2	Pima	3.7	codo	72[e]	3.4	2.0	0.6	—	—	3
3	Pima	1.7	inte	43[e]	1.9	1.4	0.6	—	—	3
4	Pima	4.6	inte	80[e]	3.7	2.9	0.8	—	—	5
5	Pima	1.6	inte	—[e]	1.8	1.3	0.6	—	—	2

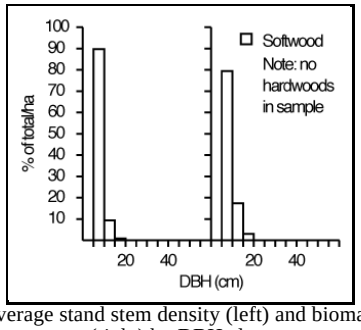
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, s/in = suppressed/intermediate.
[c] Age estimated by counting whorls. [d] Dashes indicate no measurement taken. [e] Core or stem sample taken at base of tree.

SITE CODE: MAN BIH-1a (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 5	Plot 6	Average
Date of measurements (y/m/d)	93/08/15	94/07/21	94/07/21	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	9.2	39.0	27.6	25.3
Basal area, dead (m^2 ha^{-1})	1.1	6.9	4.6	4.2
Stem density, live (ha^{-1})	1928	6647	5805	4793
Stem volume, live (m^3 ha^{-1})	32	151	101	95
Biomass (t ha^{-1})	20	91	67	60

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
3	Pima	9.6	codo	6	Pima[c]	6.2	codo	13	Pima	10.6	inte
4	Pima	8.1	inte	7	Pima[d]	5.9	inte	14	Pima	6.8	inte
5	Pima	7.8	codo	8	Pima	8.0	inte	16	Pima	8.3	codo
Plot 5 (point sample)											
1	Piba	9.2	inte	8	Pima[c]	7.3	supp	15	Pima	8.5	codo
2	Piba	9.5	codo	9	Pima	8.4	inte	16	Pima	8.6	codo
3	Pima	6.2	inte	10	Pima	9.7	codo	17	Pima[c]	5.5	supp
4	Pima[d]	9.7	codo	11	Pima[d]	10.1	codo	18	Pima[d]	13.6	domi
5	Pima	7.1	codo	12	Piba[c]	6.7	codo	19	Piba[d]	6.2	supp
6	Piba	9.1	codo	13	Pima	10.3	codo	20	Pima[d]	15.0	codo
7	Piba	7.7	supp	14	Pima	9.2	codo	—[e]	—	—	—
Plot 6 (point sample)											
1	Pima[d]	9.7	domi	6	Pima	7.5	codo	11	Lala	7.8	codo
2	Pima[d]	8.7	codo	7	Pima[c]	7.2	inte	12	Lala	10.0	codo
3	Pima	7.8	codo	8	Pima	12.0	domi	13	Pima	7.8	inte
4	Pima	7.7	codo	9	Lala	6.0	codo	14	Lala[c]	7.7	codo
5	Pima[d]	6.4	inte	10	Pima	6.8	codo	—	—	—	—

[a] Lala = *Larix laricina*, Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	12.1	domi	58	10.2	4.5	1.1	1.2	20	4
17	Pima	8.2	codo	49	8.1	4.4	0.7	0.8	15	2
Plot 5										
6	Piba	9.1	codo	90	9.5	6.2	0.8	1.4	47	4
9	Pima	8.4	inte	57	8.6	4.6	1.1	1.2	24	3
10	Pima	9.7	codo	51	9.2	4.8	1.2	1.6	18	5
18	Pima	13.6	domi	62	11.7	4.2	1.3	1.7	24	5
20	Pima	15.0	codo	76	10.2	4.2	1.2	1.1	19	5
Plot 6										
1	Pima	9.7	domi	63	11.1	4.3	1.4	1.4	33	4
4	Pima	7.7	codo	60	7.6	4.6	1.2	1.0	10	4
7	Pima	7.2	inte	56	6.9	3.3	1.4	1.1	28	3
8	Pima	12.0	domi	62	9.3	3.9	1.4	1.1	23	4
12	Lala	10.0	codo	58	9.8	4.1	1.6	1.6	35	4

[a] Lala = *Larix laricina*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.

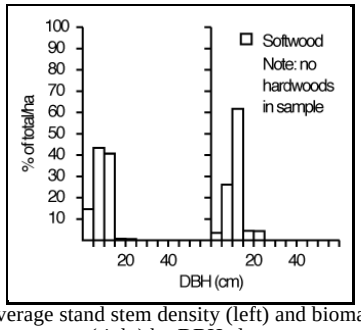
SITE CODE: MAN BIH-1b (2) Northern Aux. Site

Stand values

Parameter	Plot 2	Plot 4	Plot 7	Average
Date of measurements (y/m/d)	93/08/15	93/08/15	94/07/21	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	1.148 [b]	2.296	na
Basal area, live (m^2 ha^{-1})	18.4	25.3	29.8	24.5
Basal area, dead (m^2 ha^{-1})	2.3	2.3	0.0	1.5
Stem density, live (ha^{-1})	1554	4504	4305	3454
Stem volume, live (m^3 ha^{-1})	72	114	132	106
Biomass (t ha^{-1})	41	67	74	61

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (point sample)											
1	Pima	12.4	codo	5	Pima	10.4	codo	9	Pima	13.6	codo
2	Pima	22.4	domi	7	Pima [c]	12.2	codo	10	Pima	10.3	codo
3	Pima	13.6	codo	8	Pima [d]	12.3	codo	11	Pima	10.8	codo
Plot 4 (point sample)											
1	Pima	6.9	inte	6	Pima	7.6	inte	12	Pima	18.5	domi
2	Pima	14.4	domi	7	Pima [d]	14.6	codo	14	Pima	11.3	codo
3	Pima	10.6	codo	8	Pima [d]	13.5	codo	16	Pima [d]	4.4	supp
5	Pima	6.4	inte	10	Pima [c]	10.9	codo	17	Pima	14.1	codo
Plot 7 (point sample)											
1	Pima	9.6	codo	6	Pima	8.5	supp	11	Pima	11.8	codo
2	Pima [d]	9.7	supp	7	Pima	11.9	codo	12	Pima [d]	8.8	inte
3	Pima	10.6	codo	8	Pima	7.7	supp	13	Pima	10.1	codo
4	Pima	14.6	domi	9	Pima	10.6	codo	—[e]	—	—	—
5	Pima	10.2	inte	10	Pima	6.2	supp	—	—	—	—

[a] Pima = *Picea mariana*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Tree is dead.

[d] Visual indications of poor health.

[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
2	Pima	22.4	domi	102	15.3	5.2	2.5	2.1	34	7
4	Pima	12.5	codo	62	8.5	4.0	2.0	2.4	27	3
Plot 4										
1	Pima	6.9	inte	51	7.0	5.5	1.1	0.9	21	2
2	Pima	14.4	domi	66	13.7	5.7	1.7	1.0	27	2
3	Pima	10.6	codo	47	7.8	4.5	2.1	1.7	27	3
Plot 7										
1	Pima	9.6	codo	106	10.1	3.4	1.1	0.9	26	3
3	Pima	10.6	codo	104	9.1	2.1	1.1	1.2	33	4
4	Pima	14.6	domi	83	13.6	3.3	1.5	1.1	33	5
5	Pima	10.2	inte	88	10.6	1.8	1.9	0.9	27	4
7	Pima	11.9	codo	125	10.1	3.5	1.5	1.0	38	5

[a] Pima = *Picea mariana*.

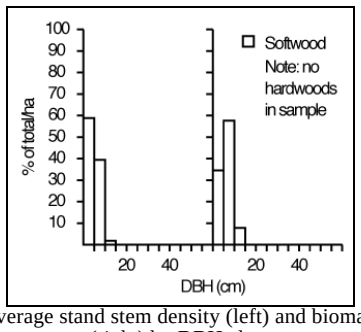
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: MAN BIH-1c (3) Northern Aux. Site

Stand values

Parameter	Plot 3	Plot 8	Plot 9	Average
Date of measurements (y/m/d)	93/08/15	94/07/21	94/07/22	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	18.4	18.4	18.4	18.4
Basal area, dead (m^2 ha^{-1})	4.6	2.3	9.2	5.4
Stem density, live (ha^{-1})	5949	11008	4519	7158
Stem volume, live (m^3 ha^{-1})	65	50	83	66
Biomass (t ha^{-1})	47	54	50	50

[a] na = not applicable.
[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]
Plot 3 (point sample)											
1	Pima	3.9	inte	9	Pima [c]	10.3	codo	13	Pima [c]	8.0	codo
2	Pima	9.1	domi	10	Pima	8.5	codo	15	Pima	8.3	codo
6	Pima	8.9	codo	11	Pima	6.4	inte	—[d]	—	—	—
7	Pima	7.7	inte	12	Pima	4.8	supp	—	—	—	—
Plot 8 (point sample)											
1	Pima	7.0	codo	4	Pima	5.4	inte	7	Pima [e]	3.5	supp
2	Pima [c]	7.1	codo	5	Pima	5.4	inte	8	Pima	11.0	domi
3	Pima	4.4	supp	6	Pima [e]	3.4	supp	9	Pima	4.1	inte
Plot 9 (point sample)											
1	Pima [c]	8.2	domi	5	Pima	13.7	domi	9	Pima [e]	4.8	supp
2	Pima [c]	6.9	inte	6	Pima [c]	8.8	supp	10	Pima	7.8	codo
3	Pima	8.5	domi	7	Pima	8.3	codo	11	Pima [e]	7.1	inte
4	Pima	7.4	inte	8	Pima [c]	8.6	supp	12	Pima	6.6	inte

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Dashes indicate no measurement taken. [e] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 3										
1	Pima	3.9	inte	22 [c]	4.5	2.5	—[d]	—	—	—
4	Pima	11.5	codo	82	10.6	5.5	1.5	0.8	28	3
Plot 8										
1	Pima	7.0	codo	93	8.2	4.6	0.7	0.7	40	3
3	Pima	4.4	supp	149 [e]	4.5	2.9	0.6	0.3	12	4
4	Pima	5.4	inte	128 [e]	5.4	4.8	0.6	0.3	11	3
8	Pima	11.0	domi	115	9.5	2.0	1.1	0.7	34	3
9	Pima	4.1	inte	118 [e]	4.6	2.9	1.1	0.8	37	3
Plot 9										
3	Pima	8.5	domi	120	11.0	3.8	1.3	0.6	24	3
4	Pima	7.4	inte	112	10.3	5.4	1.2	0.5	29	2
5	Pima	13.7	domi	87	11.9	3.1	1.1	2.1	56	4
7	Pima	8.3	codo	106	9.3	4.5	1.1	0.7	21	2
12	Pima	6.6	inte	105	8.6	4.1	1.2	0.6	29	4

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Age estimated by counting whorls.
[d] Dashes indicate no measurement taken.
[e] Core or stem sample taken at base of tree.

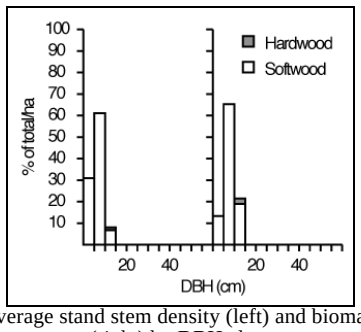
SITE CODE: MAN BIH-9 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/13	93/08/13	93/08/13	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	1.148 [b]	1.148 [b]	na
Basal area, live (m^2 ha^{-1})	23.0	36.7	29.8	29.8
Basal area, dead (m^2 ha^{-1})	0.0	2.3	4.6	2.3
Stem density, live (ha^{-1})	4098	10846	9085	8010
Stem volume, live (m^3 ha^{-1})	85	155	126	122
Biomass (t ha^{-1})	52	100	83	78

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
2	Pima	8.2	inte	8	Pima	6.4	inte	14	Pima	7.9	supp
4	Pima	13.2	codo	10	Pima	8.2	codo	16	Pima	8.5	codo
5	Potr [c]	10.2	codo	11	Pima	7.5	codo	—[e]	—	—	—
7	Pima	8.9	codo	12	Pima	9.8	codo	—	—	—	—
Plot 2 (point sample)											
1	Pima [c]	10.1	codo	7	Pima [d]	5.6	codo	13	Pima	8.5	codo
2	Pima	9.7	codo	8	Pima	8.2	codo	14	Pima	10.2	codo
3	Pima	6.8	codo	9	Pima	7.6	codo	15	Pima	10.4	codo
4	Pima	6.6	codo	10	Pima	7.8	codo	16	Pima	8.2	codo
5	Pima	5.3	inte	11	Pima	3.4	inte	17	Pima	4.9	inte
6	Pima	8.4	codo	12	Pima	5.6	inte	—	—	—	—
Plot 3 (point sample)											
1	Piba	14.1	domi	9	Pima	3.8	inte	14	Pima	8.8	codo
2	Piba	10.7	domi	10	Pima	5.5	codo	15	Piba [d]	8.8	codo
6	Pima	4.2	inte	11	Pima	7.0	codo	16	Pima	6.7	codo
7	Pima	6.6	codo	12	Pima	11.1	codo	18	Pima	7.9	codo
8	Pima [d]	4.7	inte	13	Pima	7.9	codo	19	Pima	7.2	codo

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Visual indications of poor health.

[d] Tree is dead.

[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	7.1	inte	48	7.4	4.6	0.4	0.9	18	2
3	Pima	12.1	codo	49	9.1	3.4	0.6	1.3	20	3
Plot 2										
1	Pima	10.1	codo	41	11.0	4.3	1.7	1.4	21	3
5	Pima	5.3	inte	41	6.5	4.5	0.9	0.5	15	3
Plot 3										
1	Piba	14.1	domi	42	11.8	6.1	3.0	1.8	20	2
4	Pima	7.8	codo	39	8.2	4.5	0.7	1.6	32	2

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.

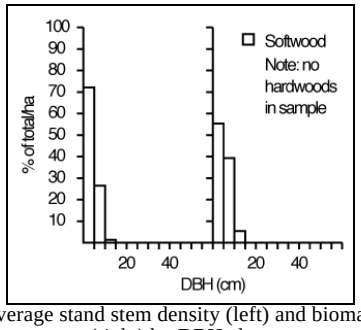
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: MAN BIL-2 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/12	93/08/12	93/08/12	na [a]
Point sampling BAF (m^2 ha^{-1})	0.394	0.394	1.148	na
Basal area, live (m^2 ha^{-1})	3.2	5.5	8.0	5.6
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	5971	1886	3157	3671
Stem volume, live (m^3 ha^{-1})	6	16	19	14
Biomass (t ha^{-1})	20	13	18	17

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
4	Pima	4.6	codo	7	Pima	2.8	codo	17	Pima	4.1	domi
5	Pima	2.7	codo	10	Pima	4.2	codo	19	Pima	1.4	inte
6	Pima	2.6	codo	12	Pima	3.1	codo	—[c]	—	—	—
Plot 2 (point sample)											
1	Pima	5.5	inte	7	Pima	8.1	codo	12	Pima	4.6	codo
2	Pima	5.2	inte	8	Pima	5.0	codo	13	Pima	7.3	codo
3	Pima	8.7	domi	9	Pima	4.9	codo	14	Pima	8.5	domi
4	Pima	6.5	codo	10	Pima	6.4	codo	15	Pima	8.2	domi
5	Pima	7.3	codo	11	Pima	5.4	codo	—	—	—	—
Plot 3 (point sample)											
1	Pima	10.0	domi	4	Pima	4.1	codo	7	Pima	8.2	domi
2	Pima	6.2	inte	5	Pima	6.2	codo	—	—	—	—
3	Pima	5.4	codo	6	Pima	4.7	codo	—	—	—	—

[a] Pima = *Picea mariana*.

[b] codo = codominant, domi = dominant, inte = intermediate.

[c] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	3.4	domi	43[c]	4.8	1.0	0.7	—[d]	—	—
8	Pima	1.9	inte	25[c]	2.2	0.5	0.4	—	—	—
9	Pima	3.1	codo	37[c]	2.9	—	0.7	—	—	—
Plot 2										
1	Pima	5.5	inte	45	—	—	—	—	—	—
3	Pima	8.7	domi	61	—	—	—	0.8	24	3
4	Pima	6.5	codo	49	—	—	—	1.1	26	2
Plot 3										
1	Pima	10.0	domi	66	8.7	2.0	1.6	0.5	27	2
2	Pima	6.2	inte	65	4.2	2.3	1.2	0.3	26	3
3	Pima	5.4	codo	48	4.6	1.8	0.6	0.4	22	2

[a] Pima = *Picea mariana*.

[b] codo = codominant, domi = dominant, inte = intermediate.

[c] Age estimated by counting whorls.

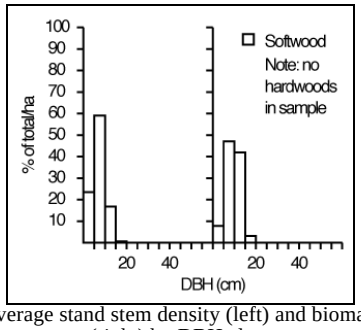
[d] Dashes indicate no measurement taken.

SITE CODE: MAN BIM-1a (1) Northern Aux. Site

Stand values

Parameter	Plot 2	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/08/18	94/07/23	94/07/23	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	11.5	32.1	41.3	28.3
Basal area, dead (m^2 ha^{-1})	2.3	4.6	0.0	2.3
Stem density, live (ha^{-1})	2685	5409	11478	6524
Stem volume, live (m^3 ha^{-1})	39	136	177	117
Biomass (t ha^{-1})	26	79	114	73

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (point sample)											
1	Pima	8.4	codo	5	Pima	6.5	inte	12	Pima	8.1	codo
2	Pima	10.5	domi	6	Pima	5.4	inte	13	Pima	9.4	domi
3	Pima	5.6	inte	8	Pima	6.3	codo	15	Piba	12.4	codo
4	Lala[c]	7.2	inte	11	Pima	9.0	codo	17	Pima[c]	4.9	inte
Plot 4 (point sample)											
1	Pima	10.9	codo	7	Pima[d]	9.9	codo	13	Pima[c]	7.2	inte
2	Pima	11.8	domi	8	Lala[d]	10.4	inte	14	Pima	11.7	codo
3	Pima	7.7	codo	9	Pima[d]	6.4	inte	15	Pima	5.5	supp
4	Pima	12.5	domi	10	Pima	8.6	inte	16	Pima	7.8	supp
5	Pima	8.1	codo	11	Pima	11.3	domi	—[e]	—	—	—
6	Pima	10.6	codo	12	Pima[c]	5.3	supp	—	—	—	—
Plot 5 (point sample)											
1	Pima	11.5	inte	7	Pima	5.6	inte	13	Pima	8.4	inte
2	Pima	11.1	codo	8	Pima	15.2	domi	14	Pima	8.3	inte
3	Pima	14.7	domi	9	Pima	3.2	supp	15	Pima[d]	11.5	codo
4	Pima	8.4	supp	10	Pima	11.6	inte	16	Pima	12.6	codo
5	Pima	6.7	inte	11	Pima	11.3	inte	17	Pima	5.7	inte
6	Pima	4.1	supp	12	Pima	5.9	supp	18	Pima	6.3	inte

[a] Lala = *Larix laricina*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
1	Pima	8.4	codo	63	7.8	4.2	0.9	1.0	28	3
2	Pima	10.5	domi	62	8.7	2.9	1.3	1.7	30	4
3	Pima	5.6	inte	55	5.5	3.0	0.7	0.6	30	2
Plot 4										
2	Pima	11.8	domi	64	11.7	4.9	1.3	1.2	32	4
4	Pima	12.5	domi	68	10.3	4.7	1.3	1.2	27	4
7	Pima	9.9	codo	62	9.8	5.9	0.8	1.6	30	4
11	Pima	11.3	domi	88	10.2	5.9	1.5	1.2	42	5
16	Pima	7.8	supp	62	9.0	3.4	0.9	0.9	31	4
Plot 5										
1	Pima	11.5	inte	72	11.5	7.1	2.0	1.5	35	4
4	Pima	8.4	supp	51	8.7	2.4	1.5	1.1	21	3
8	Pima	15.2	domi	55	12.9	8.0	1.6	1.2	24	4
16	Pima	12.6	codo	78	11.0	8.3	1.6	0.7	14	4
18	Pima	6.3	inte	54	8.7	4.8	0.8	1.0	29	3

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

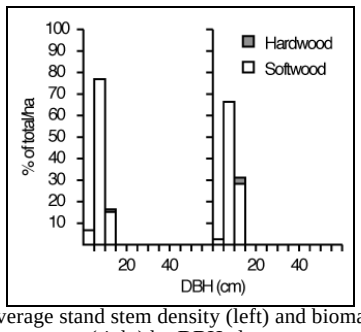
SITE CODE: MAN BIM-1b (2) Northern Aux. Site

Stand values

Parameter	Plot 3a	Plot 6	Plot 7	Average
Date of measurements (y/m/d)	93/08/18	94/07/23	94/07/23	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	36.7	27.6	45.9	36.7
Basal area, dead (m^2 ha^{-1})	0.0	2.3	9.2	3.8
Stem density, live (ha^{-1})	6435	4224	8976	6545
Stem volume, live (m^3 ha^{-1})	194	124	194	171
Biomass (t ha^{-1})	105	69	117	97

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (point sample)											
1	Pima	10.4	codo	8	Pima	7.6	inte	17	Pima	9.9	codo
2	Pima	9.4	codo	9	Pima	8.0	codo	18	Pima	9.3	codo
3	Pima	7.9	codo	10	Pima	5.9	supp	19	Pima	7.8	codo
4	Pima	12.9	codo	11	Pima	9.4	codo	21	Pima	6.1	inte
6	Pima	8.8	inte	15	Pima	11.5	codo	—[e]	—	—	—
7	Pima	10.8	codo	16	Pima	9.8	codo	—	—	—	—
Plot 6 (point sample)											
1	Pima	8.9	codo	6	Pima	10.7	codo	11	Pima	8.5	inte
2	Pima	7.8	inte	7	Pima	11.3	domi	12	Pima	11.2	inte
3	Pima[c]	8.4	inte	8	Pima	7.0	inte	13	Pima	11.1	inte
4	Bepa[d]	11.7	supp	9	Pima[c]	7.9	inte	—	—	—	—
5	Pima	11.4	domi	10	Pima	9.7	codo	—	—	—	—
Plot 7 (point sample)											
1	Pima	11.5	codo	9	Pima	12.0	domi	17	Pima[d]	7.6	inte
2	Pima	9.4	codo	10	Bepa	11.7	codo	18	Pima	8.8	codo
3	Pima	8.6	codo	11	Pima	9.6	codo	19	Pima	6.4	supp
4	Pima	11.1	domi	12	Pima[d]	4.9	supp	20	Pima[d]	10.3	codo
5	Pima[c]	7.1	supp	13	Pima[c]	7.9	inte	21	Pima	8.1	inte
6	Pima	9.4	codo	14	Pima	7.0	codo	22	Pima	8.3	codo
7	Pima	6.9	codo	15	Pima[d]	5.1	supp	23	Pima	9.2	codo
8	Pima	7.0	inte	16	Pima	4.7	supp	24	Pima	11.0	codo

[a] Bepa = *Betula papyrifera*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 3										
1	Pima	10.4	codo	56	10.7	7.5	1.8	1.5	26	2
7	Pima	10.8	codo	57	12.2	8.2	1.2	1.4	26	3
10	Pima	5.9	supp	62	8.8	3.5	0.8	0.7	25	1
Plot 6										
1	Pima	8.9	codo	58	9.9	4.9	0.6	1.4	22	4
7	Pima	11.3	domi	61	10.7	5.7	1.2	1.4	21	3
9	Pima	7.9	inte	56	9.4	6.3	0.7	1.0	20	4
11	Pima	8.5	inte	54	9.0	6.9	0.8	0.8	19	3
12	Pima	11.2	inte	53	8.9	5.5	1.9	1.4	25	5
Plot 7										
9	Pima	12.0	domi	67	11.2	5.7	1.1	0.8	29	4
11	Pima	9.6	codo	57	9.5	4.7	1.2	1.3	20	3
13	Pima	7.9	inte	111[c]	8.0	4.4	1.3	—[d]	—	5
16	Pima	4.7	supp	92[c]	6.7	3.9	1.6	—	—	2
24	Pima	11.0	codo	69	9.5	5.0	1.1	0.9	22	3

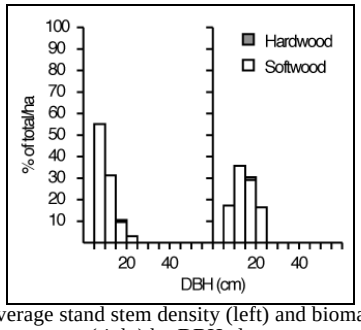
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Core or stem sample taken at base of tree. [d] Dashes indicate no measurement taken.

SITE CODE: MAN BIM-12a (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 3	Plot 6	Average
Date of measurements (y/m/d)	93/08/15	93/08/15	94/07/11	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	17.2	16.1	27.6	20.3
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	2961	1687	1833	2160
Stem volume, live (m^3 ha^{-1})	60	71	169	100
Biomass (t ha^{-1})	38	39	88	55

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	14.0	codo	6	Pima	7.6	inte	11	Pima	7.7	inte
2	Pima	10.2	codo	7	Pima	11.5	codo	13	Pima	9.4	codo
3	Pima	17.6	domi	8	Pima	8.2	inte	14	Pima	9.7	codo
4	Pima	18.7	domi	9	Pima	5.8	supp	15	Pima	5.2	s/in
5	Pima	7.2	s/in	10	Pima	8.8	inte	16	Poba [c]	15.3	codo
Plot 3 (point sample)											
1	Pima [c]	15.1	codo	6	Pima	5.2	inte	11	Pima	14.6	codo
2	Pima [c]	14.2	codo	7	Pima [c]	14.6	codo	12	Pima	16.0	codo
3	Pima	10.6	codo	8	Pima	10.7	codo	14	Pima [c]	12.4	codo
4	Pima	10.6	codo	9	Pima	11.8	codo	15	Pima [c]	19.0	domi
5	Pima	11.4	codo	10	Pima	14.0	codo	—[d]	—	—	—
Plot 6 (point sample)											
1	Pima	20.2	codo	5	Pima [c]	24.0	domi	9	Pima	7.3	inte
2	Pima [c]	16.3	domi	6	Pima	18.7	domi	10	Pima [c]	18.2	domi
3	Pima [c]	13.8	codo	7	Pima	12.6	codo	11	Pima	20.4	domi
4	Pima	18.2	codo	8	Pima [c]	14.1	codo	12	Pima [c]	11.1	codo

[a] Pima = *Picea mariana*, Poba = *Populus balsamifera*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed, s/in = suppressed/intermediate. [c] Visual indications of poor health. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	14.0	codo	55	10.1	2.0	2.1	1.8	26	4
4	Pima	18.7	domi	122	14.8	4.1	2.1	1.5	30	5
5	Pima	7.2	s/in	55 [c]	4.0	1.4	0.9	—[d]	—	4
6	Pima	7.6	inte	60 [c]	7.9	4.0	1.7	—	—	2
16	Poba	15.3	codo	30 +	8.9	5.9	2.1	—	—	—
Plot 3										
1	Pima	15.1	codo	101	9.6	1.7	1.8	1.7	24	6
6	Pima	5.2	inte	85 [c]	4.7	3.2	0.9	—	—	1
15	Pima	19.0	domi	131	15.6	7.6	1.9	5.7	113	1
Plot 6										
1	Pima	20.2	codo	145	15.7	6.7	1.2	1.1	53	6
2	Pima	16.3	domi	138	15.3	12.3	1.7	0.7	38	3
4	Pima	18.2	codo	94	14.3	5.9	2.3	1.7	32	8
6	Pima	18.7	domi	136	15.3	12.5	1.7	1.1	33	5
9	Pima	7.3	inte	45	7.7	2.0	1.4	1.1	18	4

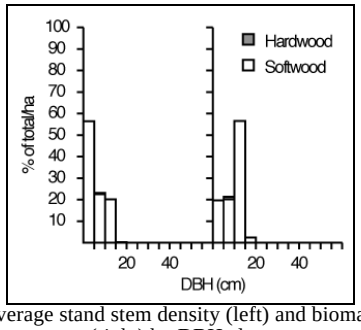
[a] Pima = *Picea mariana*, Poba = *Populus balsamifera*.
[b] codo = codominant, domi = dominant, inte = intermediate, s/in = suppressed/intermediate.
[c] Core or stem sample taken at base of tree. [d] Dashes indicate no measurement taken.

SITE CODE: MAN BIM-12b (2) Northern Aux. Site

Stand values

Parameter	Plot 2	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/08/15	94/07/11	94/07/11	na [a]
Point sampling BAF (m^2 ha^{-1})	0.394	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	10.6	18.4	13.8	14.3
Basal area, dead (m^2 ha^{-1})	0.4	4.6	2.3	2.4
Stem density, live (ha^{-1})	3594	5556	1168	3440
Stem volume, live (m^3 ha^{-1})	38	74	58	57
Biomass (t ha^{-1})	29	51	32	37

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (point sample)											
1	Pima	4.2	inte	11	Pima	7.5	supp	21	Pima	19.6	domi
2	Pima	5.2	inte	12	Pima	10.0	codo	22	Pima[c]	17.5	domi
3	Pima	5.8	inte	13	Pima[c]	10.3	codo	23	Pima[c]	14.9	domi
4	Pima	4.0	supp	14	Pima	10.2	codo	24	Pima	11.4	codo
5	Pima	3.6	supp	15	Pima	9.2	codo	25	Lala	6.0	inte
6	Bepa	9.2	codo	16	Pima	5.2	inte	26	Pima	8.4	codo
7	Pima[c]	6.2	inte	17	Pima	5.1	inte	27	Pima	10.7	codo
8	Pima[c]	8.9	codo	18	Pima	5.0	inte	28	Pima[d]	4.5	supp
9	Pima	4.0	supp	19	Pima	6.0	inte	—[e]	—	—	—
10	Pima	4.4	inte	20	Pima	7.4	inte	—	—	—	—
Plot 4 (point sample)											
1	Pima	9.5	domi	5	Pima	4.3	supp	9	Pima	13.0	domi
2	Pima[d]	12.6	domi	6	Pima	13.0	domi	10	Pima	14.4	domi
3	Pima	9.8	inte	7	Pima[c]	12.9	domi	—	—	—	—
4	Pima[d]	12.0	domi	8	Pima	3.3	supp	—	—	—	—
Plot 5 (point sample)											
1	Pima[d]	9.2	inte	4	Pima	14.1	domi	7	Pima[c]	12.4	codo
2	Pima[c]	14.4	codo	5	Pima	10.5	inte	—	—	—	—
3	Pima[c]	10.9	codo	6	Pima[c]	12.8	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Lala = *Larix laricina*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
1	Pima	4.2	inte	63[c]	5.3	3.6	1.0	—[d]	—	—
4	Pima	4.0	supp	42[c]	3.9	2.8	1.1	—	—	—
6	Bepa	9.2	codo	33	8.8	5.1	1.8	3.0	25	3
8	Pima	8.9	codo	56	8.3	3.4	1.3	1.2	21	1
21	Pima	19.6	domi	90	14.2	4.8	3.5	1.5	25	3
25	Lala	6.0	inte	46	6.3	3.7	1.1	1.8	35	2
Plot 4										
1	Pima	9.5	domi	123	8.4	3.0	1.4	0.8	50	5
6	Pima	13.0	domi	194	9.9	6.3	1.4	0.6	33	5
8	Pima	3.3	supp	—[e]	3.3	1.3	0.7	—	—	2
9	Pima	13.0	domi	167	12.7	9.4	0.9	0.8	29	3
10	Pima	14.4	domi	132	12.4	10.3	0.4	0.8	21	8
Plot 5										
2	Pima	14.4	codo	147	9.4	2.8	2.5	1.4	36	4
3	Pima	10.9	codo	93	9.2	3.1	1.0	0.7	34	4
4	Pima	14.1	domi	126	10.9	9.0	1.1	1.1	25	4
5	Pima	10.5	inte	93	8.0	3.7	1.2	1.1	33	4
6	Pima	12.8	codo	101	10.5	7.8	1.1	1.7	27	4

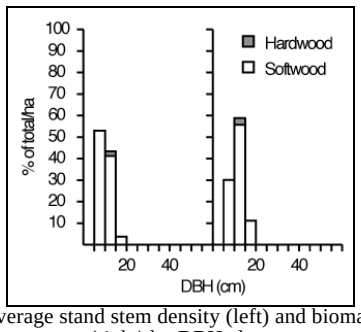
[a] Bepa = *Betula papyrifera*, Lala = *Larix laricina*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Age estimated by counting whorls. [d] Dashes indicate no measurement taken. [e] Core or stem sample taken at base of tree.

SITE CODE: MAN BMH-6 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/17	93/08/17	93/08/17	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	26.4	28.7	17.2	24.1
Basal area, dead (m^2 ha^{-1})	1.1	2.3	0.0	1.1
Stem density, live (ha^{-1})	2867	4105	2073	3015
Stem volume, live (m^3 ha^{-1})	138	140	81	120
Biomass (t ha^{-1})	73	76	44	65

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	12.0	domi	9	Pima	9.9	codo	17	Pima	12.1	domi
2	Pima	12.4	domi	10	Pima	12.8	domi	18	Pima[c]	13.8	codo
3	Pima	11.2	codo	11	Pima	9.9	codo	19	Pima	14.3	domi
4	Pima	6.8	inte	12	Pima	7.5	inte	20	Pima	15.7	domi
5	Pima	10.4	codo	13	Pima	11.6	codo	21	Pima	12.1	domi
6	Pima	11.4	codo	14	Potr	12.6	codo	22	Pima	16.4	domi
7	Pima	11.9	codo	15	Pima	12.2	codo	23	Pima	13.8	domi
8	Pima	10.0	codo	16	Pima	11.5	codo	24	Pima	8.1	codo
Plot 2 (point sample)											
1	Pima	11.9	domi	13	Pima	7.3	codo	22	Pima	10.8	codo
2	Pima	10.2	codo	14	Pima	12.0	domi	23	Pima	9.1	codo
5	Pima[c]	6.6	inte	15	Pima	7.0	codo	24	Pima	10.7	codo
7	Pima	8.1	codo	16	Pima	8.2	codo	25	Pima	12.1	domi
8	Pima	10.5	codo	17	Pima	6.7	codo	26	Pima	8.7	codo
9	Pima	11.7	domi	18	Pima	10.5	codo	27	Pima	9.0	codo
10	Pima	13.3	domi	19	Pima[c]	4.6	supp	28	Piba	15.3	domi
11	Pima	10.9	codo	20	Pima	8.6	codo	29	Pima	10.9	codo
12	Pima	11.6	domi	21	Pima	6.0	inte	31	Piba	18.5	domi
Plot 3 (point sample)											
1	Pima	15.8	domi	6	Pima	6.5	s/in	13	Pima	9.8	codo
2	Pima	12.9	codo	7	Pima	10.5	codo	14	Pima	8.7	codo
3	Pima	16.3	domi	8	Pima	13.7	codo	15	Pima	11.3	codo
4	Pima	10.3	codo	9	Pima	9.3	codo	16	Pima	12.0	codo
5	Pima	9.2	codo	12	Pima	9.2	codo	17	Pima	12.0	codo

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed, s/in = suppressed/intermediate. [c] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	12.0	domi	38	11.1	7.3	2.4	—[c]	—	4
2	Pima	12.4	domi	39	11.3	5.3	1.6	1.7	16	4
5	Pima	10.4	codo	40	9.5	4.7	2.3	1.3	19	2
12	Pima	7.5	inte	40	9.0	5.5	1.4	1.2	19	2
14	Potr	12.6	codo	31	9.8	6.0	3.3	—	—	2
Plot 2										
1	Pima	11.9	domi	51	10.8	6.8	1.7	2.2	32	3
2	Pima	10.2	codo	52	9.4	5.7	1.7	1.2	26	4
21	Pima	6.0	inte	53[d]	8.2	6.4	1.0	—	—	3
31	Piba	18.5	domi	32	12.4	7.4	3.2	2.0	34	3
Plot 3										
1	Pima	15.8	domi	49	14.5	7.0	2.6	3.2	25	3
4	Pima	10.3	codo	43	9.3	5.3	1.5	1.4	21	4
6	Pima	6.5	s/in	57[d]	6.2	2.5	1.4	0.6	21	3

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, s/in = suppressed/intermediate. [c] Dashes indicate no measurement taken. [d] Core or stem sample taken at base of tree.

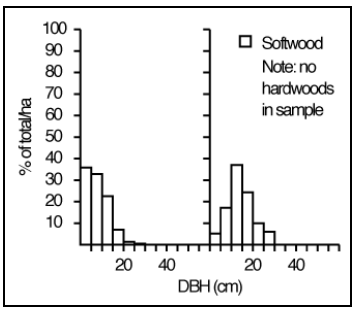
SITE CODE: MAN BMH-7 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	93/08/19	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	1.148 [b]	1.148 [b]	na
Basal area, live (m^2 ha^{-1})	41.3	48.2	34.4	41.3
Basal area, dead (m^2 ha^{-1})	6.9	4.6	2.3	4.6
Stem density, live (ha^{-1})	5510	2569	9851	5976
Stem volume, live (m^3 ha^{-1})	245	361	156	254
Biomass (t ha^{-1})	129	182	101	137

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	9.4	codo	8	Pima	7.9	inte	15	Pima	12.5	codo
2	Pima [c]	5.5	supp	9	Pima	14.9	codo	16	Pima	13.8	codo
3	Pima [c]	6.2	brok	10	Pima	8.8	inte	17	Pima	14.7	codo
4	Pima	5.6	inte	11	Pima	9.9	codo	18	Pima	12.7	codo
5	Pima	5.1	inte	12	Pima	11.8	codo	19	Pima [d]	13.5	codo
6	Pima	17.0	codo	13	Pima	14.6	codo	20	Pima	17.8	codo
7	Pima [c]	12.6	codo	14	Pima	16.2	domi	21	Pima	8.8	inte
Plot 2 (point sample)											
1	Pima [c]	22.0	codo	9	Pima [d]	16.5	codo	17	Pima	12.8	codo
2	Pima	15.4	codo	10	Pima	8.8	inte	18	Pima	20.5	codo
3	Pima	14.0	codo	11	Pima	18.1	codo	19	Pima	17.2	codo
4	Pima	20.0	codo	12	Pima [d]	13.2	codo	20	Pima	11.9	codo
5	Pima	13.0	codo	13	Pima	25.1	domi	21	Pima	17.4	codo
6	Pima	15.5	codo	14	Pima	22.8	domi	22	Pima [d]	19.9	codo
7	Pima	22.0	domi	15	Pima	14.5	codo	23	Pima	27.2	brok
8	Pima [c]	27.7	brok	16	Pima	15.5	codo	—[e]	—	—	—
Plot 3 (point sample)											
1	Pima	12.3	codo	6	Pima	13.7	codo	14	Pima	11.9	codo
2	Pima	11.3	codo	7	Pima	2.8	j/su	15	Pima [d]	12.1	codo
3	Pima	10.7	codo	8	Pima	9.9	i/co	16	Pima	7.5	inte
4	Pima	10.2	codo	10	Pima	15.4	codo	17	Pima	8.6	inte
5	Pima [d]	3.3	supp	13	Pima	12.0	codo	—	—	—	—

[a] Pima = *Picea mariana*. [b] brok = broken crown, codo = codominant, domi = dominant, inte = intermediate, supp = suppressed, i/co = intermediate/codominant, j/su = juvenile/suppressed. [c] Tree is dead. [d] Visual indications of poor health.

[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	9.4	codo	109	12.2	9.4	1.6	0.8	29	2
4	Pima	5.6	inte	96	9.0	5.9	1.2	0.8	39	4
14	Pima	16.2	domi	120	15.5	10.5	1.4	7.5	120	5
Plot 2										
3	Pima	14.0	codo	57	15.5	7.0	3.4	1.3	37	3
7	Pima	22.0	domi	115	20.2	7.7	4.2	1.7	36	4
10	Pima	8.8	inte	56	8.2	1.7	3.1	1.7	18	2
Plot 3										
1	Pima	12.3	codo	100	11.7	5.3	2.0	0.5	25	1
5	Pima	3.3	supp	58	3.6	2.2	1.0	0.5	15	3
11	Pima	8.8	inte	101	8.5	3.5	1.9	—[c]	—	2

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

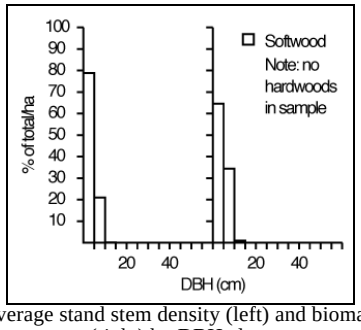
[c] Dashes indicate no measurement taken.

SITE CODE: MAN BML-21 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/12	93/08/12	93/08/12	na [a]
Point sampling BAF (m^2 ha^{-1})	0.394	0.394	0.394	na
Basal area, live (m^2 ha^{-1})	9.5	8.3	10.6	9.5
Basal area, dead (m^2 ha^{-1})	1.2	0.4	0.0	0.5
Stem density, live (ha^{-1})	4552	10834	7834	7740
Stem volume, live (m^3 ha^{-1})	21	14	23	20
Biomass (t ha^{-1})	23	38	33	31

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	7.0	codo	11	Pima	8.8	codo	20	Pima	3.5	inte
2	Pima[c]	2.4	supp	12	Pima	5.5	inte	21	Pima	4.7	inte
3	Pima	7.1	codo	13	Pima	6.1	codo	22	Pima	3.5	inte
4	Pima	4.0	inte	14	Pima	7.5	codo	23	Pima	4.8	inte
5	Pima[c]	3.7	supp	15	Pima	7.9	codo	24	Pima	5.3	codo
6	Pima	6.4	codo	16	Pima[d]	7.5	codo	25	Pima	6.0	codo
8	Pima	9.1	codo	17	Pima	5.8	codo	26	Pima	5.3	inte
9	Pima	7.0	codo	18	Pima	4.4	inte	27	Pima[c]	5.0	supp
10	Pima	4.0	inte	19	Pima	6.4	codo	28	Pima	3.1	inte
Plot 2 (point sample)											
1	Pima	3.4	inte	11	Pima	7.3	codo	19	Pima	4.5	inte
3	Pima	6.6	codo	12	Pima	5.6	codo	20	Pima	3.8	inte
4	Pima	1.3	j/in	13	Pima	2.3	j/in	21	Pima	3.3	inte
6	Pima	5.5	codo	14	Pima	3.1	j/in	22	Pima	2.4	j/in
7	Pima	7.4	codo	15	Pima	7.6	codo	23	Pima	1.7	j/in
8	Pima	8.3	domi	16	Pima	5.8	codo	24	Pima	2.6	j/in
9	Pima	6.5	codo	17	Pima[c]	3.9	supp	—[e]	—	—	—
10	Pima	4.8	codo	18	Pima	4.2	inte	—	—	—	—
Plot 3 (point sample)											
1	Pima	3.4	inte	10	Pima	6.8	codo	19	Pima	4.5	inte
2	Pima[d]	3.4	inte	11	Pima[d]	2.3	supp	20	Pima	7.8	codo
3	Pima	3.2	inte	12	Pima	2.9	j/in	21	Pima	2.9	inte
4	Pima	9.2	domi	13	Pima	11.6	domi	22	Pima	4.9	codo
5	Pima	3.7	inte	14	Pima	5.0	inte	23	Pima	6.3	codo
6	Pima	6.4	codo	15	Pima	5.5	inte	24	Pima	5.2	codo
7	Pima	5.0	codo	16	Pima	2.2	j/in	25	Pima	5.1	codo
8	Pima	7.0	codo	17	Pima	4.5	inte	26	Pima	4.5	codo
9	Pima	6.4	codo	18	Pima	6.5	codo	27	Pima	5.7	codo

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed, j/in = juvenile/intermediate. [c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	7.0	codo	50	6.0	2.5	0.9	1.5	22	3
4	Pima	4.0	inte	45	3.3	1.2	0.7	0.9	24	2
Plot 2										
1	Pima	3.4	inte	32	2.5	0.9	0.6	—[c]	—	1
3	Pima	6.6	codo	49	5.0	2.3	1.4	—	—	4
8	Pima	8.3	domi	52	7.2	1.2	1.2	0.7	18	5
Plot 3										
1	Pima	3.4	inte	46	3.7	1.1	0.6	—	—	—
4	Pima	9.2	domi	50	7.0	1.3	1.0	0.5	10	2
6	Pima	6.4	codo	50	5.2	1.3	0.6	1.2	24	2

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate. [c] Dashes indicate no measurement taken.

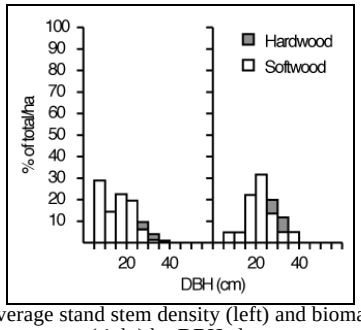
SITE CODE: MAN BMM-8a (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 5	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	94/07/12	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	23.0	18.4	20.7	20.7
Basal area, dead (m^2 ha^{-1})	9.2	1.1	2.3	4.2
Stem density, live (ha^{-1})	527	937	948	804
Stem volume, live (m^3 ha^{-1})	129	110	159	133
Biomass (t ha^{-1})	76	59	80	72

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]
Plot 1 (point sample)											
1	Pima	25.6	— [c]	6	Potr [d]	23.6	codo	11	Piba [d]	23.4	codo
2	Potr	28.8	codo	7	Pima	12.4	codo	12	Piba [d]	16.8	domi
3	Potr	30.4	codo	8	Pima	26.8	codo	13	Pima	30.4	codo
4	Potr	30.8	codo	9	Pima	35.5	codo	14	Pima	23.1	codo
5	Potr	25.7	codo	10	Piba [d]	25.7	codo	—	—	—	—
Plot 2 (point sample)											
1	Pima [e]	13.1	brok	7	Pima	9.9	inte	13	Pima [e]	20.7	brok
2	Pima [e]	28.1	codo	8	Pima [e]	19.0	domi	14	Pima	20.6	codo
3	Pima [e]	15.6	brok	9	Pima	24.7	codo	15	Pima	25.0	codo
4	Pima [e]	25.0	brok	10	Pima	17.5	codo	16	Pima	20.3	codo
5	Pima [e]	8.3	brok	11	Pima	22.2	codo	17	Pima [c]	22.5	brok
6	Pima [e]	14.1	brok	12	Pima	17.9	codo	—	—	—	—
Plot 5 (point sample)											
1	Pima	20.9	codo	5	Pima	22.7	domi	9	Pima	20.9	codo
2	Pima	20.8	domi	6	Pima	17.7	codo	10	Pima [e]	9.3	inte
3	Pima [d]	12.8	inte	7	Pima [e]	17.5	codo	—	—	—	—
4	Pima	19.4	codo	8	Pima [e]	18.5	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.

[b] brok = broken crown, codo = codominant, domi = dominant, inte = intermediate.

[c] Dashes indicate no measurement taken. [d] Tree is dead. [e] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	25.6	— [c]	121	12.8	3.0	4.5	2.8	39	3
4	Potr	30.8	codo	104	13.3	3.0	3.6	2.3	28	3
13	Pima	30.4	codo	102	21.2	4.8	4.0	3.1	24	3
Plot 2										
7	Pima	9.9	inte	67	8.8	2.5	2.6	1.7	15	4
9	Pima	24.7	codo	91	16.0	3.4	3.7	1.0	10	3
Plot 5										
2	Pima	20.8	domi	115	20.5	13.3	0.9	1.2	16	6
4	Pima	19.4	codo	111	15.3	6.3	2.5	1.4	29	6
5	Pima	22.7	domi	119	20.7	13.7	1.3	1.6	36	6
6	Pima	17.7	codo	128	17.5	9.5	1.7	1.5	26	7
9	Pima	20.9	codo	107	20.3	12.7	1.4	1.6	39	8

[a] Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate.

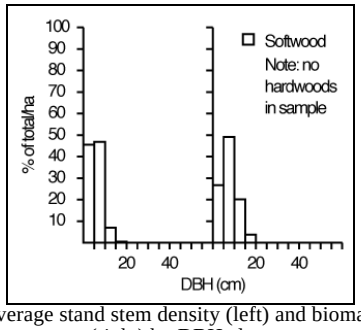
[c] Dashes indicate no measurement taken.

SITE CODE: MAN BMM-8b (2) Northern Aux. Site

Stand values

Parameter	Plot 3	Plot 4	Plot 6	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	94/07/12	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	5.7	10.3	20.7	12.2
Basal area, dead (m^2 ha^{-1})	0.0	0.0	6.9	2.3
Stem density, live (ha^{-1})	892	2883	8677	4151
Stem volume, live (m^3 ha^{-1})	16	33	59	36
Biomass (t ha^{-1})	11	24	52	29

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (point sample)											
1	Pima	10.2	codo	3	Pima	8.4	codo	11	Pima	7.3	codo
2	Pima	8.6	codo	6	Pima	14.2	domi	—	—	—	—
Plot 4 (point sample)											
1	Pima	10.9	—[c]	7	Pima	5.8	—	10	Pima	5.5	—
5	Pima	5.4	—	8	Pima	4.4	—	12	Pima	15.6	—
6	Pima	7.3	—	9	Pima	11.6	—	13	Pima	10.1	—
Plot 6 (point sample)											
1	Pima	5.1	inte	5	Pima[d]	7.9	supp	9	Pima	7.9	codo
2	Pima	4.3	inte	6	Pima	6.3	inte	10	Pima[e]	6.0	codo
3	Pima	4.0	supp	7	Pima	10.1	domi	11	Pima[d]	9.6	codo
4	Pima	9.4	codo	8	Pima[d]	9.1	codo	12	Pima[e]	4.4	supp

[a] Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken.
[d] Tree is dead.
[e] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 3										
1	Pima	10.2	codo	65	5.8	3.5	0.8	0.5	19	4
2	Pima	8.6	codo	60	6.6	3.0	0.8	0.7	22	3
Plot 4										
1	Pima	10.9	—[c]	76	8.7	3.0	1.4	1.3	24	3
12	Pima	15.6	—	99	12.8	6.5	1.9	0.8	28	3
Plot 6										
1	Pima	5.1	inte	149[d]	5.1	3.1	0.8	—	—	3
3	Pima	4.0	supp	157[d]	3.6	1.9	0.9	—	—	3
4	Pima	9.4	codo	89	7.9	4.0	1.2	0.6	18	3
7	Pima	10.1	domi	83	9.3	4.3	1.0	0.8	32	6
9	Pima	7.9	codo	103	8.4	7.0	0.8	0.8	34	5

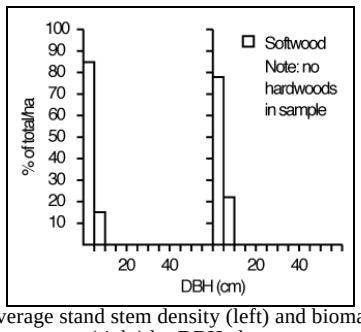
[a] Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken.
[d] Core or stem sample taken at base of tree.

SITE CODE: MAN JDH-3 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/11	93/08/11	93/08/11	na [a]
Point sampling BAF (m^2 ha^{-1})	0.394	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	2.8	12.6	6.9	7.4
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	5113	6550	7925	6529
Stem volume, live (m^3 ha^{-1})	4	23	11	13
Biomass (t ha^{-1})	17	32	30	26

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	4.2	codo	9	Piba	3.0	codo	12	Piba [c]	2.2	codo
6	Piba	2.7	codo	10	Piba	1.9	codo	—	—	—	—
8	Piba	2.3	codo	11	Piba	4.9	domi	—[d]	—	—	—
Plot 2 (point sample)											
1	Piba	6.5	codo	7	Piba	5.0	codo	12	Piba [c]	3.5	codo
2	Piba	6.3	codo	8	Piba	4.6	codo	13	Piba	5.8	codo
3	Piba	8.2	domi	10	Piba	5.1	codo	14	Piba	3.8	codo
4	Piba	5.7	codo	11	Piba	4.6	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	3.8	codo	3	Piba [c]	3.9	codo	9	Piba	4.8	codo
2	Piba [c]	2.2	supp	5	Piba	4.1	codo	11	Piba	3.2	codo

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	4.2	codo	25 [c]	4.5	1.2	0.7	—[d]	—	—
2	Piba	1.3	inte	14 [c]	2.1	1.1	0.4	—	—	—
11	Piba	4.9	domi	25 [c]	5.5	1.3	0.9	—	—	—
Plot 2										
1	Piba	6.5	codo	24 [c]	5.0	1.5	1.0	—	—	—
3	Piba	8.2	domi	25 [e]	5.6	2.5	0.9	3.9	25	2
15	Piba	3.3	inte	21 [c]	4.0	1.5	0.7	—	—	—
Plot 3										
1	Piba	3.8	codo	21 [c]	4.5	1.8	0.9	—	—	—
2	Piba	2.2	supp	19 [c]	3.2	1.5	0.6	—	—	—
9	Piba	4.8	codo	21 [c]	4.3	2.0	1.1	—	—	—

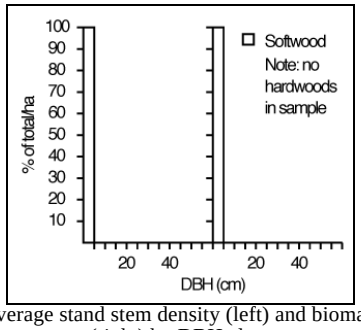
[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Age estimated by counting whorls.
[d] Dashes indicate no measurement taken.
[e] Core or stem sample taken at base of tree.

SITE CODE: MAN JDM-1 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/11	93/08/11	93/08/11	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	4.6	0.0	0.0	1.5
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	14748	0	0	4916
Stem volume, live (m^3 ha^{-1})	4	0	0	1
Biomass (t ha^{-1})	46	0	0	15

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	1.9	codo	3	Piba	1.5	inte	—[d]	—	—	—
2	Piba	2.5	codo	4	Piba [c]	2.8	domi	—	—	—	—

Plot 2 (point sample)

No trees (height greater than 1.3 m) found at this sample point. Understory vegetation plot (5- (5-m) gave a shrub count of 29 stems (11600 stems ha^{-1}) for *Pinus banksiana*.

Plot 3 (point sample)

No trees (height greater than 1.3 m) found at this sample point. Understory vegetation plot (5- (5-m) gave a shrub count of 44 stems (17600 stems ha^{-1}) for *Pinus banksiana*.

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	1.9	codo	29 [c]	2.6	0.9	0.6	—[d]	—	—
3	Piba	1.5	inte	20 [c]	1.9	1.6	0.6	—	—	—
4	Piba	2.8	domi	35 [c]	3.0	1.4	0.8	—	—	—

Plot 2

By counting whorls, the Piba in the understory vegetation plot were estimated to be about 24 years old.

Plot 3

By counting whorls, the Piba in the understory vegetation plot were estimated to be about 25 years old.

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Age estimated by counting whorls.
[d] Dashes indicate no measurement taken.

SITE CODE: MAN JIH-2 (1) Northern Aux. Site

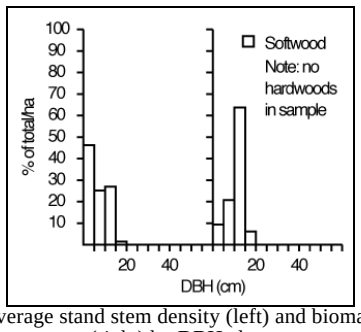
Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/14	93/08/14	93/08/14	na [a]
Point sampling BAF (m^2 ha^{-1})	0.394 [b]	2.296	1.148 [c]	na
Basal area, live (m^2 ha^{-1})	2.4	20.7	16.1	13.0
Basal area, dead (m^2 ha^{-1})	11.5	9.2	6.9	9.2
Stem density, live (ha^{-1})	3441	2115	1469	2342
Stem volume, live (m^3 ha^{-1})	5	101	98	68
Biomass (t ha^{-1})	12	55	51	39

[a] na = not applicable.

[b] This is the BAF used for sampling *Picea mariana*. A BAF of 2.296 was used for *Pinus banksiana*.

[c] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]	Tree no.	Species [a]	DBH (cm)	Canopy class [b]
Plot 1 (point sample)											
2	Piba [c]	9.5	— [d]	7	Piba [c]	9.0	—	13	Pima	5.2	—
4	Piba [c]	6.0	—	10	Pima	2.5	—	16	Pima [e]	2.2	—
5	Piba [c]	6.0	—	11	Pima	4.5	—	18	Pima [e]	3.7	—
6	Piba [c]	7.0	—	12	Pima [e]	2.5	—	—	—	—	—
Plot 2 (point sample)											
1	Piba	12.8	domi	10	Piba	12.1	codo	18	Piba [e]	14.4	codo
2	Piba [c]	9.0	codo	14	Piba [c]	9.1	supp	19	Piba	8.5	inte
3	Piba [e]	9.8	inte	15	Piba	13.4	codo	21	Piba [c]	9.1	inte
4	Piba [e]	9.3	inte	16	Piba	11.7	codo	—	—	—	—
9	Piba [c]	6.2	supp	17	Piba	13.0	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	16.4	domi	7	Piba	13.1	inte	11	Piba [c]	6.1	inte
2	Piba	7.4	inte	8	Piba	13.7	codo	13	Piba	13.4	codo
3	Piba	12.4	inte	9	Piba [c]	10.0	inte	—	—	—	—
4	Piba [c]	6.3	inte	10	Piba	14.1	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Tree is dead. [d] Dashes indicate no measurement taken. [e] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species [a]	DBH (cm)	Canopy class [b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
11	Pima	4.5	— [c]	25	5.5	1.6	0.9	—	—	—
18	Pima	3.7	—	30	5.0	1.1	1.5	—	—	—
Plot 2										
1	Piba	12.8	domi	42	13.2	8.8	—	3.2	21	1
7	Piba	12.2	codo	40	12.5	9.0	—	1.1	17	1
15	Piba	13.4	codo	48	10.5	8.0	—	1.7	28	1
Plot 3										
1	Piba	16.4	domi	44	14.1	11.1	2.7	2.1	28	2
2	Piba	7.4	inte	37	11.0	9.5	1.5	0.7	18	1
3	Piba	12.4	inte	48	12.2	8.5	2.3	2.8	24	2

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.

[b] codo = codominant, domi = dominant, inte = intermediate.

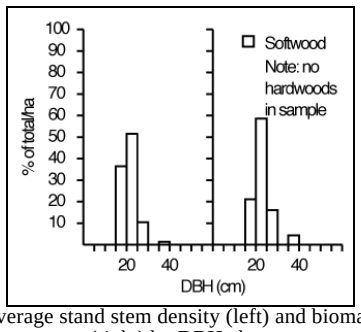
[c] Dashes indicate no measurement taken.

SITE CODE: MAN JIL-1 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/12	93/08/12	93/08/12	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	11.5	12.6	8.0	10.7
Basal area, dead (m^2 ha^{-1})	0.0	0.0	1.1	0.4
Stem density, live (ha^{-1})	346	283	203	277
Stem volume, live (m^3 ha^{-1})	61	73	37	57
Biomass (t ha^{-1})	32	39	20	30

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	24.1	codo	6	Piba	21.6	codo	12	Piba	16.3	codo
2	Piba	23.8	codo	9	Piba	23.9	codo	13	Piba	21.9	codo
4	Piba	19.2	codo	10	Piba	21.3	codo	—[c]	—	—	—
5	Piba	18.5	codo	11	Piba	19.7	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	24.4	codo	6	Piba	25.9	codo	11	Piba	24.3	codo
3	Piba	25.4	codo	7	Piba	25.3	codo	13	Piba	23.9	codo
4	Piba[d]	26.8	codo	8	Piba	24.1	codo	14	Piba	19.5	codo
5	Piba	21.6	codo	10	Piba	24.0	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	23.5	codo	5	Piba[d]	23.5	codo	8	Piba[d]	24.4	inte
2	Piba	24.8	codo	6	Piba	18.2	inte	9	Piba	36.1	domi
3	Piba[e]	16.6	inte	7	Piba	17.8	codo	—	—	—	—

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.
[d] Visual indications of poor health.
[e] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	24.1	codo	101	14.0	3.0	3.7	3.7	24	4
3	Piba	18.3	inte	105	11.5	3.0	2.8	1.5	28	2
Plot 2										
1	Piba	24.4	codo	72	15.0	1.5	3.4	4.0	37	2
7	Piba	25.3	codo	67	13.8	1.8	3.8	2.7	28	1
Plot 3										
1	Piba	23.5	codo	79	12.2	2.6	4.1	2.0	26	2
6	Piba	18.2	inte	76	9.0	3.8	3.9	4.8	61	3
9	Piba	36.1	domi	89	15.6	2.5	7.4	2.9	35	3

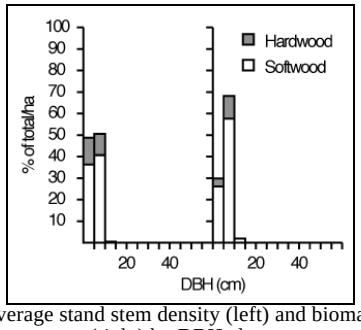
[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: MAN JIM-4 (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/14	93/08/14	93/08/14	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	0.394	1.148	na
Basal area, live (m^2 ha^{-1})	13.8	15.4	28.7	19.3
Basal area, dead (m^2 ha^{-1})	1.1	0.0	0.0	0.4
Stem density, live (ha^{-1})	7266	3995	15380	8880
Stem volume, live (m^3 ha^{-1})	37	41	76	51
Biomass (t ha^{-1})	27	33	84	48

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	5.7	codo	7	Potr	4.6	inte	13	Potr	8.5	codo
2	Piba [c]	3.7	supp	8	Potr	6.3	codo	14	Potr	2.9	inte
4	Piba	8.4	domi	9	Potr	4.0	codo	15	Potr	7.2	codo
5	Potr	6.2	codo	10	Potr	5.5	codo	—[d]	—	—	—
6	Piba	3.7	inte	11	Potr	5.5	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	9.9	domi	18	Piba	7.0	codo	32	Piba	9.2	domi
2	Piba	6.4	codo	19	Piba	6.2	codo	33	Piba	7.0	codo
3	Piba	6.7	codo	20	Piba	5.3	codo	34	Piba	6.4	codo
5	Piba	7.0	codo	21	Piba	6.2	codo	35	Piba	6.6	codo
6	Piba	8.3	codo	22	Piba	8.8	domi	36	Piba	5.9	codo
7	Piba	6.9	codo	23	Piba	7.7	codo	37	Piba	8.4	codo
8	Piba	6.9	codo	25	Piba	9.4	domi	38	Piba	5.5	codo
9	Piba	8.5	domi	26	Piba	8.7	domi	39	Piba	8.0	codo
11	Piba	6.4	codo	27	Piba	5.3	inte	40	Piba	5.8	codo
12	Piba	9.5	codo	28	Piba	8.1	codo	41	Piba	5.3	codo
15	Piba	8.4	codo	29	Piba	7.0	codo	42	Piba	7.5	codo
16	Piba	7.3	codo	30	Piba	8.5	codo	43	Piba	7.8	codo
17	Piba	6.0	codo	31	Piba	7.1	codo	45	Piba	8.3	codo
Plot 3 (point sample)											
1	Piba	7.3	codo	11	Piba	10.9	domi	22	Piba	5.3	codo
2	Piba	5.1	codo	12	Piba	5.9	codo	24	Piba	4.9	codo
3	Piba	6.7	codo	14	Piba	3.6	codo	25	Piba	6.7	codo
4	Piba	7.3	codo	16	Piba	5.2	codo	26	Piba	8.2	codo
5	Piba	5.0	codo	17	Piba	5.8	codo	28	Piba	3.7	codo
6	Piba	4.7	codo	18	Piba	7.4	codo	29	Piba	8.7	codo
8	Piba	5.8	codo	19	Piba	5.6	codo	30	Piba	6.7	codo
9	Piba	2.1	s/in	20	Piba	4.8	codo	—	—	—	—
10	Piba	3.5	codo	21	Piba	5.5	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed, s/in = suppressed/intermediate

[c] Tree is dead.

[d] Dashes indicate no measurement taken.

SITE CODE: MAN JIM-4 (1) concluded

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	5.7	codo	21	5.9	1.6	4.3	1.8	17	3
3	Piba	5.9	codo	21	6.4	1.9	1.3	—[c]	—	2
4	Piba	8.4	domi	25	7.7	3.6	2.3	2.0	16	1
6	Piba	3.7	inte	24[d]	4.6	1.6	0.8	—	—	—
14	Potr	2.9	inte	15[d]	4.4	2.7	1.3	—	—	—
Plot 2										
1	Piba	9.9	domi	20	7.3	2.7	2.3	2.2	13	1
2	Piba	6.4	codo	26	5.8	2.2	1.6	2.1	18	2
27	Piba	5.3	inte	25	5.3	2.9	1.3	1.9	17	1
Plot 3										
1	Piba	7.3	codo	22	8.2	2.3	1.8	—	—	1
9	Piba	2.1	s/in	13	3.5	2.5	0.4	0.3	6	1
11	Piba	10.9	domi	24	9.1	3.3	2.5	3.4	17	3

[a] Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate, s/in = suppressed/intermediate.

[c] Dashes indicate no measurement taken

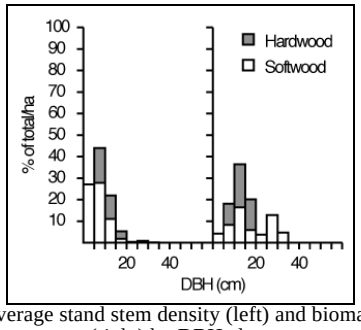
[d] Age estimated by counting whorls.

SITE CODE: MAN MW-1a (1) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 3	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	13.8	25.3	19.5
Basal area, dead (m^2 ha^{-1})	1.1	2.3	1.7
Stem density, live (ha^{-1})	791	5194	2992
Stem volume, live (m^3 ha^{-1})	87	124	105
Biomass (t ha^{-1})	49	80	64

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	13.8	codo	7	Potr [c]	10.9	codo	12	Potr	12.7	codo
2	Pima	10.6	inte	8	Potr	16.3	codo	13	Potr [d]	15.3	codo
3	Pima	27.4	domi	9	Potr [d]	16.5	codo	14	Potr	19.3	domi
4	Potr	14.2	codo	10	Pima	23.9	codo	—[e]	—	—	—
5	Potr	13.4	codo	11	Potr [d]	13.2	codo	—	—	—	—
Plot 3 (point sample)											
1	Pima [c]	23.4	domi	12	Pima	18.1	inte	21	Potr	12.9	codo
2	Pima [d]	28.8	domi	13	Pima	13.4	codo	22	Bepa	5.7	supp
3	Pima [d]	28.8	domi	15	Pima	8.1	inte	23	Pima	5.0	supp
6	Bepa	9.4	codo	16	Bepa	11.7	inte	25	Pima	6.0	inte
7	Pima	10.9	codo	17	Bepa [c]	8.5	inte	27	Pima	14.0	codo
9	Pima	5.7	supp	18	Potr	9.6	codo	28	Pima	14.0	codo
10	Pima [d]	34.3	domi	19	Pima	15.3	codo	29	Potr	8.6	codo
11	Pima	12.0	inte	20	Potr	10.6	inte	30	Pima	3.0	supp

[a] Bepa = *Betula papyrifera*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	13.8	codo	55	12.1	2.0	3.6	2.3	18	3
3	Pima	27.4	domi	83	19.6	4.6	5.4	1.5	23	5
Plot 3										
1	Pima	23.4	domi	75	19.0	—[c]	—	—	—	4
7	Pima	10.9	codo	52	11.9	6.9	2.5	—	—	4
10	Pima	34.3	domi	114	24.4	5.0	6.0	2.5	27	6
11	Pima	12.0	inte	37	9.4	4.0	2.5	1.7	17	4
13	Pima	13.4	codo	43	11.4	3.9	3.5	2.7	14	3
15	Pima	8.1	inte	42	8.0	4.5	2.5	2.0	19	3
19	Pima	15.3	codo	50	13.6	5.0	3.5	2.9	19	4
20	Potr	10.6	inte	40	10.4	5.7	2.0	1.6	16	3
27	Pima	14.0	codo	49	10.9	3.3	2.5	1.5	19	4
28	Pima	14.0	codo	43	13.4	5.0	2.5	3.4	20	4

[a] Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

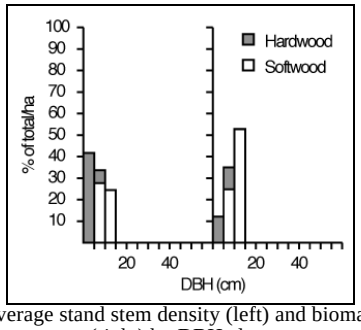
SITE CODE: MAN MW-1b (2) Northern Aux. Site

Stand values

Parameter	Plot 2	Average
Date of measurements (y/m/d)	93/08/19	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	na
Basal area, live (m^2 ha^{-1})	29.8	29.8
Basal area, dead (m^2 ha^{-1})	0.0	0.0
Stem density, live (ha^{-1})	5722	5722
Stem volume, live (m^3 ha^{-1})	134	134
Biomass (t ha^{-1})	83	83

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (point sample)											
1	Pima	13.3	codo	7	Pima	8.7	inte	14	Pima	10.8	codo
3	Pima	8.3	inte	8	Pima	14.2	codo	15	Bepa	3.5	inte
4	Bepa [c]	9.2	codo	9	Pima	10.6	codo	16	Pima	14.1	codo
5	Pima [c]	10.0	codo	11	Pima	9.4	codo	— [d]	—	—	—
6	Pima	8.1	inte	13	Pima	14.3	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Pima = *Picea mariana*.

[b] codo = codominant, inte = intermediate.

[c] Visual indications of poor health.

[d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
1	Pima	13.3	codo	55	11.2	4.0	3.2	1.8	21	3
4	Bepa	9.2	codo	49	10.6	6.0	2.0	2.7	35	3
8	Pima	14.2	codo	51	14.1	5.5	2.3	2.2	19	3

[a] Bepa = *Betula papyrifera*, Pima = *Picea mariana*.

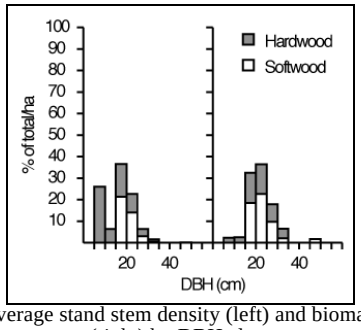
[b] codo = codominant.

SITE CODE: MAN MW-2a (1) Northern Aux. Site

Stand values

Parameter	Plot 3	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/08/20	93/08/20	94/08/07	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	20.7	14.9	27.6	21.0
Basal area, dead (m^2 ha^{-1})	0.0	0.0	2.3	0.8
Stem density, live (ha^{-1})	693	944	864	834
Stem volume, live (m^3 ha^{-1})	156	84	238	159
Biomass (t ha^{-1})	88	51	118	86

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (point sample)											
1	Potr	19.3	codo	7	Potr	22.3	codo	13	Potr	21.9	codo
2	Pima	34.6	codo	8	Potr	18.7	codo	14	Potr	16.1	codo
3	Potr	14.0	codo	9	Potr	17.3	codo	15	Potr [c]	20.7	codo
4	Potr	18.9	codo	10	Potr	25.3	codo	16	Piba	23.1	codo
5	Potr	20.9	codo	11	Potr	17.1	codo	17	Piba	24.6	codo
6	Potr	17.8	codo	12	Potr	20.7	codo	18	Piba	17.6	codo
Plot 4 (point sample)											
1	Piba	46.0	domi	7	Potr	21.6	—	14	Potr	27.7	—
2	Potr	28.2	—[d]	10	Potr	7.7	—	15	Potr	34.9	—
3	Potr	25.0	domi	11	Potr	8.1	—	16	Potr	31.5	—
5	Potr	24.7	—	12	Potr	13.1	—	—	—	—	—
6	Potr	15.7	—	13	Potr	9.0	—	—	—	—	—
Plot 5 (point sample)											
1	Piba [c]	18.4	codo	6	Piba [c]	16.6	inte	11	Piba [c]	26.4	domi
2	Piba [c]	23.1	domi	7	Piba [c]	20.5	codo	12	Piba	22.5	domi
3	Piba	24.3	domi	8	Piba	19.2	codo	13	Piba [c]	29.6	domi
4	Piba [c]	18.5	codo	9	Piba [c]	20.2	codo	—	—	—	—
5	Piba	15.1	inte	10	Piba [e]	18.9	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate. [c] Visual indications of poor health. [d] Dashes indicate no measurement taken. [e] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 3										
1	Potr	19.3	codo	78	17.8	13.2	3.7	3.8	45	3
2	Pima	34.6	codo	85	21.1	13.7	6.8	3.8	27	4
Plot 4										
1	Piba	46.0	domi	86	18.0	9.5	—	2.3	35	4
2	Potr	28.2	—[c]	59	18.5	13.5	—	6.0	36	3
5	Potr	24.7	—	79	15.6	11.0	—	5.5	53	2
8	Piba	21.3	—	85	16.0	9.0	—	4.3	22	3
Plot 5										
3	Piba	24.3	domi	79	19.6	12.5	2.4	0.8	18	4
5	Piba	15.1	inte	90	18.8	8.3	1.2	0.9	22	2
6	Piba	16.6	inte	63	15.7	12.3	1.7	1.0	23	2
8	Piba	19.2	codo	117	17.3	11.9	2.4	1.6	60	3
12	Piba	22.5	domi	125	19.3	11.2	2.1	2.7	91	5

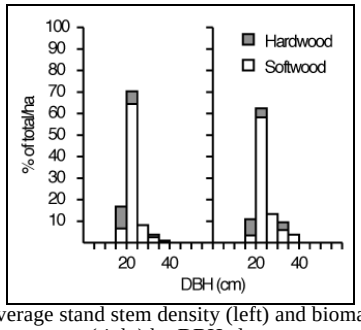
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate. [c] Dashes indicate no measurement taken.

SITE CODE: MAN MW-2b (2) Northern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Average
Date of measurements (y/m/d)	93/08/20	93/08/20	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	1.148	na
Basal area, live (m^2 ha^{-1})	29.8	16.1	23.0
Basal area, dead (m^2 ha^{-1})	6.9	8.0	7.5
Stem density, live (ha^{-1})	826	348	587
Stem volume, live (m^3 ha^{-1})	239	143	191
Biomass (t ha^{-1})	123	75	99

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	20.9	codo	8	Pima	22.5	domi	15	Piba	20.3	codo
2	Pima	21.5	codo	9	Pima	28.2	codo	16	Piba [c]	15.7	codo
3	Piba	20.0	codo	10	Pima	22.5	codo	17	Poba	20.8	codo
4	Bepa [c]	23.0	codo	11	Pima	23.5	codo	18	Pima	20.2	codo
5	Pima	20.8	codo	12	Pima [c]	15.3	codo	—[d]	—	—	—
6	Potr	19.2	codo	13	Pima	21.9	codo	—	—	—	—
Plot 2 (point sample)											
1	Potr	19.1	codo	8	Piba [c]	24.2	codo	15	Potr	31.8	codo
2	Piba	30.3	domi	9	Piba [c]	22.6	codo	17	Pima	19.9	codo
3	Piba [c]	28.4	codo	10	Piba	23.4	codo	18	Pima	27.0	codo
4	Piba	29.8	codo	11	Pima	31.7	codo	19	Piba	22.5	codo
5	Piba	25.8	codo	12	Piba [c]	21.4	brok	20	Piba	20.0	codo
6	Piba	24.9	codo	13	Pima	18.9	codo	21	Piba [c]	25.0	codo
7	Piba	35.9	codo	14	Piba [c]	18.6	brok	22	Piba [c]	19.2	brok

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] brok = broken crown, codo = codominant, domi = dominant.
[c] Tree is dead. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	20.9	codo	97	20.6	15.0	1.9	1.2	32	4
2	Pima	21.5	codo	83	20.1	17.0	2.5	0.5	18	3
3	Piba	20.0	codo	81	17.0	12.0	2.6	—	—	—
5	Pima	20.8	codo	—[c]	20.0	3.0	2.5	1.8	—	2
7	Pima	21.7	codo	—	17.1	6.0	2.5	1.0	—	3
8	Pima	22.5	domi	—	20.6	10.0	2.0	1.2	—	2
9	Pima	28.2	codo	—	19.2	7.0	2.8	2.3	—	4
10	Pima	22.5	codo	—	17.8	7.5	3.2	1.9	—	4
11	Pima	23.5	codo	—	19.8	14.0	2.8	2.2	—	2
13	Pima	21.9	codo	—	17.5	10.8	1.1	1.4	—	3
15	Piba	20.3	codo	—	18.0	15.0	1.5	2.9	—	3
Plot 2										
1	Potr	19.1	codo	62	16.9	11.7	6.2	3.5	—	5
2	Piba	30.3	domi	80 +	26.3	15.7	3.9	2.0	25	3
11	Pima	31.7	codo	91	21.2	7.5	3.6	2.2	25	6

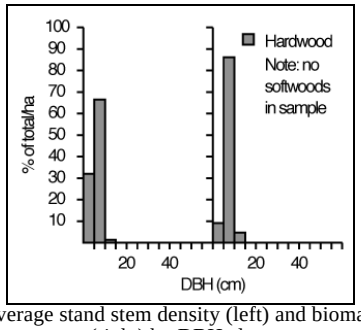
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK ADH-2 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/19	93/07/19	93/07/19	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	17.2	21.8	18.4	19.1
Basal area, dead (m^2 ha^{-1})	1.1	0.0	2.3	1.1
Stem density, live (ha^{-1})	5865	6985	3841	5564
Stem volume, live (m^3 ha^{-1})	58	78	78	71
Biomass (t ha^{-1})	36	66	46	49

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	4.8	codo	7	Potr [c]	5.4	codo	13	Potr	8.4	codo
2	Potr	7.4	domi	8	Potr [c]	4.4	inte	14	Potr	7.4	codo
3	Potr [c]	8.8	supp	9	Potr	8.4	domi	15	Potr [c]	6.1	codo
4	Potr	9.3	domi	10	Potr	6.8	codo	16	Potr [c]	4.8	codo
5	Potr	7.0	codo	11	Potr [c]	6.6	codo	—[e]	—	—	—
6	Potr [c]	4.6	inte	12	Potr [d]	6.6	codo	—	—	—	—
Plot 2 (point sample)											
1	Poba	6.2	codo	8	Potr	8.3	codo	17	Potr [c]	5.9	codo
2	Poba [c]	6.8	codo	9	Potr	6.8	codo	18	Potr	6.3	codo
3	Poba	6.6	codo	11	Potr	8.1	codo	19	Potr	9.0	domi
4	Potr	3.8	inte	13	Potr	7.4	codo	20	Potr	6.2	codo
5	Poba [c]	8.8	codo	14	Potr [c]	3.8	inte	21	Potr	7.6	codo
6	Poba	7.9	codo	15	Poba [c]	7.6	codo	—	—	—	—
7	Poba [c]	6.8	codo	16	Potr	6.8	codo	—	—	—	—
Plot 3 (point sample)											
1	Potr	11.1	domi	7	Potr	9.8	codo	13	Potr	8.8	codo
2	Potr	5.4	inte	8	Potr [c]	8.3	codo	14	Potr	11.0	codo
3	Potr	9.9	codo	9	Potr [d]	6.9	codo	15	Potr [d]	4.1	supp
4	Potr	9.5	codo	10	Potr	8.1	codo	16	Potr [c]	9.1	codo
5	Potr [c]	4.9	inte	11	Potr	9.2	codo	17	Potr [c]	9.1	codo
6	Potr	8.3	codo	12	Potr [c]	6.1	codo	18	Potr	7.3	codo

[a] Poba = *Populus balsamifera*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	4.8	codo	16 [c]	7.8	4.8	1.0	2.4	12	4
3	Potr	8.8	supp	23 [c]	8.9	5.7	2.1	3.8	16	4
4	Potr	9.3	domi	20 [c]	10.8	7.8	2.3	7.8	20	6
6	Potr	4.6	inte	16 [c]	5.2	3.2	2.0	2.7	10	3
Plot 2										
1	Poba	6.2	codo	17 [c]	9.3	5.9	1.9	—[d]	12	3
4	Potr	3.8	inte	12 [c]	5.1	3.7	1.4	3.8	12	2
13	Potr	7.4	codo	20 [c]	9.3	5.3	2.5	3.4	14	3
19	Potr	9.0	domi	22 [c]	10.5	6.6	2.4	2.8	14	3
Plot 3										
1	Potr	11.1	domi	20	11.7	6.7	2.8	3.0	15	1
2	Potr	5.4	inte	21	7.9	5.4	2.1	1.3	12	1
3	Potr	9.9	codo	27	10.8	6.7	2.6	2.8	19	1

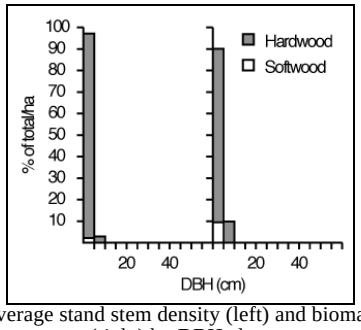
[a] Poba = *Populus balsamifera*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Core or stem sample taken at stump height. [d] Dashes indicate no measurement taken.

SITE CODE: SASK ADM-3 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/07	94/07/07	94/07/07	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	9.6	17.1	5.0	10.6
Basal area, dead (m^2 ha^{-1})	1.8	6.7	8.0	5.5
Stem density, live (ha^{-1})	18800	29200	7600	18533
Stem volume, live (m^3 ha^{-1})	22	39	11	24
Biomass (t ha^{-1})	33	34	9	25

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Potr	3.5	codo	18	Potr	0.7	inte	35	Potr	1.8	inte
2	Potr	1.8	inte	19	Potr	0.8	inte	36	Potr	0.9	supp
3	Potr	6.2	domi	20	Potr [c]	2.2	inte	37	Potr	2.7	codo
4	Potr	3.3	codo	21	Potr	5.0	domi	38	Potr	4.0	domi
5	Potr	2.2	inte	22	Potr	2.0	inte	39	Potr	2.4	inte
6	Potr	0.8	inte	23	Pigl	1.0	inte	40	Bepa	1.4	inte
7	Pigl	1.3	inte	24	Potr	1.8	inte	41	Potr	0.8	supp
8	Potr	2.7	codo	25	Potr	3.7	codo	42	Potr	3.2	inte
9	Potr [c]	0.8	inte	26	Potr	2.5	inte	43	Piba [c]	7.2	domi
10	Potr	3.3	codo	27	Potr	3.0	inte	44	Potr	1.4	inte
11	Potr	4.7	codo	28	Potr	0.6	inte	45	Potr	1.8	inte
12	Potr [d]	2.0	inte	29	Potr [d]	2.5	inte	46	Potr	2.2	inte
13	Potr	1.3	inte	30	Pigl	0.7	supp	47	Potr	2.3	inte
14	Sasp	0.6	supp	31	Potr	1.6	supp	48	Potr	3.8	codo
15	Potr	3.1	inte	32	Potr	2.7	inte	49	Sasp	0.6	supp
16	Potr	3.2	inte	33	Potr	2.8	codo	50	Sasp	0.7	supp
17	Potr	1.2	inte	34	Potr	1.6	inte	—[e]	—	—	—
Plot 2 (fixed area plot)											
1	Potr	1.5	codo	29	Potr	3.0	codo	57	Potr	1.4	inte
2	Potr	1.6	supp	30	Potr	4.2	domi	58	Potr	1.1	inte
3	Potr	3.7	domi	31	Potr	1.6	inte	59	Potr	1.3	inte
4	Potr	3.9	domi	32	Potr	0.6	inte	60	Potr	2.2	codo
5	Potr [d]	2.2	codo	33	Potr	1.1	inte	61	Potr	0.8	inte
6	Potr [c]	1.6	supp	34	Potr	0.4	inte	62	Potr	0.8	inte
7	Potr	3.3	domi	35	Potr	1.1	inte	63	Potr [c]	1.2	inte
8	Potr	2.7	codo	36	Potr	2.2	codo	64	Potr [c]	1.4	inte
9	Potr	1.8	inte	37	Potr	1.3	inte	65	Potr [c]	2.2	inte
10	Potr	3.1	codo	38	Potr	3.2	domi	66	Potr	4.5	domi
11	Potr	3.4	domi	39	Potr	3.4	codo	67	Potr	2.7	codo
12	Potr	1.7	codo	40	Potr [c]	1.4	inte	68	Potr	3.8	domi
13	Potr	1.4	inte	41	Potr	0.4	inte	69	Potr	3.7	codo
14	Potr [d]	2.3	inte	42	Potr	3.2	codo	70	Potr	2.7	codo
15	Potr [d]	1.5	inte	43	Potr	1.7	inte	71	Potr [c]	0.9	inte
16	Potr [d]	3.3	inte	44	Potr [c]	0.6	inte	72	Potr	1.1	inte
17	Potr	2.2	inte	45	Potr	0.7	inte	73	Potr	3.5	codo
18	Potr	3.6	domi	46	Potr	4.5	domi	74	Potr	1.7	inte
19	Potr [c]	0.5	inte	47	Potr	1.7	inte	75	Potr	4.5	domi
20	Potr	3.8	codo	48	Potr	3.9	codo	76	Potr	4.2	domi
21	Potr	5.0	domi	49	Potr	2.7	codo	77	Potr	2.6	inte
22	Potr	2.0	inte	50	Potr [c]	0.4	inte	78	Potr	3.9	domi
23	Potr	1.8	inte	51	Potr	2.3	inte	79	Potr	1.5	inte
24	Potr [c]	1.4	inte	52	Potr	1.1	inte	80	Potr	1.4	inte
25	Potr [d]	3.6	codo	53	Potr	2.7	codo	81	Potr	4.1	inte
26	Potr	2.9	codo	54	Potr [d]	1.0	inte	82	Potr	2.9	inte
27	Potr	3.2	codo	55	Potr [c]	14.0	domi	83	Potr	2.9	inte
28	Potr	0.9	inte	56	Potr	2.9	codo	84	Potr	3.5	codo

SITE CODE: SASK ADM-3 (1) concluded

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (fixed area plot)											
1	Potr	5.0	domi	8	Potr	2.7	codo	15	Potr [d]	2.5	inte
2	Potr	2.8	codo	9	Potr [d]	1.6	inte	16	Potr [d]	3.7	codo
3	Potr	3.1	inte	10	Potr [d]	0.8	inte	17	Potr [d]	4.1	codo
4	Potr	1.8	inte	11	Potr [d]	1.8	inte	18	Potr [d]	2.0	inte
5	Potr	0.8	inte	12	Potr [d]	2.8	codo	19	Potr [d]	2.7	codo
6	Potr	3.5	codo	13	Potr [d]	4.0	domi	20	Potr [c]	16.0	domi
7	Potr [d]	3.8	codo	14	Potr [d]	1.4	inte	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	3.5	codo	18 [c]	5.7	3.7	0.7	—[d]	—	—
3	Potr	6.2	domi	20 [c]	8.9	5.6	0.8	—	—	—
15	Potr	3.1	inte	20 [c]	4.6	2.4	0.5	—	—	—
Plot 2										
5	Potr	2.2	codo	15 [c]	4.7	3.7	1.0	—	—	—
7	Potr	3.3	domi	18 [c]	6.1	4.5	0.9	—	—	—
43	Potr	1.7	inte	11 [c]	2.3	1.9	0.9	—	—	—
Plot 3										
1	Potr	5.0	domi	29 [c]	7.0	4.5	1.3	—	—	—
4	Potr	1.8	inte	—[c]	3.7	2.0	0.5	—	—	—
16	Potr	3.7	codo	15 [c]	5.0	2.7	0.7	—	—	—

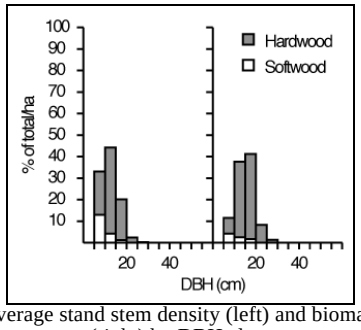
[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Core or stem sample taken at base of tree. [d] Dashes indicate no measurement taken.

SITE CODE: SASK AIH-3 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/19	93/07/18	93/07/17	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	32.1	40.2	29.8	34.1
Basal area, dead (m^2 ha^{-1})	1.1	4.6	1.1	2.3
Stem density, live (ha^{-1})	2000	3134	2981	2705
Stem volume, live (m^3 ha^{-1})	184	248	194	209
Biomass (t ha^{-1})	108	143	111	121

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	20.3	domi	13	Potr	10.2	codo	23	Potr [c]	20.3	domi
2	Potr	20.1	domi	14	Potr	12.5	codo	24	Potr	13.7	codo
3	Potr	18.3	codo	15	Potr	17.5	codo	25	Potr	15.2	codo
4	Potr	13.2	codo	16	Potr	14.0	codo	26	Potr	18.8	codo
5	Potr [d]	15.5	brok	17	Potr	13.0	codo	27	Potr	18.3	codo
6	Potr	15.0	codo	18	Potr	19.1	domi	28	Potr	14.2	codo
7	Potr	24.4	domi	19	Potr	14.0	codo	29	Potr	19.1	codo
8	Potr	25.9	domi	20	Pigl [c]	8.6	inte	30	Potr	17.0	codo
9	Potr	18.3	codo	21	Pigl	8.1	inte	31	Potr	16.3	codo
12	Pigl	9.9	inte	22	Potr	19.3	domi	—[e]	—	—	—
Plot 2 (point sample)											
1	Potr	16.3	codo	14	Potr	21.3	domi	27	Potr	14.0	codo
2	Potr	14.7	codo	15	Potr	10.2	codo	28	Potr	10.4	codo
3	Potr	19.3	domi	16	Potr [d]	7.4	supp	29	Potr	16.3	codo
4	Potr	15.2	codo	17	Potr	6.4	codo	30	Potr	14.7	codo
5	Potr	17.8	codo	18	Potr [c]	11.2	codo	31	Potr [d]	7.4	supp
6	Potr	15.2	codo	19	Pigl	16.0	codo	32	Potr	13.2	codo
7	Potr	17.3	codo	20	Potr	15.2	codo	33	Potr	17.5	codo
8	Potr	19.3	domi	21	Potr	12.7	codo	34	Potr	8.6	inte
9	Potr	19.8	domi	22	Potr	15.8	codo	35	Potr	12.7	codo
10	Potr [c]	19.6	domi	23	Pigl	9.1	inte	36	Potr	17.5	codo
11	Potr	10.7	codo	24	Potr	9.1	inte	37	Potr	9.7	codo
12	Potr [d]	7.1	inte	25	Potr	13.5	codo	38	Potr	12.7	codo
13	Potr	13.5	codo	26	Potr	20.8	domi	39	Potr [d]	8.1	supp
Plot 3 (point sample)											
1	Potr	10.4	codo	10	Potr	16.8	domi	20	Potr	16.8	codo
2	Potr	17.3	domi	11	Potr	10.4	codo	21	Pigl	11.7	inte
3	Pigl [c]	6.9	inte	13	Potr	11.7	codo	22	Potr	9.9	codo
4	Potr	10.7	inte	14	Potr	14.7	domi	23	Pigl [c]	11.9	inte
5	Potr	10.4	inte	15	Potr	7.4	inte	24	Potr	13.0	codo
6	Potr	9.1	codo	16	Potr	10.4	codo	25	Potr	11.9	codo
7	Potr [d]	12.7	codo	17	Potr [c]	16.5	codo	26	Pigl	19.1	codo
8	Potr	11.4	codo	18	Potr	13.2	codo	28	Pigl	10.7	inte
9	Potr	14.7	domi	19	Potr	9.9	codo	29	Potr	16.8	domi

[a] Pigl = *Picea glauca*, Potr = *Populus tremuloides*.

[b] brok = broken crown, codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Visual indications of poor health.

[d] Tree is dead.

[e] Dashes indicate no measurement taken.

SITE CODE: SASK AIH-3 (1) concluded

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	20.3	domi	26	18.2	13.9	4.7	2.1	12	4
3	Potr	18.3	codo	40	14.1	12.1	6.0	—[c]	—	2
8	Potr	25.9	domi	35	18.7	10.4	10.1	3.3	15	5
12	Pigl	9.9	inte	39	7.6	0.5	4.4	2.2	17	5
20	Pigl	8.6	inte	31	9.1	7.0	3.3	2.3	22	2
Plot 2										
1	Potr	16.3	codo	—	16.5	11.8	4.0	—	—	—
4	Potr	15.2	codo	—	—	—	—	—	—	—
14	Potr	21.3	domi	—	17.0	12.6	5.5	—	—	—
19	Pigl	16.0	codo	—	13.3	3.4	4.2	—	—	—
23	Pigl	9.1	inte	—	7.6	1.6	3.5	—	—	—
34	Potr	8.6	inte	—	11.8	8.5	2.8	—	—	—
Plot 3										
1	Potr	10.4	codo	40	14.6	11.5	3.2	0.6	10	4
2	Potr	17.3	domi	41	16.3	12.0	5.3	1.1	8	1
3	Pigl	6.9	inte	32[d]	9.1	3.2	4.2	0.2	2	8
15	Potr	7.4	inte	22[d]	12.6	9.5	2.5	2.4	17	2
26	Pigl	19.1	codo	—	11.9	3.4	3.8	2.3	10	1

[a] Pigl = *Picea glauca*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate.

[c] Dashes indicate no measurement taken.

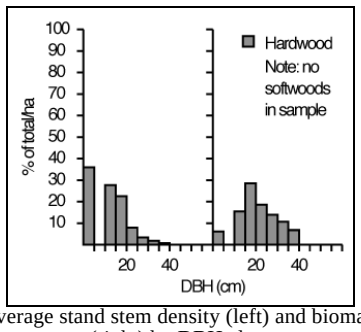
[d] Core or stem sample taken at base of tree.

SITE CODE: SASK AIM-13 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/26	93/07/26	93/07/26	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	18.4	26.4	24.1	23.0
Basal area, dead (m^2 ha^{-1})	3.4	1.1	9.2	4.6
Stem density, live (ha^{-1})	588	1429	2213	1410
Stem volume, live (m^3 ha^{-1})	144	161	140	148
Biomass (t ha^{-1})	85	95	99	93

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr [c]	27.9	brok	8	Potr [d]	16.7	inte	15	Potr	25.4	codo
2	Potr	30.7	codo	9	Potr [c]	21.8	brok	16	Potr	16.5	inte
3	Potr [d]	25.9	codo	10	Potr	11.8	inte	17	Potr [d]	30.0	codo
4	Potr [d]	26.5	codo	11	Potr	13.7	inte	18	Potr	20.6	codo
5	Potr [d]	38.9	codo	12	Potr	16.5	inte	19	Poba	24.2	codo
6	Potr	29.5	codo	13	Potr	17.7	inte	—[e]	—	—	—
7	Potr	30.4	codo	14	Potr [c]	7.1	supp	—	—	—	—
Plot 2 (point sample)											
1	Poba	13.1	codo	9	Poba	12.5	codo	17	Poba	15.9	codo
2	Poba	14.3	codo	10	Poba [d]	16.0	codo	18	Poba [c]	9.4	inte
3	Potr [d]	20.6	codo	11	Potr [d]	23.2	codo	19	Poba [d]	19.5	codo
4	Poba	15.6	codo	12	Potr	21.1	codo	20	Poba	11.9	codo
5	Poba	10.2	codo	13	Potr	19.1	codo	21	Poba	17.0	codo
6	Poba [d]	18.2	codo	14	Potr	17.7	codo	22	Poba	13.8	codo
7	Poba	20.1	codo	15	Poba	22.1	codo	23	Poba	13.1	codo
8	Poba	17.3	codo	16	Poba	17.5	codo	24	Poba	11.0	codo
Plot 3 (point sample)											
1	Potr [c]	7.4	inte	11	Bepa [c]	11.4	inte	21	Potr	19.5	codo
2	unid [c]	9.1	inte	12	Bepa [c]	11.0	inte	22	Potr	14.3	codo
3	Bepa [c]	11.5	inte	13	Bepa [c]	18.8	codo	23	Potr	24.6	codo
4	Potr	32.8	codo	14	Poba	37.3	codo	24	Potr	18.4	codo
5	Potr	30.4	codo	15	Potr	23.4	codo	25	Potr	26.4	codo
6	Potr [d]	27.2	codo	16	Potr	26.3	codo	26	Potr	19.9	codo
7	Potr	23.5	codo	17	Potr	18.4	codo	27	Potr	36.0	codo
8	Sasp	14.0	inte	18	Poba	3.1	inte	28	Potr	17.0	codo
9	Sasp [c]	4.1	inte	19	Potr	14.9	codo	29	Potr	18.5	codo
10	Sasp [c]	3.9	inte	20	Potr	20.6	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*, Sasp = *Salix* sp., unid = unidentified.
[b] brok = broken crown, codo = codominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Potr	30.7	codo	—[c]	20.7	13.9	5.9	4.5	25	14
8	Potr	16.7	inte	30	17.1	12.0	5.8	—	—	5
19	Poba	24.2	codo	—	16.7	1.7	4.8	—	—	15
Plot 2										
2	Poba	14.3	codo	40 +	14.1	6.1	3.7	3.4	26	9
3	Potr	20.6	codo	38	20.6	11.8	5.2	6.5	27	4
Plot 3										
4	Potr	32.8	codo	85 +	20.0	12.6	7.0	6.7	60	4
8	Sasp	14.0	inte	30 +	6.9	2.8	2.4	5.0	—	8
14	Poba	37.3	codo	65 +	23.2	9.8	12.4	5.9	20	11

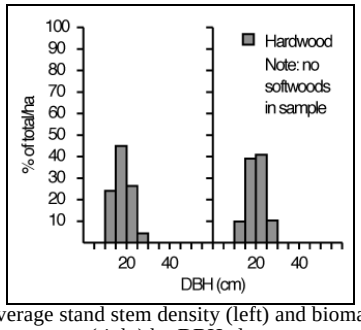
[a] Poba = *Populus balsamifera*, Potr = *Populus tremuloides*, Sasp = *Salix* sp.
[b] codo = codominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK AMH-16 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/20	93/07/20	93/07/19	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	18.4	17.2	27.6	21.0
Basal area, dead (m^2 ha^{-1})	0.0	3.4	3.4	2.3
Stem density, live (ha^{-1})	874	508	991	791
Stem volume, live (m^3 ha^{-1})	119	137	236	164
Biomass (t ha^{-1})	69	80	136	95

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	25.4	domi	7	Potr	19.3	codo	14	Potr	19.8	codo
2	Potr	14.7	codo	8	Potr	23.9	domi	15	Potr	17.8	codo
3	Potr	12.5	codo	9	Potr	14.7	codo	16	Potr	15.5	codo
4	Potr	14.8	codo	11	Potr	16.8	codo	17	Potr	11.7	inte
5	Potr	16.5	codo	12	Potr	17.8	codo	—[e]	—	—	—
6	Potr	19.8	codo	13	Potr	17.0	codo	—	—	—	—
Plot 2 (point sample)											
1	Potr	20.6	codo	8	Potr	16.5	codo	15	Potr	20.8	codo
2	Potr	20.3	codo	9	Potr[c]	10.9	inte	16	Potr	18.0	codo
3	Potr	22.9	codo	10	Potr[c]	10.9	inte	17	Potr[c]	16.3	inte
4	Potr	26.7	codo	11	Potr	18.0	codo	18	Potr	24.1	domi
5	Potr	20.8	codo	13	Potr	26.7	domi	19	Potr	19.8	codo
7	Potr	21.6	codo	14	Potr	26.2	domi	20	Potr	18.5	codo
Plot 3 (point sample)											
1	Potr	21.3	codo	11	Potr	18.5	codo	20	Potr	19.8	codo
2	Potr[d]	22.1	codo	12	Potr	15.5	codo	21	Potr	23.4	codo
3	Potr	22.4	codo	13	Potr	26.2	domi	22	Potr[c]	11.4	inte
4	Potr	21.8	codo	14	Potr	18.8	codo	23	Potr[c]	8.9	inte
5	Potr	16.3	codo	15	Potr	16.5	codo	24	Potr	20.3	codo
6	Potr	17.5	codo	16	Potr	14.2	codo	25	Potr	18.3	codo
7	Potr	20.3	codo	17	Potr	22.9	codo	26	Potr	12.2	inte
8	Potr	19.6	codo	18	Potr[c]	11.2	inte	27	Potr	21.8	codo
9	Potr	20.3	codo	19	Potr	22.1	codo	28	Potr	20.3	codo

[a] Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	25.4	domi	30	18.0	11.4	7.7	8.1	18	6
2	Potr	14.7	codo	27	15.8	8.7	4.4	4.6	18	5
17	Potr	11.7	inte	26	11.1	9.5	3.0	—	—	4
Plot 2										
1	Potr	20.6	codo	—[c]	19.6	15.8	5.8	—	—	—
4	Potr	26.7	codo	—	19.9	15.4	6.0	—	—	—
14	Potr	26.2	domi	—	21.5	15.3	—	—	—	—
19	Potr	19.8	codo	—	19.8	14.5	3.8	—	—	—
Plot 3										
1	Potr	21.3	codo	40	19.0	15.7	6.3	3.1	15	3
13	Potr	26.2	domi	41	23.0	17.1	8.4	2.6	8	4
26	Potr	12.2	inte	27	17.0	13.8	3.6	—	—	2

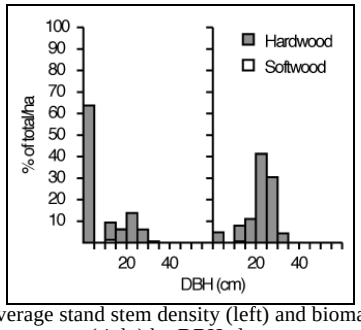
[a] Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK AMM-12 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/27	93/07/27	93/07/27	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	21.8	39.0	27.6	29.5
Basal area, dead (m^2 ha^{-1})	2.3	2.3	1.1	1.9
Stem density, live (ha^{-1})	5076	1187	808	2357
Stem volume, live (m^3 ha^{-1})	190	372	229	264
Biomass (t ha^{-1})	131	216	131	159

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr [c]	27.2	codo	8	Potr	21.0	codo	16	Potr	22.8	codo
2	Alcr	1.8	—[e]	10	Potr	27.7	codo	17	Potr	15.9	inte
3	Potr [d]	12.2	supp	11	Potr	31.0	domi	18	Potr	14.7	inte
4	Potr [c]	23.4	codo	12	Potr	27.4	codo	19	Potr [c]	26.7	codo
5	Potr [d]	20.6	brok	13	Poba	24.1	codo	20	Poba	18.0	inte
6	Potr [c]	20.8	codo	14	Potr	23.5	codo	21	Poba	20.3	codo
7	Potr	23.9	codo	15	Potr	20.9	codo	22	Poba	21.3	codo
Plot 2 (point sample)											
1	Potr	19.1	codo	13	Potr	21.6	codo	25	Potr	18.9	codo
2	Potr	24.0	codo	14	Potr	20.4	codo	26	Potr [d]	11.7	inte
3	Potr	24.2	codo	15	Poba	26.6	codo	27	Potr	23.7	codo
4	Potr	18.2	codo	16	Bepa	12.9	inte	28	Potr	25.0	codo
5	Potr	21.1	codo	17	Potr	29.2	codo	29	Potr [d]	22.2	brok
6	Potr	24.8	codo	18	Potr	13.8	inte	30	Potr	14.6	inte
7	Potr	20.0	codo	19	Potr	26.5	codo	31	Potr [c]	24.1	codo
8	Potr	28.2	codo	20	Poba [c]	14.4	inte	32	Potr	24.1	codo
9	Potr	25.2	codo	21	Poba	21.5	codo	33	Potr	14.5	inte
10	Potr	29.1	codo	22	Potr	21.1	codo	34	Potr	25.3	codo
11	Potr	28.5	codo	23	Potr	32.4	domi	35	Potr	18.2	codo
12	Potr	19.3	codo	24	Potr	19.8	codo	36	Potr	25.9	codo
Plot 3 (point sample)											
1	Potr	23.6	codo	10	Potr	26.8	codo	19	Poba	21.6	codo
2	Potr	14.8	inte	11	Potr	26.3	codo	20	Potr [c]	20.4	codo
3	Potr [c]	25.5	codo	12	Potr	21.7	codo	21	Potr [c]	24.8	codo
4	Potr	22.1	codo	13	Poba	20.2	codo	22	Potr [d]	11.9	inte
5	Potr	22.2	codo	14	Pigl	12.8	inte	23	Potr [c]	14.6	inte
6	Potr	16.8	codo	15	Poba	18.7	codo	24	Potr	30.4	domi
7	Potr	24.3	codo	16	Potr	25.5	codo	25	Potr	26.3	codo
8	Potr	21.1	codo	17	Poba	26.7	codo	—	—	—	—
9	Potr	23.2	codo	18	Poba	28.5	codo	—	—	—	—

[a] Alcr = *Alnus crispa*, Bepa = *Betula papyrifera*, Pigl = *Picea glauca*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] brok = broken crown, codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

SITE CODE: SASK AMM-12 (1) concluded

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	27.2	codo	57 +	23.6	15.0	4.4	0.5	5	4
9	Potr	16.5	inte	58 +	21.6	11.8	2.6	0.4	5	4
11	Potr	31.0	domi	61	26.4	13.6	9.5	0.6	7	4
13	Poba	24.1	codo	76 +	25.6	8.1	4.0	0.4	4	3
17	Potr	15.9	inte	40 +	15.9	3.5	3.5	1.0	8	7
Plot 2										
1	Potr	19.1	codo	64	24.4	17.0	3.1	2.3	25	8
15	Poba	26.6	codo	29	26.2	9.2	6.8	3.9	29	11
16	Bepa	12.9	inte	35 +	9.8	2.6	4.8	2.6	29	3
18	Potr	13.8	inte	35 +	15.5	11.2	3.2	1.8	25	6
20	Poba	14.4	inte	20 +	15.5	2.3	0.7	2.3	16	9
23	Potr	32.4	domi	63 +	26.5	10.0	7.4	—[c]	—	11
Plot 3										
1	Potr	23.6	codo	77	22.1	13.6	5.0	7.0	47	2
2	Potr	14.8	inte	58 +	17.1	12.6	2.5	3.8	40	4
13	Poba	20.2	codo	35 +	19.6	9.9	3.8	2.5	31	5
14	Pigl	12.8	inte	34	9.8	1.8	4.7	1.0	9	4
24	Potr	30.4	domi	70 +	21.6	15.4	9.0	9.5	43	4

[a] Bepa = *Betula papyrifera*, Pigl = *Picea glauca*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate.

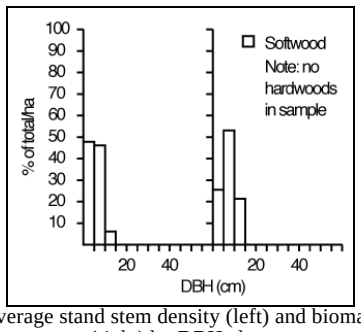
[c] Dashes indicate no measurement taken.

SITE CODE: SASK B?L (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/24	93/07/26	93/07/25	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	16.1	6.9	13.8	12.2
Basal area, dead (m^2 ha^{-1})	0.0	1.1	1.1	0.8
Stem density, live (ha^{-1})	10509	2362	1819	4896
Stem volume, live (m^3 ha^{-1})	29	15	43	29
Biomass (t ha^{-1})	47	16	30	31

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	5.5	codo	6	Pima	2.5	inte	13	Pima	5.9	codo
2	Lala	5.6	codo	7	Pima	7.6	codo	14	Lala	6.6	codo
3	Lala	5.8	codo	8	Pima	4.4	codo	15	Lala	6.5	codo
4	Pima	2.1	inte	9	Pima	6.8	codo	16	Pima	6.2	codo
5	Pima	5.2	codo	11	Pima	10.8	domi	—[e]	—	—	—
Plot 2 (point sample)											
1	Lala	4.9	codo	4	Pima[c]	6.2	inte	8	Pima	6.5	codo
2	Pima	6.6	codo	5	Lala[d]	12.0	codo	—	—	—	—
3	Pima	5.3	codo	6	Pima	5.7	codo	—	—	—	—
Plot 3 (point sample)											
1	Lala	9.8	codo	6	Lala	13.1	codo	11	Lala	11.3	codo
2	Lala	9.6	codo	7	Lala	8.2	codo	12	Lala	11.2	codo
3	Lala	10.2	codo	8	Lala	12.2	codo	13	Pima	6.9	codo
4	Lala	9.9	codo	9	Pima	9.6	codo	—	—	—	—
5	Lala[c]	6.5	codo	10	Lala	11.0	codo	—	—	—	—

[a] Lala = *Larix laricina*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	5.5	codo	—[c]	4.7	2.5	0.8	0.4	4	1
2	Lala	5.6	codo	—	4.2	2.2	1.2	0.5	5	1
3	Lala	5.8	codo	20 +	2.4	1.7	0.7	0.4	3	1
11	Pima	10.8	domi	69	7.1	2.7	1.7	0.7	16	3
Plot 2										
1	Lala	4.9	codo	25	3.1	1.5	1.2	0.8	9	2
2	Pima	6.6	codo	25	5.2	2.8	0.9	1.0	8	1
Plot 3										
1	Lala	9.8	codo	50 +[d]	6.5	4.3	1.7	1.2	37	2
9	Pima	9.6	codo	55[d]	9.2	1.5	2.0	2.0	27	4

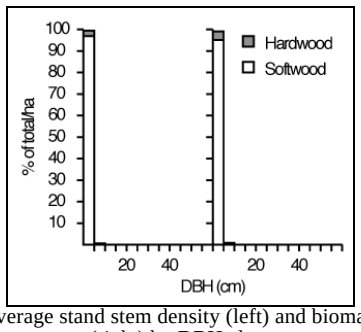
[a] Lala = *Larix laricina*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant.
[c] Dashes indicate no measurement taken.
[d] Core or stem sample taken at base of tree.

SITE CODE: SASK BDH-4 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/24	94/06/24	94/06/24	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	2.6	12.4	5.6	6.9
Basal area, dead (m^2 ha^{-1})	5.3	0.1	21.4	8.9
Stem density, live (ha^{-1})	7600	40000	16000	21200
Stem volume, live (m^3 ha^{-1})	3	14	6	8
Biomass (t ha^{-1})	24	130	52	69

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Piba	1.5	codo	10	Piba	0.5	supp	19	Piba	3.0	domi
2	Piba	2.2	codo	11	Piba [c]	5.6	domi	20	Piba	0.4	supp
3	Piba	3.3	domi	12	Pima	0.8	supp	21	Piba [c]	3.4	domi
4	Piba	2.6	codo	13	Piba [c]	8.6	domi	22	Piba	1.4	supp
5	Piba [c]	4.1	domi	14	Piba [c]	5.4	domi	23	Piba	3.8	codo
6	Piba	2.9	domi	15	Piba [d]	1.6	inte	24	Piba	1.8	supp
7	Pima	1.0	supp	16	Piba	1.9	inte	25	Piba	1.8	supp
8	Piba [c]	2.1	inte	17	Piba	2.1	codo	—[e]	—	—	—
9	Pima	1.5	supp	18	Piba	1.9	codo	—	—	—	—
Plot 2 (fixed area plot)											
1	Piba	2.5	codo	35	Piba [d]	1.7	inte	69	Piba	3.1	codo
2	Piba	1.8	codo	36	Piba	1.6	codo	70	Piba	1.8	inte
3	Piba	2.2	codo	37	Piba	0.8	inte	71	Piba	1.0	inte
4	Piba	1.6	inte	38	Piba [d]	1.5	inte	72	Piba [d]	1.9	inte
5	Pima	0.4	inte	39	Piba	1.6	inte	73	Sasp	0.4	inte
6	Piba	2.2	codo	40	Piba	1.8	inte	74	Sasp	0.3	inte
7	Piba	2.4	codo	41	Piba	1.1	inte	75	Sasp	1.5	inte
8	Piba [c]	1.8	inte	42	Piba	1.4	inte	76	Piba	2.3	inte
9	Piba	2.7	codo	43	Piba	2.6	codo	77	Piba [d]	2.4	codo
10	Piba	2.4	codo	44	Piba	1.1	inte	78	Piba	2.4	codo
11	Piba	1.2	inte	45	Piba	1.3	inte	79	Piba	1.9	codo
12	Piba [d]	2.6	domi	46	Piba	1.6	inte	80	Piba	2.5	codo
13	Piba	2.0	codo	47	Piba [d]	2.1	codo	81	Piba	1.5	inte
14	Piba	1.4	inte	48	Piba	1.4	inte	82	Piba	1.7	inte
15	Piba	1.8	codo	49	Piba	3.1	domi	83	Piba	1.8	codo
16	Piba	1.1	inte	50	Piba	1.8	inte	84	Piba	2.5	codo
17	Piba	2.8	domi	51	Piba [d]	2.4	codo	85	Piba	1.8	codo
18	Piba	1.8	inte	52	Piba	1.8	codo	86	Piba	2.4	codo
19	Piba	1.6	inte	53	Piba	2.3	codo	87	Piba	1.8	inte
20	Piba	1.8	inte	54	Piba	1.8	codo	88	Piba	2.1	inte
21	Piba [d]	2.4	codo	55	Piba [d]	1.9	codo	89	Piba	1.8	inte
22	Piba	2.5	codo	56	Piba	2.2	codo	90	Piba	1.5	inte
23	Piba	2.7	codo	57	Piba	1.7	inte	91	Pima	1.1	inte
24	Piba	1.4	inte	58	Piba	3.3	domi	92	Piba	1.3	inte
25	Piba	3.6	domi	59	Piba	2.3	codo	93	Piba	1.7	codo
26	Piba	3.2	codo	60	Piba	2.1	codo	94	Piba	3.2	domi
27	Piba	2.3	codo	61	Piba	1.8	inte	95	Piba	1.9	codo
28	Piba	3.4	codo	62	Piba	1.6	inte	96	Piba	1.4	inte
29	Piba	1.8	codo	63	Piba	1.2	inte	97	Piba	1.4	inte
30	Piba	1.6	inte	64	Piba	1.4	inte	98	Piba	0.9	inte
31	Piba [d]	1.4	inte	65	Piba	1.7	codo	99	Piba [d]	1.4	codo
32	Piba	3.1	codo	66	Piba [d]	1.3	inte	100	Piba	1.9	inte
33	Piba	1.8	codo	67	Piba	1.7	inte	101	Piba	2.2	codo
34	Piba	1.8	codo	68	Piba	1.1	inte	—	—	—	—

SITE CODE: SASK BDH-4 (1) concluded

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (fixed area plot)											
1	Piba	1.6	inte	15	Piba	2.5	codo	29	Piba	2.1	codo
2	Piba	2.1	codo	16	Piba[c]	22.5	domi	30	Piba	2.0	codo
3	Piba	2.1	codo	17	Piba	0.9	inte	31	Piba	1.9	codo
4	Piba	1.9	inte	18	Piba	2.2	codo	32	Piba	5.0	domi
5	Piba	2.1	inte	19	Piba	1.6	inte	33	Piba[d]	2.9	codo
6	Piba	2.1	codo	20	Piba	2.4	codo	34	Piba	2.1	inte
7	Piba	2.0	codo	21	Piba	1.8	codo	35	Piba	1.9	codo
8	Piba	2.2	domi	22	Piba	1.3	inte	36	Piba[d]	2.0	codo
9	Piba[d]	3.2	domi	23	Piba	2.6	domi	37	Piba	1.7	inte
10	Piba	2.1	codo	24	Piba	1.4	codo	38	Piba	1.8	inte
11	Piba	1.8	inte	25	Piba	2.1	inte	39	Piba	1.9	codo
12	Piba[d]	0.5	inte	26	Sasp	2.4	inte	40	Piba	1.7	codo
13	Piba[d]	1.9	inte	27	Piba	1.5	inte	41	Piba[c]	13.2	domi
14	Piba	1.5	inte	28	Piba	1.6	inte	42	Piba	1.8	inte

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
9	Pima	1.5	supp	12[c]	1.8	0.1	0.3	—[d]	—	2
17	Piba	2.1	codo	13[c]	2.4	0.7	0.6	—	—	4
19	Piba	3.0	domi	15[c]	3.2	0.8	0.6	—	—	5
Plot 2										
12	Piba	2.6	domi	13[c]	3.7	1.8	0.5	—	—	4
35	Piba	1.7	inte	11[c]	1.8	1.6	0.3	—	—	3
51	Piba	2.4	codo	11[c]	3.4	1.8	0.4	—	—	3
94	Piba	3.2	domi	16[c]	3.7	1.6	0.6	—	—	4
Plot 3										
1	Piba	1.6	inte	16[c]	2.1	1.0	0.6	—	—	2
6	Piba	2.1	codo	18[c]	2.7	1.1	0.6	—	—	2
9	Piba	3.2	domi	17[c]	3.6	0.6	0.6	—	—	4

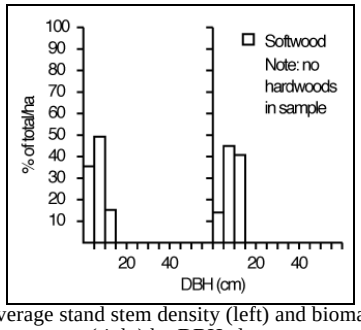
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Core or stem sample taken at base of tree.
[d] Dashes indicate no measurement taken.

SITE CODE: SASK BDL-20 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/26	94/05/27	94/05/27	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	41.3	45.9	16.1	34.4
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	6325	9998	10554	8959
Stem volume, live (m^3 ha^{-1})	160	211	37	136
Biomass (t ha^{-1})	94	125	47	88

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	8.9	codo	8	Pima	11.6	domi	14	Pima	10.1	domi
2	Pima	8.4	codo	9	Pima	6.5	inte	15	Pima	6.3	inte
3	Pima	9.6	codo	10	Pima	9.9	codo	16	Pima	14.6	domi
4	Pima	10.1	domi	11	Pima	11.4	domi	17	Pima	10.6	domi
6	Pima	11.2	domi	12	Pima	6.1	inte	18	Pima	9.6	codo
7	Pima	11.4	domi	13	Pima	11.7	codo	19	Pima	9.7	codo
Plot 2 (point sample)											
1	Pima	12.1	domi	8	Pima	12.3	domi	15	Pima	5.8	inte
2	Pima	12.4	codo	9	Pima	4.7	inte	16	Pima	8.4	inte
3	Pima	11.0	codo	10	Pima	6.5	inte	17	Pima	13.2	domi
4	Pima	5.4	inte	11	Pima	5.0	inte	18	Pima	9.3	codo
5	Pima	12.6	domi	12	Pima	6.7	inte	19	Pima	10.0	codo
6	Pima	9.9	codo	13	Pima	10.7	codo	20	Pima	5.7	inte
7	Pima	9.2	codo	14	Pima	10.4	codo	—[c]	—	—	—
Plot 3 (point sample)											
2	Pima	5.8	codo	5	Pima	7.7	domi	8	Pima	4.0	inte
3	Pima	3.0	inte	6	Pima	5.5	codo	—	—	—	—
4	Pima	4.7	codo	7	Pima	4.0	codo	—	—	—	—

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Pima	9.6	codo	121	8.9	4.9	0.8	1.5	33	2
9	Pima	6.5	inte	60	5.8	1.6	1.5	0.7	29	2
16	Pima	14.6	domi	102	11.2	3.1	2.0	3.2	42	3
Plot 2										
7	Pima	9.2	codo	90	10.3	5.4	1.3	1.0	23	3
10	Pima	6.5	inte	115	8.6	5.0	—[c]	0.8	28	2
17	Pima	13.2	domi	139	10.6	5.2	1.4	0.7	25	3
Plot 3										
5	Pima	7.7	domi	—	7.5	3.5	0.4	2.3	75	3
6	Pima	5.5	codo	98	4.8	2.5	0.5	0.3	26	2
9	Pima	3.4	inte	—[d]	3.6	1.5	0.4	—	—	—

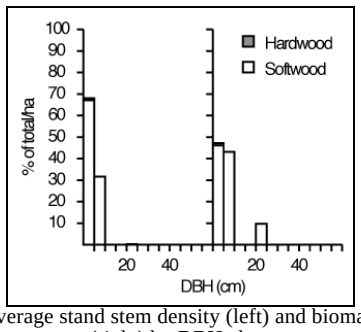
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.
[d] Core or stem sample taken at base of tree.

SITE CODE: SASK BIH (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 6	Plot 7	Average
Date of measurements (y/m/d)	93/07/23	94/06/11	94/06/12	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	2.296	na	na
Fixed plot area (m^2)	na	na	25	na
Basal area, live (m^2 ha^{-1})	26.4	25.3	20.0	23.9
Basal area, dead (m^2 ha^{-1})	2.3	13.8	0.5	5.5
Stem density, live (ha^{-1})	21802	5465	14000	13756
Stem volume, live (m^3 ha^{-1})	55	107	48	70
Biomass (t ha^{-1})	87	66	62	72

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	5.2	codo	10	Pima	2.3	inte	19	Pima	2.7	inte
2	Pima	3.0	inte	11	Pima	4.7	codo	20	Pima	4.7	codo
3	Pima	5.6	codo	12	Pima	5.0	codo	21	Pima	2.3	inte
4	Pima	3.2	inte	13	Pima	3.1	inte	22	Pima[c]	3.3	inte
5	Pima	5.3	codo	14	Pima[d]	5.2	codo	23	Pima	7.9	codo
6	Potr[c]	3.5	inte	15	Pima	4.1	codo	24	Pima	4.5	codo
7	Pima	5.6	codo	16	Pima	4.9	codo	25	Pima	5.1	codo
8	Pima	4.1	codo	17	Pima	5.1	codo	—[e]	—	—	—
9	Pima	7.4	codo	18	Pima	5.1	codo	—	—	—	—
Plot 6 (point sample)											
1	Pima[c]	4.5	inte	8	Pima[d]	6.0	inte	14	Pima	5.1	inte
3	Pima	6.6	codo	9	Potr[c]	5.5	inte	15	Potr[c]	5.3	inte
4	Pima	7.4	codo	10	Pima	8.7	domi	16	Pima[d]	6.4	inte
5	Pima	8.4	codo	11	Potr[c]	6.4	inte	17	Pima[d]	9.8	codo
6	Piba[d]	24.2	domi	12	Potr[c]	5.3	inte	18	Pima	8.6	codo
7	Poba[c]	7.8	inte	13	Piba	22.1	domi	—	—	—	—
Plot 7 (fixed area plot)											
1	Pima	9.5	domi	14	Pima	2.4	inte	27	Pima	4.5	codo
2	Pima	4.2	inte	15	Pima	2.3	inte	28	Pima	3.5	inte
3	Pima	4.5	inte	16	Pima	3.5	inte	29	Pima	4.7	codo
4	Pima	5.9	codo	17	Pima	2.2	inte	30	Pima	4.3	codo
5	Pima	4.7	codo	18	Pima	2.8	inte	31	Pima	4.0	inte
6	Pima	2.1	inte	19	Pima	1.7	inte	32	Pima	3.6	inte
7	Pima	5.5	codo	20	Pima	2.7	inte	33	Pima	4.5	codo
8	Pima	2.2	inte	21	Pima	6.6	domi	34	Pima	2.8	inte
9	Pima	4.6	inte	22	Pima[c]	1.9	inte	35	Pima	4.7	codo
10	Pima	5.3	codo	23	Sasp	2.4	inte	36	Pima	4.8	inte
11	Pima	4.0	inte	24	Pima	5.3	codo	37	Pima	2.4	inte
12	Pima	3.3	inte	25	Pima	3.3	inte	—	—	—	—
13	Pima	4.4	inte	26	Pima[c]	3.5	inte	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	5.2	codo	41	—[c]	—	—	0.3	6	1
2	Pima	3.0	inte	31	—	—	—	0.9	25	2
Plot 6										
5	Pima	8.4	codo	48	8.3	6.7	—	1.1	24	4
6	Piba	24.2	domi	55	22.0	16.8	—	5.4	31	5
17	Pima	9.8	codo	38	7.8	4.3	—	1.3	16	4
Plot 7										
1	Pima	9.5	domi	48	7.4	2.0	1.1	1.4	25	3
4	Pima	5.9	codo	41	6.0	3.0	0.7	0.9	18	2
24	Pima	5.3	codo	40	6.2	3.4	0.6	1.1	19	2

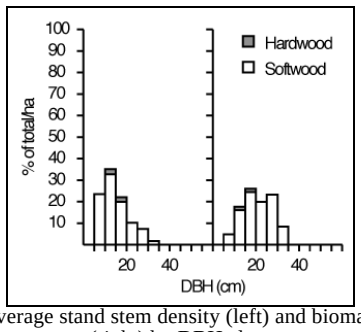
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK BMH (2) Southern Aux. Site

Stand values

Parameter	Plot 2	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/07/23	94/06/10	94/06/11	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	44.8	29.8	43.6	39.4
Basal area, dead (m^2 ha^{-1})	11.5	0.0	2.3	4.6
Stem density, live (ha^{-1})	3122	730	1795	1882
Stem volume, live (m^3 ha^{-1})	372	237	337	316
Biomass (t ha^{-1})	184	124	169	159

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (point sample)											
1	Pima[c]	14.6	codo	18	Pima[d]	12.1	inte	35	Pima[c]	12.3	codo
2	Pima[d]	16.7	inte	19	Pima	13.7	codo	36	Pima	12.9	codo
3	Piba	20.4	codo	20	Pima	9.6	inte	37	Pima	13.9	codo
4	Piba[c]	27.4	codo	21	Pima[d]	11.3	inte	38	Piba	31.9	codo
5	Piba[d]	15.2	inte	22	Pima	9.9	inte	39	Pima[c]	11.8	inte
6	Pima	19.8	codo	23	Pima	18.5	codo	40	Pima[c]	14.4	codo
7	Piba	20.0	codo	24	Pima	14.4	codo	41	Piba[d]	12.9	codo
8	Pima[d]	5.5	supp	25	Pima	18.6	codo	42	Pima	18.2	codo
9	Piba	27.3	codo	26	Pima[c]	17.4	codo	43	Piba	20.1	inte
10	Pima[c]	23.2	codo	27	Pima	12.0	codo	44	Pima[d]	10.2	inte
11	Piba	23.9	codo	28	Pima[d]	12.7	inte	45	Pima	15.3	codo
12	Pima	8.3	supp	29	Pima	7.5	inte	46	Piba	20.2	codo
13	Pima[d]	15.1	inte	30	Pima	10.1	inte	47	Piba	25.8	codo
14	Pima	15.3	codo	31	Pima	9.7	inte	48	Pima[c]	19.3	codo
15	Pima	16.9	codo	32	Pima[c]	9.6	codo	49	Pima	21.2	codo
16	Pima[d]	11.7	inte	33	Pima	7.9	inte	—[e]	—	—	—
17	Pima	13.5	codo	34	Pima	13.3	codo	—	—	—	—
Plot 4 (point sample)											
2	Piba	29.9	domi	8	Poba	14.7	inte	13	Piba	25.2	domi
3	Piba	19.8	codo	9	Piba	28.2	domi	14	Poba	15.2	inte
4	Pima	18.9	codo	10	Piba	31.6	domi	15	Piba	27.3	domi
5	Piba	28.0	domi	11	Piba	33.7	domi	—	—	—	—
6	Piba	27.4	domi	12	Piba	33.4	domi	—	—	—	—
Plot 5 (point sample)											
1	Piba	26.9	domi	8	Pima	13.4	inte	15	Piba	22.1	domi
2	Pima	12.5	codo	9	Piba	22.8	codo	16	Piba	25.9	codo
3	Pima	18.7	domi	10	Pima[d]	16.5	inte	17	Piba	27.5	domi
4	Pima	14.3	codo	11	Pima	10.0	inte	18	Piba	23.2	codo
5	Pima	18.8	codo	12	Piba	21.3	domi	19	Pima	18.2	inte
6	Piba	21.0	codo	13	Piba	17.0	codo	20	Pima	19.3	codo
7	Pima	16.8	inte	14	Piba	24.7	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Poba = *Populus balsamifera*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
1	Pima	14.6	codo	76	16.5	12.7	—[c]	1.4	8	4
3	Piba	20.4	codo	103	20.1	14.7	—	2.4	38	4
12	Pima	8.3	supp	46	8.3	1.0	—	0.7	7	1
20	Pima	9.6	inte	64	14.1	11.8	—	1.5	41	3
Plot 4										
2	Piba	29.9	domi	130	22.0	13.3	3.0	2.3	43	3
3	Piba	19.8	codo	104	16.9	9.8	2.5	4.0	65	5
4	Pima	18.9	codo	103	17.5	6.0	2.4	5.2	48	5
11	Piba	33.7	domi	146	20.1	11.3	5.8	2.3	28	4
Plot 5										
2	Pima	12.5	codo	129	14.0	9.6	—	0.5	27	3
3	Pima	18.7	domi	131	16.2	12.9	—	0.8	29	3
12	Piba	21.3	domi	126	18.3	14.3	—	1.4	33	4
17	Piba	27.5	domi	151	21.9	14.3	—	2.8	62	5

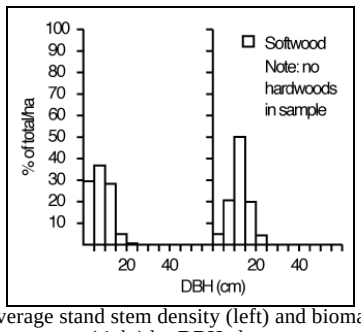
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Dashes indicate no measurement taken.

SITE CODE: SASK BMH-9 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/20	93/07/20	93/07/20	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	35.6	31.0	43.6	36.7
Basal area, dead (m^2 ha^{-1})	3.4	6.9	0.0	3.4
Stem density, live (ha^{-1})	4294	1826	10570	5563
Stem volume, live (m^3 ha^{-1})	172	165	197	178
Biomass (t ha^{-1})	98	88	124	104

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima[c]	5.5	inte	13	Pima	10.4	codo	25	Lala	12.1	codo
2	Pima	13.9	codo	14	Pima	5.5	supp	26	Pima	14.0	codo
3	Pima	7.6	inte	15	Lala	6.6	codo	27	Pima	14.0	codo
4	Lala	14.7	codo	16	Pima	6.5	codo	28	Pima	10.1	codo
5	Pima	9.3	inte	17	Pima	8.2	codo	29	Lala	9.6	codo
6	Pima	13.7	codo	18	Pima	9.5	codo	30	Lala	19.3	domi
7	Pima	19.8	codo	19	Pima	9.8	codo	31	Pima	16.1	codo
8	Lala	11.6	codo	20	Pima[c]	10.5	codo	32	Pima	7.9	inte
9	Pima	15.5	codo	21	Pima	12.3	codo	33	Pima	14.7	codo
10	Pima[c]	13.3	inte	22	Pima	10.7	codo	34	Pima	18.3	domi
11	Pima	15.4	codo	23	Pima	17.4	domi	—[e]	—	—	—
12	Lala	8.5	inte	24	Pima	13.2	codo	—	—	—	—
Plot 2 (point sample)											
1	Pima	21.4	domi	14	Pima[c]	11.7	inte	26	Pima	17.6	codo
2	Pima	13.9	codo	15	Pima	11.5	codo	27	Pima	16.4	codo
3	Pima	12.2	codo	17	Pima	14.6	codo	28	Pima	14.6	codo
4	Pima[d]	12.8	codo	18	Pima	13.8	codo	29	Pima[c]	15.3	codo
5	Pima[d]	14.3	codo	19	Pima[c]	10.4	codo	30	Pima[c]	11.3	inte
6	Pima[d]	14.2	codo	20	Pima	15.4	codo	31	Pima[d]	13.9	codo
7	Pima	20.2	codo	21	Pima	14.3	codo	32	Pima	17.5	codo
8	Pima	14.2	codo	22	Pima[c]	10.6	codo	33	Pima	13.9	codo
9	Pima	14.9	codo	23	Pima	11.7	codo	34	Pima	12.8	codo
10	Lala	19.8	codo	24	Pima[c]	13.8	codo	35	Lala	23.8	domi
13	Pima	14.4	codo	25	Lala	17.1	codo	36	Pima	13.9	codo
Plot 3 (point sample)											
1	Pima[d]	13.3	codo	14	Pima	10.4	codo	28	Pima	4.1	inte
2	Pima[d]	11.3	codo	15	Lala	18.0	domi	29	Pima	13.0	codo
3	Pima	15.5	codo	16	Pima	12.9	codo	30	Pima	10.9	codo
4	Pima	5.5	supp	17	Pima	11.8	codo	31	Pima	7.2	inte
5	Pima	7.7	inte	18	Pima	1.9	supp	32	Pima	7.4	codo
6	Pima	11.2	codo	19	Pima	8.2	inte	33	Pima	8.5	codo
7	Pima	9.6	codo	20	Pima	14.1	codo	34	Pima	8.4	codo
8	Pima[d]	11.2	codo	21	Pima	7.2	inte	35	Lala[d]	14.3	codo
9	Pima	9.5	codo	22	Pima	12.0	codo	36	Pima	13.9	codo
10	Pima	11.9	codo	23	Pima	12.8	codo	37	Pima	9.2	codo
11	Pima	10.4	codo	24	Lala	15.0	domi	38	Pima	10.6	codo
12	Lala[d]	14.3	domi	26	Pima	5.6	inte	39	Pima	10.2	codo
13	Pima	12.6	codo	27	Pima	7.2	inte	—	—	—	—

[a] Lala = *Larix laricina*, Pima = *Picea mariana*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Tree is dead.

[d] Visual indications of poor health.

[e] Dashes indicate no measurement taken.

SITE CODE: SASK BMH-9 (1) concluded

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
4	Lala	14.7	codo	49	14.3	7.0	3.6	3.1	21	1
5	Pima	9.3	inte	40	9.6	2.8	1.9	1.2	23	1
9	Pima	15.5	codo	41	12.9	5.3	2.3	1.6	22	1
12	Lala	8.5	inte	48	10.5	5.5	1.3	1.0	25	2
14	Pima	5.5	supp	43	4.5	3.4	1.9	0.4	14	2
23	Pima	17.4	domi	49	12.4	6.5	2.5	2.6	27	3
Plot 2										
1	Pima	21.4	domi	70	16.1	8.2	3.1	2.7	32	4
2	Pima	13.9	codo	58	12.1	4.8	2.7	2.7	29	3
10	Lala	19.8	codo	61	16.5	11.7	4.1	3.7	33	4
11	Pima	14.5	inte	55	10.5	5.6	3.5	2.4	30	2
Plot 3										
1	Pima	13.3	codo	59	11.0	4.6	2.6	2.6	32	2
4	Pima	5.5	supp	49	5.6	2.6	1.6	0.6	22	2
5	Pima	7.7	inte	55	7.6	6.2	1.2	0.8	28	3
12	Lala	14.3	domi	44	14.2	9.2	2.1	3.5	23	2

[a] Lala = *Larix laricina*, Pima = *Picea mariana*.

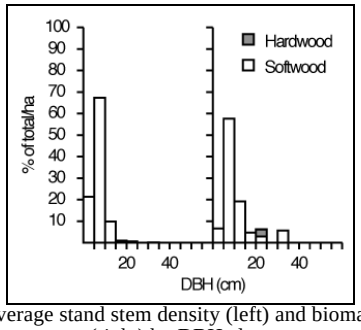
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

SITE CODE: SASK BMM-1a (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/20	94/06/13	94/06/14	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	28.7	48.2	23.0	33.3
Basal area, dead (m^2 ha^{-1})	4.6	9.2	2.3	5.4
Stem density, live (ha^{-1})	4694	12661	5155	7503
Stem volume, live (m^3 ha^{-1})	120	212	87	139
Biomass (t ha^{-1})	69	137	57	88

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	11.9	domi	11	Pima	8.9	codo	22	Pima	10.2	codo
2	Pima	6.9	codo	12	Pima	7.9	codo	23	Pima[c]	8.6	codo
3	Pima	8.4	domi	13	Pima	12.5	domi	24	Pima	7.1	codo
4	Pima[d]	5.3	codo	14	Pima	10.2	codo	25	Pima[c]	11.7	codo
5	Pima	8.6	codo	15	Pima[d]	11.2	codo	26	Pima	9.7	domi
6	Pima	15.2	domi	16	Pima	8.9	codo	27	Pima	6.1	inte
7	Pima	6.9	domi	17	Pima	10.2	codo	28	Pima	10.4	codo
8	Pima[d]	5.1	domi	19	Pima	10.2	codo	29	Pima	8.4	domi
9	Pima	10.2	domi	20	Pima	7.6	codo	30	Lala	15.0	domi
10	Pima[d]	5.8	domi	21	Pima	6.9	codo	—[e]	—	—	—
Plot 2 (point sample)											
1	Pima	8.3	codo	11	Pima[d]	3.5	inte	20	Pima	9.1	codo
2	Pima	7.9	codo	12	Pima	5.7	codo	21	Pima	9.2	codo
4	Pima	3.4	codo	13	Pima	6.7	codo	22	Pima	6.8	inte
5	Pima	7.7	codo	14	Pima	6.5	codo	23	Pima	7.9	inte
6	Pima[d]	6.2	inte	15	Pima	7.1	codo	24	Pima	10.0	domi
7	Pima[c]	9.1	codo	16	Pima	10.2	domi	25	Pima	3.6	inte
8	Pima	9.5	codo	17	Pima[d]	8.0	codo	26	Lala[c]	34.0	domi
9	Pima[d]	8.3	codo	18	Pima	9.5	domi	—	—	—	—
10	Pima	11.7	codo	19	Poba[c]	22.9	domi	—	—	—	—
Plot 3 (point sample)											
1	Pima	5.9	inte	5	Pima	5.8	inte	9	Pima	6.4	codo
2	Pima[c]	8.4	codo	6	Lala[c]	22.1	domi	10	Pima	7.4	codo
3	Pima	9.8	codo	7	Lala	16.8	codo	11	Pima[c]	10.3	codo
4	Pima[d]	8.0	inte	8	Pima[c]	5.3	inte	—	—	—	—

[a] Lala = *Larix laricina*, Pima = *Picea mariana*, Poba = *Populus balsamifera*. [b] codo = codominant, domi = dominant, inte = intermediate. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	11.9	domi	—[c]	11.9	6.4	1.9	2.0	—	2
2	Pima	6.9	codo	—	7.5	6.2	1.6	2.0	3	1
6	Pima	15.2	domi	80	11.4	8.6	4.3	2.7	60	2
18	Pima	6.6	inte	31	6.6	3.4	2.1	—	—	—
Plot 2										
1	Pima	8.3	codo	96	8.3	5.8	0.8	1.2	32	4
8	Pima	9.5	codo	92	9.1	6.7	0.9	1.5	36	5
16	Pima	10.2	domi	96	10.4	7.6	1.3	1.1	23	3
23	Pima	7.9	inte	64	9.3	5.3	1.1	0.9	16	3
Plot 3										
3	Pima	9.8	codo	101	9.8	6.1	1.3	1.0	19	6
6	Lala	22.1	domi	—	13.9	8.3	3.9	0.8	16	4
11	Pima	10.3	codo	95	9.8	6.1	1.2	1.5	18	5

[a] Lala = *Larix laricina*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.

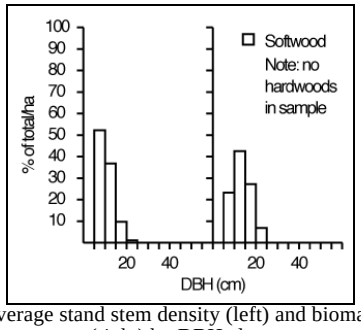
[c] Dashes indicate no measurement taken.

SITE CODE: SASK BMM-1b (2) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/21	93/07/21	94/06/14	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	31.0	21.8	20.7	24.5
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	4820	1369	1942	2710
Stem volume, live (m^3 ha^{-1})	128	134	112	125
Biomass (t ha^{-1})	74	70	60	68

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	11.4	domi	11	Pima	10.4	domi	21	Pima	7.9	codo
2	Pima	10.2	domi	12	Pima	9.1	codo	22	Pima	5.6	inte
3	Pima	11.4	domi	13	Pima	11.7	domi	23	Pima[c]	10.4	codo
4	Pima	9.7	domi	15	Pima	15.0	domi	24	Pima	10.4	codo
5	Pima	11.4	domi	16	Pima	8.1	codo	25	Pima[c]	9.7	domi
6	Pima	12.7	domi	17	Pima	11.7	domi	26	Pima	8.4	codo
7	Pima	13.0	domi	18	Pima	7.1	codo	27	Pima	7.1	codo
9	Pima	8.9	codo	19	Pima	11.7	domi	28	Pima	6.1	inte
10	Pima	6.6	inte	20	Pima	10.9	codo	29	Pima	10.2	domi
Plot 2 (point sample)											
2	Lala	20.3	codo	10	Pima	14.2	codo	17	Pima	18.3	domi
3	Pima	16.8	codo	11	Pima	9.7	codo	18	Pima	18.8	domi
5	Pima	15.0	codo	12	Pima	15.5	codo	20	Pima	22.9	codo
6	Pima[c]	22.6	domi	13	Pima	17.5	codo	21	Pima	14.5	codo
7	Pima	11.7	codo	14	Pima	8.9	inte	22	Pima	15.2	codo
8	Pima	11.9	codo	15	Pima	14.7	codo	—[d]	—	—	—
9	Pima	12.7	codo	16	Pima	16.5	codo	—	—	—	—
Plot 3 (point sample)											
1	Lala[c]	15.8	codo	4	Lala	18.0	codo	7	Pima	7.7	inte
2	Pima[c]	12.3	codo	5	Lala	17.9	domi	8	Pima	9.7	codo
3	Pima[c]	12.6	codo	6	Pima	11.5	codo	9	Pima	11.0	codo

[a] Lala = *Larix laricina*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
2	Lala	20.3	codo	60	15.6	4.8	6.8	1.5	28	3
5	Pima	15.0	codo	45	13.5	1.8	2.4	1.9	17	2
6	Pima	22.6	domi	51	18.9	7.3	3.2	1.4	28	4
14	Pima	8.9	inte	72	8.6	7.0	1.2	—[c]	—	2
Plot 3										
3	Pima	12.6	codo	75	13.9	6.3	—	2.0	49	7
5	Lala	17.9	domi	130	13.3	8.1	—	2.5	19	4
9	Pima	11.0	codo	70	11.3	3.3	—	1.9	34	5

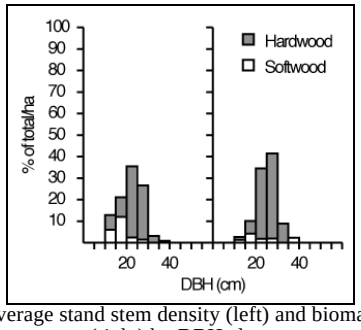
[a] Lala = *Larix laricina*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK Jail House (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/01	94/06/01	94/06/01	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	34.4	34.4	34.4	34.4
Basal area, dead (m^2 ha^{-1})	4.6	6.9	4.6	5.4
Stem density, live (ha^{-1})	1123	747	738	869
Stem volume, live (m^3 ha^{-1})	285	316	292	298
Biomass (t ha^{-1})	161	182	170	171

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	12.7	domi	7	Pigl[c]	9.5	inte	13	Potr[d]	33.1	domi
2	Pigl[c]	24.2	domi	8	Potr	32.3	domi	14	Potr[d]	19.5	codo
3	Pigl	13.7	inte	9	Potr[d]	25.6	codo	15	Potr[d]	20.9	codo
4	Potr	25.4	domi	10	Potr[d]	21.2	codo	16	Pigl[d]	15.6	inte
5	Pigl	21.8	codo	11	Potr[d]	28.8	domi	17	Potr[d]	23.2	codo
6	Pigl	17.2	codo	12	Potr[d]	21.7	domi	—[e]	—	—	—
Plot 2 (point sample)											
1	Pigl	35.0	domi	7	Potr[c]	20.9	codo	13	Potr	27.6	domi
2	Potr[c]	28.5	domi	8	Potr	25.8	codo	14	Potr	25.2	domi
3	Potr	32.5	domi	9	Potr	22.7	codo	15	Potr	22.4	domi
4	Potr	24.2	codo	10	Abba	17.8	inte	16	Potr	23.1	domi
5	Potr	26.4	domi	11	Potr	22.7	codo	17	Potr	25.8	domi
6	Potr	27.4	domi	12	Potr	19.9	codo	18	Pigl[c]	45.8	domi
Plot 3 (point sample)											
1	Potr	21.0	codo	7	Potr	22.5	codo	13	Potr[c]	21.1	codo
2	Potr	21.5	codo	8	Potr	26.5	domi	14	Potr[d]	26.9	domi
3	Potr	24.7	codo	9	Potr	24.6	codo	15	Potr[d]	29.5	domi
4	Potr	28.0	domi	10	Potr[d]	29.3	domi	16	Pigl[d]	27.6	inte
5	Potr[c]	21.0	codo	11	Potr[d]	25.7	codo	17	Potr[d]	22.7	codo
6	Potr	18.5	codo	12	Potr	26.0	codo	—	—	—	—

[a] Abba = *Abies balsamea*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate. [c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Pigl	13.7	inte	94	13.0	9.6	1.7	1.1	41	5
5	Pigl	21.8	codo	90	20.6	15.4	2.4	2.5	32	8
8	Potr	32.3	domi	69	26.2	18.0	3.8	5.0	31	14
15	Potr	20.9	codo	95	19.4	15.8	2.5	3.2	50	7
Plot 2										
1	Pigl	35.0	domi	90	26.4	16.8	3.6	5.4	33	7
5	Potr	26.4	domi	121	22.4	17.0	3.0	3.8	56	12
16	Potr	23.1	domi	86	22.0	8.1	3.5	4.1	46	7
Plot 3										
6	Potr	18.5	codo	—[c]	17.0	14.0	3.4	1.5	17	7
8	Potr	26.5	domi	79	22.1	18.1	3.5	5.5	51	11
15	Potr	29.5	domi	82	21.4	16.2	5.0	6.2	51	12

[a] Pigl = *Picea glauca*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate.

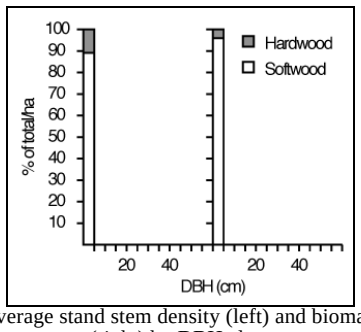
[c] Dashes indicate no measurement taken.

SITE CODE: SASK JDM-8 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/18	93/07/18	93/07/18	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	2.3	8.0	4.6	5.0
Basal area, dead (m^2 ha^{-1})	0.0	0.0	2.3	0.8
Stem density, live (ha^{-1})	1560	8606	10625	6931
Stem volume, live (m^3 ha^{-1})	3	13	5	7
Biomass (t ha^{-1})	6	27	35	23

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	4.1	codo	2	Piba	4.6	codo	—[d]	—	—	—
Plot 2 (point sample)											
1	Piba	4.6	codo	4	Potr[c]	4.8	codo	7	Piba	2.3	inte
2	Piba	3.8	codo	5	Piba	3.8	codo	—	—	—	—
3	Potr[c]	3.0	codo	6	Piba	4.1	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	3.8	codo	3	Piba	1.8	codo	5	Piba	2.3	codo
2	Piba	2.5	codo	4	Piba[e]	21.8	codo	6	Piba[e]	24.4	codo

[a] Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.
[b] codo = codominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.
[e] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	4.1	codo	21[c]	3.6	0.3	1.2	3.1	21	4
2	Piba	4.6	codo	21[c]	3.7	0.7	1.6	2.9	21	4
Plot 2										
1	Piba	4.6	codo	15[c]	4.4	1.2	0.9	0.3	3	1
3	Potr	3.0	codo	10[c]	2.9	1.3	0.9	2.4	10	3
4	Potr	4.8	codo	14[c]	4.2	1.6	1.9	3.4	14	2
5	Piba	3.8	codo	16[c]	4.3	0.7	1.2	3.2	16	4
7	Piba	2.3	inte	12[c]	3.5	1.0	0.4	1.1	12	4
Plot 3										
1	Piba	3.8	codo	17[c]	3.7	0.9	1.0	2.6	17	4
3	Piba	1.8	codo	15[c]	2.4	0.7	0.9	1.7	15	2

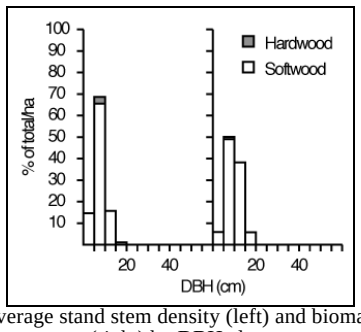
[a] Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.
[b] codo = codominant, inte = intermediate.
[c] Core or stem sample taken at base of tree.

SITE CODE: SASK JIH-4 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/17	93/07/17	93/07/17	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	23.0	21.8	29.8	24.9
Basal area, dead (m^2 ha^{-1})	1.1	2.3	2.3	1.9
Stem density, live (ha^{-1})	7234	4521	4038	5265
Stem volume, live (m^3 ha^{-1})	81	87	178	115
Biomass (t ha^{-1})	65	56	98	73

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	4.4	inte	8	Piba	8.5	domi	15	Piba	7.1	domi
2	Piba	11.9	domi	9	Piba	7.4	domi	16	Piba	6.1	codo
3	Piba	7.4	domi	10	Piba	9.7	domi	17	Piba	4.0	supp
4	Piba	7.9	domi	11	Piba	12.4	domi	18	Pigl	5.1	inte
5	Piba [c]	4.7	supp	12	Piba	6.1	codo	19	Piba	5.5	supp
6	Pigl	5.3	inte	13	Piba	10.4	domi	20	Piba	8.0	codo
7	Pigl	4.8	inte	14	Piba	7.9	codo	21	Piba	6.3	codo
Plot 2 (point sample)											
1	Piba	10.4	codo	10	Piba	7.9	codo	18	Piba	7.2	codo
2	Piba	9.4	codo	12	Piba	13.2	codo	19	Piba	9.1	codo
3	Piba	9.2	codo	13	Piba	8.3	codo	20	Piba	10.5	codo
4	Piba	6.7	inte	14	Piba	6.3	codo	21	Piba	7.8	codo
5	Piba	5.9	inte	15	Piba	8.7	codo	22	Piba	15.5	inte
7	Piba [c]	4.5	supp	16	Piba	5.9	inte	23	Piba	9.3	codo
8	Piba [c]	4.1	supp	17	Piba	5.4	inte	24	Piba	8.0	codo
Plot 3 (point sample)											
1	Piba	8.9	codo	12	Piba	11.0	codo	22	Piba	13.0	codo
3	Piba	6.9	codo	13	Piba	11.5	codo	23	Pigl	7.4	inte
4	Piba	12.3	codo	14	Piba [c]	12.9	codo	24	Pigl	9.1	inte
5	Piba	10.0	codo	15	Piba	13.3	codo	25	Piba	11.6	codo
6	Piba [c]	5.8	inte	16	Piba	10.0	codo	26	Pigl	10.6	codo
7	Piba	13.7	codo	17	Piba	12.9	codo	27	Piba [d]	11.3	codo
8	Pigl	11.8	codo	18	Piba	18.1	codo	28	Piba	12.9	codo
9	Pigl	5.8	inte	19	Piba	12.0	codo	29	Potr	5.4	inte
10	Pigl	7.3	inte	20	Piba	12.9	codo	—[e]	—	—	—
11	Piba	15.2	codo	21	Piba	12.4	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	4.4	inte	24	6.6	4.8	0.7	1.3	11	4
2	Piba	11.9	domi	41	9.6	6.4	2.8	2.5	28	3
6	Pigl	5.3	inte	30	6.2	1.7	1.7	1.5	13	2
9	Piba	7.4	domi	35	7.8	6.1	1.9	1.9	26	2
Plot 2										
1	Piba	10.4	codo	42	10.7	7.9	2.0	2.5	28	3
4	Piba	6.7	inte	40	9.5	7.4	2.0	1.7	22	4
22	Piba	15.5	inte	34	11.1	7.7	3.4	4.8	29	1
Plot 3										
1	Piba	8.9	codo	24	11.3	8.7	1.8	1.3	11	4
8	Pigl	11.8	codo	27	11.4	2.0	2.9	2.5	15	5
9	Pigl	5.8	inte	29	6.7	1.3	1.8	1.1	16	2
29	Potr	5.4	inte	27	8.4	6.4	1.9	1.0	10	—[c]

[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*.

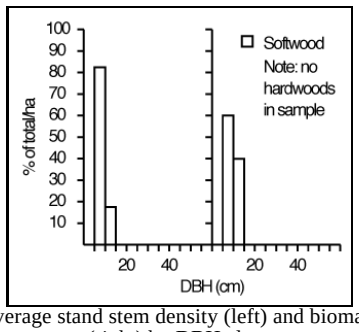
[b] codo = codominant, domi = dominant, inte = intermediate. [c] Dashes indicate no measurement taken.

SITE CODE: SASK JIH-7 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/09/01	93/09/01	93/09/01	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	32.1	32.1	23.0	29.1
Basal area, dead (m^2 ha^{-1})	6.9	3.4	4.6	5.0
Stem density, live (ha^{-1})	4152	9157	3918	5742
Stem volume, live (m^3 ha^{-1})	169	114	103	129
Biomass (t ha^{-1})	93	81	61	79

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	8.6	codo	15	Piba	13.8	domi	29	Piba [c]	4.0	supp
2	Piba	11.3	codo	16	Piba	9.1	codo	30	Piba [c]	7.4	inte
3	Piba	7.4	codo	17	Piba	9.8	codo	31	Piba	11.3	codo
4	Piba	10.7	codo	18	Piba	9.7	codo	32	Piba	9.2	codo
5	Piba [c]	5.9	inte	19	Piba	9.2	codo	34	Piba	9.9	codo
7	Piba	10.8	codo	20	Piba	13.4	domi	35	Piba	12.6	codo
8	Piba	13.4	codo	22	Piba [c]	6.2	inte	36	Piba	7.5	inte
9	Piba [d]	11.3	codo	23	Piba	6.4	inte	37	Piba [d]	12.5	codo
11	Piba [c]	5.1	inte	25	Piba	14.1	domi	39	Piba	11.7	codo
12	Piba [c]	8.6	inte	26	Piba [d]	7.9	inte	40	Piba	12.5	codo
13	Piba	8.4	codo	27	Piba	11.0	codo	—[e]	—	—	—
14	Piba	10.6	codo	28	Piba	11.8	codo	—	—	—	—
Plot 2 (point sample)											
1	Pima	8.3	codo	13	Piba	6.3	codo	29	Pima	6.7	codo
2	Pima	9.1	codo	15	Piba	6.0	codo	30	Piba	5.6	codo
3	Piba	6.0	codo	16	Piba	10.9	codo	31	Piba	5.6	codo
4	Piba	7.6	codo	17	Piba	8.0	codo	32	Pima [c]	4.0	supp
5	Piba	5.3	inte	18	Pima	8.9	codo	33	Pima	6.4	codo
6	Pima	8.0	inte	20	Piba	5.8	codo	34	Pima	11.1	codo
8	Pima	7.9	codo	21	Pima	7.0	codo	36	Pima	6.6	codo
9	Piba	8.1	codo	22	Pima	7.7	codo	39	Pima	6.5	codo
10	Piba [c]	4.5	supp	23	Piba	5.4	codo	41	Piba	5.1	inte
11	Pima	8.0	codo	25	Piba	5.4	codo	—	—	—	—
12	Piba [c]	5.1	inte	28	Piba	6.0	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	13.3	domi	16	Piba [c]	5.2	supp	27	Piba	7.3	codo
2	Piba	9.7	codo	17	Piba	7.5	codo	29	Piba	8.6	codo
4	Pima	10.8	codo	19	Piba	5.4	inte	32	Piba	7.4	inte
6	Piba	11.4	codo	20	Piba	10.2	codo	33	Piba	11.8	codo
9	Piba [c]	3.7	supp	22	Pima	14.2	codo	35	Piba	9.1	codo
10	Piba	12.7	domi	24	Piba	11.0	codo	36	Piba	10.6	codo
12	Piba [c]	6.8	codo	25	Piba	6.2	inte	37	Piba	10.4	codo
14	Piba	8.9	codo	26	Piba	6.0	inte	38	Piba [c]	3.8	supp

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	8.6	codo	52	10.3	6.6	1.1	2.0	39	1
15	Piba	13.8	domi	64	12.3	7.7	2.1	4.0	48	3
21	Piba	7.5	inte	42	10.1	5.7	1.1	1.7	24	4
Plot 2										
1	Pima	8.3	codo	37	8.2	4.0	1.6	1.5	17	2
4	Piba	7.6	codo	50 +	9.9	6.2	1.1	1.2	32	3
5	Piba	5.3	inte	33	6.1	4.2	0.8	0.7	10	2
Plot 3										
1	Piba	13.3	domi	60	11.1	7.5	1.9	3.3	32	2
2	Piba	9.7	codo	43	11.1	6.9	1.1	2.2	32	2
4	Pima	10.8	codo	38	8.4	2.3	2.6	2.0	20	1
19	Piba	5.4	inte	37	7.5	5.5	0.9	2.1	27	2

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.

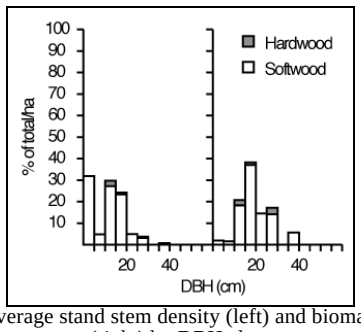
SITE CODE: SASK JMH-5 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/31	93/08/31	93/08/31	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	1.148 [b]	1.148	na
Basal area, live (m^2 ha^{-1})	34.4	43.6	18.4	32.1
Basal area, dead (m^2 ha^{-1})	0.0	2.3	1.1	1.1
Stem density, live (ha^{-1})	3928	1363	1050	2114
Stem volume, live (m^3 ha^{-1})	245	348	130	241
Biomass (t ha^{-1})	128	181	66	125

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	18.8	codo	6	Pima	18.6	codo	11	Pima [c]	9.8	inte
2	Pima	15.5	codo	7	Pima	16.9	codo	12	Pima	13.2	codo
3	Pima	12.9	codo	8	Pima [c]	10.5	inte	13	Pima	12.7	codo
4	Pima	17.0	codo	9	Pima	19.7	codo	14	Pima	19.5	codo
5	Pima	3.8	j/su	10	Pima	14.4	codo	15	Piba [c]	35.1	codo
Plot 2 (point sample)											
1	Piba	38.5	domi	8	Pima	15.2	inte	15	Pima	24.5	codo
2	Pima [c]	15.3	supp	9	Pima	19.6	codo	16	Pima	21.4	codo
3	Piba	23.5	codo	10	Potr	28.2	codo	17	Piba	24.3	codo
4	Piba	18.1	codo	11	Pima	26.4	domi	18	Pima [d]	17.1	codo
5	Piba	26.3	codo	12	Pima	15.8	codo	19	Pima	21.4	codo
6	Potr [c]	13.6	inte	13	Pima	14.8	codo	20	Pima	28.6	domi
7	Piba	25.4	codo	14	Piba	27.9	codo	—[e]	—	—	—
Plot 3 (point sample)											
1	Pima	13.9	codo	7	Pima	19.1	domi	13	Pima	19.5	codo
2	Pima	20.0	codo	8	Pima	18.5	codo	14	Pima	12.7	codo
3	Pima	19.1	domi	9	Pima [c]	18.6	codo	15	Pima	11.6	codo
4	Pima	14.0	codo	10	Pima [d]	8.0	supp	16	Pima	10.0	codo
5	Potr [c]	17.4	codo	11	Pima	13.7	codo	17	Pima	13.0	codo
6	Pima	17.1	codo	12	Pima	16.8	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed, j/su = juvenile/suppressed. [c] Visual indications of poor health. [d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	18.8	codo	92	19.6	12.0	2.0	3.0	39	3
5	Pima	3.8	j/su	40 [c]	3.7	2.1	1.1	—[d]	—	—
8	Pima	10.5	inte	89	13.0	6.5	2.2	1.2	30	2
15	Piba	35.1	codo	131	19.8	15.5	4.4	4.6	61	5
Plot 2										
1	Piba	38.5	domi	105	23.6	15.8	4.3	3.6	43	6
3	Piba	23.5	codo	98	19.2	13.4	3.2	1.4	35	3
6	Potr	13.6	inte	50 +	16.0	12.0	2.4	0.5	10	5
8	Pima	15.2	inte	99	15.0	7.5	2.4	2.0	45	5
9	Pima	19.6	codo	97	17.8	9.4	2.4	1.2	31	3
10	Potr	28.2	codo	100 +	19.8	13.8	6.6	—	—	10
11	Pima	26.4	domi	92	22.8	11.0	2.4	4.3	52	5
Plot 3										
1	Pima	13.9	codo	92	14.3	10.4	1.2	1.6	27	4
3	Pima	19.1	domi	97	18.0	9.0	2.4	2.2	45	6

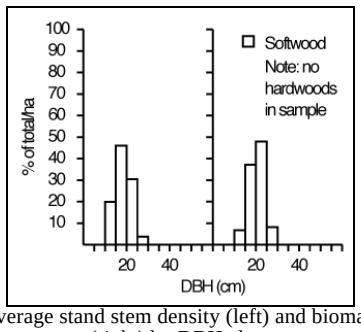
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, j/su = juvenile/suppressed. [c] Age estimated by counting whorls. [d] Dashes indicate no measurement taken.

SITE CODE: SASK JMH-10 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/17	93/07/17	93/07/17	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	25.3	24.1	29.8	26.4
Basal area, dead (m^2 ha^{-1})	11.5	2.3	3.4	5.7
Stem density, live (ha^{-1})	1015	848	1039	967
Stem volume, live (m^3 ha^{-1})	209	181	239	210
Biomass (t ha^{-1})	103	92	119	105

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	15.7	codo	12	Piba [c]	12.0	inte	23	Piba [c]	10.8	supp
2	Piba	23.9	codo	13	Piba	22.6	codo	24	Piba [d]	21.4	codo
3	Piba	13.6	inte	14	Piba	22.4	codo	25	Piba [d]	21.1	codo
4	Piba	17.7	inte	15	Piba [c]	11.6	supp	26	Piba	22.8	codo
5	Piba	21.0	codo	16	Piba	23.1	codo	27	Piba	15.4	codo
6	Piba [c]	14.9	—[e]	17	Piba [c]	11.2	inte	28	Piba	18.4	codo
7	Piba	23.1	codo	18	Piba	16.8	codo	29	Piba	11.2	inte
8	Piba	17.2	codo	19	Piba [c]	7.4	supp	30	Piba	13.6	codo
9	Piba [c]	10.1	supp	20	Piba	18.2	codo	32	Piba [c]	12.9	inte
10	Piba [c]	9.4	inte	21	Piba	18.4	codo	33	Piba	18.6	codo
11	Piba [c]	11.9	inte	22	Piba	20.4	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	18.7	codo	12	Piba	24.9	codo	21	Piba	19.1	codo
2	Piba	22.2	codo	13	Piba	25.3	codo	22	Piba	24.5	codo
3	Piba	24.2	codo	14	Piba	21.9	codo	23	Piba	10.2	supp
4	Piba [c]	16.3	inte	15	Piba	23.7	codo	25	Piba	27.3	domi
5	Piba	23.3	codo	17	Piba	16.4	inte	26	Piba	25.2	codo
6	Piba	18.9	codo	18	Piba	12.3	inte	27	Piba	18.8	codo
8	Piba	25.8	codo	19	Piba	20.7	codo	28	Piba	16.6	codo
11	Piba [c]	19.5	codo	20	Piba	21.3	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	18.9	codo	13	Piba	21.2	codo	26	Piba	17.3	codo
2	Piba	21.3	codo	14	Piba [c]	12.7	codo	27	Piba	17.9	codo
3	Piba	26.7	codo	16	Piba	15.1	codo	28	Piba	21.4	codo
5	Piba	20.3	codo	17	Piba	17.7	codo	29	Piba	23.2	codo
6	Piba	16.2	codo	18	Piba	22.4	codo	32	Piba	19.2	codo
7	Piba [c]	17.4	inte	19	Piba	17.9	codo	33	Piba	14.9	inte
8	Piba	18.4	codo	20	Piba	16.6	codo	34	Piba	22.7	codo
9	Piba	20.0	codo	21	Piba [c]	11.9	inte	36	Piba [d]	23.9	codo
11	Piba	17.6	codo	23	Piba	23.2	codo	37	Piba	23.9	codo
12	Piba	18.1	codo	25	Piba	17.9	codo	—	—	—	—

[a] Piba = *Pinus banksiana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	15.7	codo	69	17.8	6.6	3.6	2.2	41	2
2	Piba	23.9	codo	70	19.8	8.2	3.5	3.8	40	3
3	Piba	13.6	inte	63	14.2	12.2	2.7	1.0	44	2
Plot 2										
1	Piba	18.7	codo	44	13.0	9.4	3.5	1.4	11	2
17	Piba	16.4	inte	43	13.2	8.9	2.0	1.1	9	2
23	Piba	10.2	supp	34	13.2	3.6	2.3	1.1	20	4
25	Piba	27.3	domi	64	18.6	10.8	5.7	3.0	33	2
Plot 3										
1	Piba	18.9	codo	70	16.0	9.6	2.2	1.2	28	4
4	Piba	12.1	inte	45	15.4	7.0	1.4	2.0	20	1
35	Piba	24.9	domi	67	17.8	9.4	5.6	2.8	34	4

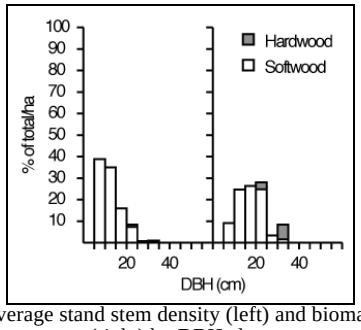
[a] Piba = *Pinus banksiana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

SITE CODE: SASK JMH-A1 (1) Southern Aux. Site

Stand values

Parameter	Plot 3	Plot 4	Plot 6	Average
Date of measurements (y/m/d)	93/09/02	93/09/02	94/06/25	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	25.3	34.4	25.3	28.3
Basal area, dead (m^2 ha^{-1})	2.3	1.1	13.8	5.7
Stem density, live (ha^{-1})	980	1442	3359	1927
Stem volume, live (m^3 ha^{-1})	220	304	145	223
Biomass (t ha^{-1})	114	150	76	113

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (point sample)											
1	Piba	22.9	codo	10	Piba	17.7	codo	23	Potr [c]	20.6	codo
2	Potr [d]	13.2	inte	13	Piba	24.9	codo	26	Potr	34.7	domi
3	Piba	13.9	codo	14	Piba	14.8	codo	27	Potr [c]	33.7	domi
4	Piba	21.2	codo	15	Piba	23.9	codo	28	Potr [d]	20.0	codo
6	Piba	15.2	codo	16	Piba	23.1	codo	29	Potr	22.3	codo
7	Piba	23.1	codo	17	Piba [c]	13.4	inte	31	Potr	30.6	domi
8	Pima	14.2	inte	20	Piba [c]	17.5	codo	32	Piba	16.0	codo
9	Piba	13.9	codo	21	Piba	17.5	codo	33	Piba	13.8	codo
Plot 4 (point sample)											
1	Pima	17.9	codo	14	Piba	30.5	codo	26	Pima	22.2	codo
2	Pima	14.5	codo	15	Pima	16.6	codo	27	Pima	18.0	codo
3	Pima	15.1	codo	16	Pima	20.6	codo	28	Pima	19.1	codo
4	Piba [c]	27.5	codo	17	Piba	23.5	codo	29	Pima	17.7	codo
5	Piba [c]	23.4	codo	19	Pima [c]	13.6	codo	30	Pima	21.9	codo
7	Pima	17.4	codo	20	Pima [c]	10.6	supp	31	Pima [d]	10.0	supp
8	Pima	11.3	inte	21	Pima	14.2	codo	32	Pima	16.9	codo
9	Pima [c]	15.8	codo	22	Pima	18.1	codo	33	Pima	24.5	codo
10	Pima	20.9	codo	23	Pima	25.7	codo	34	Pima	22.8	codo
11	Pima [c]	13.7	inte	24	Piba [c]	23.5	codo	—[d]	—	—	—
12	Pima	18.3	codo	25	Pima	19.1	codo	—	—	—	—
Plot 6 (point sample)											
1	Pima [c]	7.0	codo	7	Pima	13.8	domi	13	Piba [d]	14.3	inte
2	Pima	10.7	codo	8	Pima	8.7	codo	14	Pima	7.4	inte
3	Pima	12.8	domi	9	Pima	11.8	domi	15	Piba [d]	10.7	codo
4	Pima [d]	4.7	inte	10	Piba [d]	12.5	domi	16	Pima	11.2	codo
5	Pima [d]	9.0	inte	11	Piba [d]	14.9	domi	17	Piba	18.9	domi
6	Pima [c]	8.8	codo	12	Pima	9.1	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 3										
1	Piba	22.9	codo	105	20.1	12.0	4.0	3.2	45	2
8	Pima	14.2	inte	—[c]	13.6	0.5	3.0	—	—	—
12	Piba	12.4	inte	100	15.6	9.9	2.8	2.3	50	2
30	Pima	18.0	inte	91	15.3	0.5	3.2	2.7	31	2
Plot 4										
1	Pima	17.9	codo	70	19.0	4.2	2.0	3.0	34	1
4	Piba	27.5	codo	—	18.4	13.8	3.9	—	—	—
8	Pima	11.3	inte	52	13.4	8.2	1.9	1.2	22	2
17	Piba	23.5	codo	87	19.0	13.4	3.4	4.0	37	2
Plot 6										
2	Pima	10.7	codo	84	14.3	11.3	1.1	1.5	32	4
7	Pima	13.8	domi	82	12.7	9.4	1.3	1.1	29	6
14	Pima	7.4	inte	71	9.3	8.0	0.8	1.2	35	2
16	Pima	11.2	codo	83	13.2	9.9	1.2	1.6	29	3

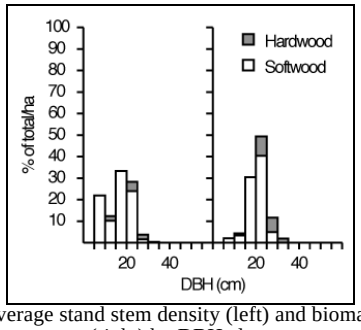
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK JMH-A2 (2) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 5	Average
Date of measurements (y/m/d)	93/09/01	93/09/01	94/06/25	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	24.1	25.3	41.3	30.2
Basal area, dead (m^2 ha^{-1})	1.1	1.1	4.6	2.3
Stem density, live (ha^{-1})	1335	847	1688	1290
Stem volume, live (m^3 ha^{-1})	199	220	342	254
Biomass (t ha^{-1})	109	111	172	131

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	23.1	codo	9	Potr	23.2	codo	17	Piba	16.2	codo
2	Potr	26.3	codo	10	Piba	16.3	inte	18	Piba	19.9	codo
3	Potr	22.0	codo	11	Piba [c]	19.7	inte	19	Piba	17.2	codo
4	Potr	24.4	codo	12	Piba	20.5	codo	20	Pigl	10.7	inte
5	Piba	20.4	codo	13	Piba	21.1	codo	21	Potr	13.3	s/in
6	Potr	26.5	codo	14	Pima	5.3	j/su	22	Potr	31.1	codo
7	Potr	25.1	codo	15	Piba	19.4	codo	—[e]	—	—	—
8	Potr	20.5	codo	16	Piba	18.7	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	21.6	codo	9	Piba	20.5	codo	17	Piba [d]	23.7	codo
2	Piba [d]	17.4	codo	10	Potr	24.6	codo	18	Piba [d]	26.9	codo
3	Piba	21.7	codo	11	Piba	23.4	codo	19	Potr [d]	29.4	domi
4	Piba	21.7	codo	12	Piba	19.3	codo	20	Piba [c]	13.4	inte
5	Piba	17.5	codo	13	Piba	18.5	codo	21	Piba	24.4	codo
6	Piba	17.5	codo	14	Piba	16.9	codo	22	Piba	20.9	codo
7	Piba	17.6	codo	15	Pima	10.5	inte	23	Piba	23.3	codo
8	Piba	20.5	codo	16	Piba	22.5	codo	—	—	—	—
Plot 5 (point sample)											
1	Pima [d]	16.4	codo	8	Pima	9.4	inte	15	Pima [d]	20.6	domi
2	Pima	20.2	codo	9	Pima	22.5	domi	16	Pima [d]	23.9	domi
3	Pima	19.7	codo	10	Pima [d]	22.8	domi	17	Pima [d]	22.8	domi
4	Pima [d]	20.4	codo	11	Pima [c]	20.6	domi	18	Pima [d]	19.0	inte
5	Pima	27.2	codo	12	Pima [c]	23.3	inte	19	Pima [d]	17.0	inte
6	Pima	16.1	inte	13	Pima [d]	14.6	inte	20	Pima [d]	21.4	domi
7	Pima	15.1	inte	14	Pima [d]	19.5	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate, j/su = juvenile/suppressed, s/in = suppressed/intermediate.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	23.1	codo	88	21.6	17.2	1.5	—[c]	—	3
5	Piba	20.4	codo	95	19.6	12.2	2.1	3.2	64	3
10	Piba	16.3	inte	85	16.5	8.0	3.0	2.7	35	3
14	Pima	5.3	j/su	35 [d]	5.0	0.5	1.8	—	—	—
20	Pigl	10.7	inte	24	11.2	1.6	2.4	3.4	14	4
Plot 2										
1	Piba	21.6	codo	98	20.8	14.4	1.3	3.5	33	4
10	Potr	24.6	codo	60 +	20.0	14.0	7.1	—	—	5
15	Pima	10.5	inte	25	9.7	0.8	3.4	2.2	14	4
19	Potr	29.4	domi	—	22.5	16.9	5.2	—	—	—
Plot 5										
3	Pima	19.7	codo	140	20.0	10.4	0.9	1.1	36	4
7	Pima	15.1	inte	142	13.5	3.3	1.3	2.1	31	4
20	Pima	21.4	domi	144	21.2	15.4	0.7	1.2	27	3

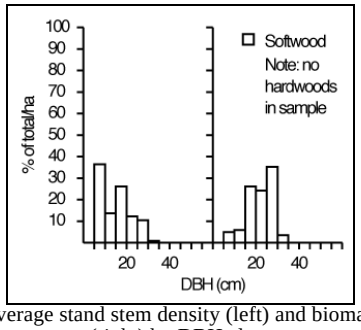
[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate, j/su = juvenile/suppressed.
[c] Dashes indicate no measurement taken. [d] Age estimated by counting whorls.

SITE CODE: SASK JMM-5 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/27	94/05/28	94/05/28	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	3.000	3.000	na
Basal area, live (m^2 ha^{-1})	23.0	24.0	30.0	25.7
Basal area, dead (m^2 ha^{-1})	0.0	0.0	3.0	1.0
Stem density, live (ha^{-1})	538	1842	1075	1152
Stem volume, live (m^3 ha^{-1})	176	161	166	168
Biomass (t ha^{-1})	90	86	87	88

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	31.1	domi	5	Piba	20.1	codo	9	Piba	23.6	domi
2	Piba	25.6	domi	6	Piba	27.9	domi	10	Piba	24.3	codo
3	Piba	26.4	domi	7	Piba	23.9	domi	—[c]	—	—	—
4	Piba	16.7	codo	8	Piba	23.4	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	28.9	domi	4	Piba	29.3	domi	7	Piba	8.9	inte
2	Piba	28.8	domi	5	Piba	7.0	inte	8	Piba	18.6	codo
3	Piba	24.4	codo	6	Piba	11.9	inte	—	—	—	—
Plot 3 (point sample)											
1	Piba	16.4	codo	5	Piba	13.7	codo	9	Piba	25.7	domi
2	Piba	22.0	codo	6	Piba	18.9	codo	10	Piba	16.9	codo
3	Piba	29.8	domi	7	Piba	19.8	codo	11	Piba[d]	13.7	codo
4	Piba	19.7	domi	8	Piba	18.4	codo	—	—	—	—

[a] Piba = *Pinus banksiana*.

[b] codo = codominant, domi = dominant, inte = intermediate.

[c] Dashes indicate no measurement taken.

[d] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	31.1	domi	122	19.0	4.2	3.0	4.5	87	6
4	Piba	16.7	codo	114	17.0	12.8	1.3	1.1	42	3
10	Piba	24.3	codo	97	15.8	4.2	2.9	2.0	40	5
Plot 2										
1	Piba	28.9	domi	129	19.0	10.0	3.6	4.3	64	5
3	Piba	24.4	codo	105	18.4	5.2	3.2	2.3	49	8
6	Piba	11.9	inte	69	12.8	7.2	1.1	2.3	34	2
Plot 3										
3	Piba	29.8	domi	86	16.4	8.0	2.2	1.8	22	7
7	Piba	19.8	codo	93	13.0	2.8	2.4	2.5	36	3
8	Piba	18.4	codo	109	13.6	9.6	2.3	1.5	34	2

[a] Piba = *Pinus banksiana*.

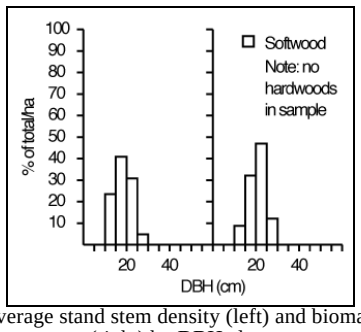
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: SASK JMM-6 (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/09/02	93/09/02	93/09/02	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	25.3	19.5	13.8	19.5
Basal area, dead (m^2 ha^{-1})	0.0	3.4	0.0	1.1
Stem density, live (ha^{-1})	864	747	528	713
Stem volume, live (m^3 ha^{-1})	177	145	103	142
Biomass (t ha^{-1})	90	73	52	72

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	20.0	codo	9	Piba	29.8	domi	17	Piba	21.2	codo
2	Piba	22.4	codo	10	Piba	25.4	codo	18	Piba	19.9	codo
3	Piba	14.9	codo	11	Piba	17.2	codo	19	Piba	13.0	codo
4	Piba	24.5	codo	12	Piba	18.6	codo	20	Piba	23.9	codo
5	Piba	16.9	codo	13	Piba	19.6	codo	21	Piba	20.4	codo
6	Piba	22.0	codo	14	Piba	21.0	codo	22	Piba	17.3	codo
7	Piba	27.5	domi	15	Piba	14.5	codo	—[d]	—	—	—
8	Piba	18.5	codo	16	Piba	22.8	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	18.0	codo	8	Piba	24.9	codo	15	Piba	21.8	codo
2	Piba	16.0	codo	9	Piba	21.5	codo	16	Piba	15.3	codo
3	Piba	12.3	codo	10	Piba	16.6	codo	17	Piba	21.6	codo
4	Piba[c]	8.0	inte	11	Piba[c]	10.4	inte	18	Piba	23.7	codo
5	Piba	20.8	codo	12	Piba	19.6	codo	19	Piba	21.5	codo
6	Piba	18.3	codo	13	Piba	13.5	codo	20	Piba	22.3	codo
7	Piba	21.2	codo	14	Piba[c]	8.0	inte	—	—	—	—
Plot 3 (point sample)											
1	Piba	24.1	codo	5	Piba	11.8	codo	9	Piba	17.1	codo
2	Piba	23.3	codo	6	Piba	15.0	codo	10	Piba	25.3	codo
3	Piba	24.0	codo	7	Piba	15.8	codo	11	Piba	17.4	inte
4	Piba	20.0	codo	8	Piba	18.0	codo	12	Piba	27.2	codo

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	20.0	codo	60	17.2	10.3	3.2	2.7	31	3
7	Piba	27.5	domi	68	19.2	12.2	4.9	4.0	42	5
Plot 2										
1	Piba	18.0	codo	54	16.8	10.8	2.9	3.2	34	3
15	Piba	21.8	codo	68	17.8	10.4	3.2	3.0	35	3
Plot 3										
1	Piba	24.1	codo	67	19.5	7.7	3.5	3.8	38	3
11	Piba	17.4	inte	51	16.0	6.5	2.9	3.1	33	4

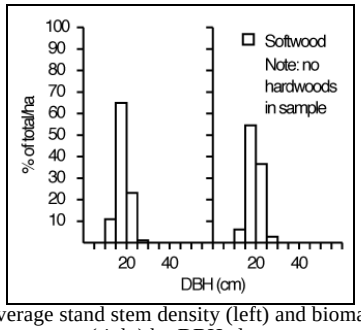
[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: SASK JMM-8a (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/15	93/07/15	93/07/15	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	13.8	18.4	20.7	17.6
Basal area, dead (m^2 ha^{-1})	1.1	3.4	0.0	1.5
Stem density, live (ha^{-1})	577	728	649	651
Stem volume, live (m^3 ha^{-1})	98	102	136	112
Biomass (t ha^{-1})	49	53	69	57

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	14.9	codo	9	Piba	18.2	codo	15	Piba	21.2	codo
2	Piba [c]	16.1	inte	10	Piba	18.4	codo	17	Piba	16.5	codo
4	Piba	14.4	codo	12	Piba	22.6	domi	18	Piba	20.0	codo
5	Piba	13.8	codo	13	Piba	16.9	codo	—[d]	—	—	—
7	Piba	23.4	domi	14	Piba	17.5	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	19.0	codo	10	Piba	21.8	domi	18	Piba	17.7	codo
3	Piba	19.8	codo	11	Piba	15.3	codo	19	Piba	15.4	codo
4	Piba	22.2	domi	12	Piba	19.2	codo	20	Piba	18.2	codo
5	Piba	17.3	codo	13	Piba [c]	11.0	supp	21	Piba	15.5	codo
7	Piba	15.4	codo	14	Piba [c]	13.5	supp	22	Piba	21.8	codo
8	Piba	19.5	codo	16	Piba	18.0	codo	—	—	—	—
9	Piba	17.2	codo	17	Piba [c]	9.8	supp	—	—	—	—
Plot 3 (point sample)											
1	Piba	22.9	codo	7	Piba	26.7	codo	13	Piba	21.3	codo
2	Piba	23.7	codo	8	Piba	18.3	codo	14	Piba	18.3	codo
3	Piba	19.3	codo	9	Piba	21.1	codo	15	Piba	19.9	codo
4	Piba	21.3	codo	10	Piba	17.9	codo	16	Piba	18.7	codo
5	Piba	16.5	codo	11	Piba	17.3	codo	17	Piba	23.8	codo
6	Piba	19.6	codo	12	Piba	22.1	codo	18	Piba	22.1	codo

[a] Piba = *Pinus banksiana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	14.9	codo	55	13.8	9.4	2.9	1.7	20	4
3	Piba	9.9	inte	47	12.3	4.5	2.2	3.0	43	2
7	Piba	23.4	domi	70	15.9	1.9	4.2	—[c]	—	8
Plot 2										
1	Piba	19.0	codo	62	11.8	1.8	2.5	3.5	45	1
4	Piba	22.2	domi	77	15.9	12.6	3.4	2.0	38	3
10	Piba	21.8	domi	46	16.1	11.4	5.7	2.2	22	2
Plot 3										
1	Piba	22.9	codo	59	16.2	9.7	4.7	2.7	37	2
18	Piba	22.1	codo	61	16.7	12.3	5.6	2.2	33	3

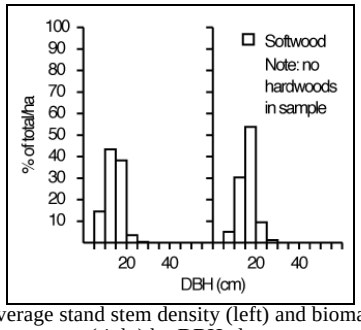
[a] Piba = *Pinus banksiana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK JMM-8b (2) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/16	93/07/16	93/07/16	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	1.148	na
Basal area, live (m^2 ha^{-1})	19.5	31.0	42.5	31.0
Basal area, dead (m^2 ha^{-1})	0.0	1.1	5.7	2.3
Stem density, live (ha^{-1})	789	1585	3203	1859
Stem volume, live (m^3 ha^{-1})	101	227	240	189
Biomass (t ha^{-1})	53	113	125	97

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	18.5	codo	8	Piba	19.4	codo	15	Piba	16.9	codo
2	Piba	14.5	codo	9	Piba	16.6	codo	16	Piba	18.8	codo
4	Piba	25.1	codo	10	Piba	17.6	codo	17	Piba	21.3	codo
5	Piba	15.9	codo	12	Piba	17.9	codo	18	Piba	16.9	codo
6	Piba	17.9	codo	13	Piba	20.7	codo	19	Piba	18.2	codo
7	Piba	15.7	codo	14	Piba	16.7	codo	—[d]	—	—	—
Plot 2 (point sample)											
1	Piba	12.8	supp	11	Piba	15.4	codo	21	Piba	9.9	inte
2	Piba	18.2	codo	12	Piba	17.7	codo	22	Piba	13.7	codo
3	Piba	18.2	codo	13	Piba	13.2	codo	23	Piba	19.0	codo
4	Piba[c]	10.8	supp	14	Piba	18.3	codo	24	Piba	13.8	codo
5	Piba	20.4	codo	15	Piba	21.5	codo	25	Piba	16.3	codo
6	Piba	17.9	codo	16	Piba	23.9	codo	26	Piba	13.9	codo
7	Piba	12.7	codo	17	Piba	17.8	codo	27	Piba	17.2	codo
8	Piba	14.8	codo	18	Piba	16.4	codo	28	Piba	20.1	codo
9	Piba	16.2	codo	19	Piba	16.5	codo	—	—	—	—
10	Piba	17.6	codo	20	Piba	15.7	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	15.0	codo	15	Piba	17.3	codo	29	Piba	14.0	codo
2	Piba	13.3	codo	16	Piba	16.7	codo	30	Piba	11.7	codo
3	Piba	16.5	codo	17	Piba	12.5	codo	31	Piba	16.0	codo
4	Piba[c]	11.1	supp	18	Piba	13.5	codo	32	Piba	14.8	codo
5	Piba	11.7	codo	19	Piba[c]	10.6	codo	33	Piba	12.5	codo
6	Piba	10.2	codo	20	Piba[c]	7.3	inte	34	Piba	13.5	codo
7	Piba	9.9	codo	21	Piba[c]	8.4	inte	35	Piba	16.3	codo
8	Piba	9.6	codo	22	Piba	10.0	codo	36	Piba	11.4	codo
9	Piba	19.0	codo	23	Piba	16.0	codo	37	Piba	10.6	codo
10	Piba	16.5	codo	24	Piba	12.3	codo	38	Piba	12.9	codo
11	Piba	15.7	codo	25	Piba[c]	8.3	inte	39	Piba	14.1	codo
12	Piba	16.0	codo	26	Piba	15.6	codo	40	Piba	9.1	codo
13	Piba	13.5	codo	27	Piba	17.7	codo	41	Piba	9.1	codo
14	Piba	14.4	codo	28	Piba	17.6	codo	42	Piba	14.9	codo

[a] Piba = *Pinus banksiana*. [b] codo = codominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	18.5	codo	64	13.2	9.5	4.8	1.9	38	5
4	Piba	25.1	codo	66	14.9	9.2	7.5	3.8	38	6
Plot 2										
1	Piba	12.8	supp	41	11.9	1.3	1.7	1.5	13	2
21	Piba	9.9	inte	38	14.1	4.2	1.8	0.8	17	2
23	Piba	19.0	codo	68	14.1	4.3	3.9	2.7	35	4
Plot 3										
1	Piba	15.0	codo	75	14.8	5.3	2.8	2.8	37	2
15	Piba	17.3	codo	63	14.3	5.4	3.4	3.1	31	1

[a] Piba = *Pinus banksiana*. [b] codo = codominant, inte = intermediate, supp = suppressed.

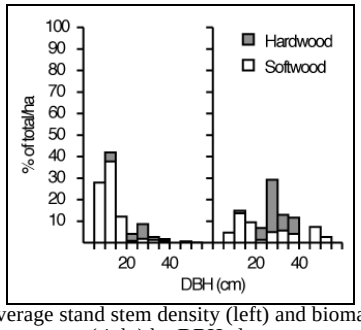
SITE CODE: SASK MW-1a (1) Southern Aux. Site

Stand values

Parameter	Plot 1	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/07/21	94/06/09	94/06/09	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148 [b]	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	62.0	18.4	55.1	45.2
Basal area, dead (m^2 ha^{-1})	11.5	6.9	0.0	6.1
Stem density, live (ha^{-1})	2801	340	3296	2146
Stem volume, live (m^3 ha^{-1})	489	171	381	347
Biomass (t ha^{-1})	268	95	221	195

[a] na = not applicable.

[b] Half sweep: point sample only covers 180% arc (see text for details).



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pigl	48.3	domi	12	Abba	8.1	inte	24	Pigl [c]	36.0	domi
2	Pigl [c]	32.4	codo	13	Potr [d]	25.6	codo	25	Pigl [c]	26.8	codo
3	Potr [c]	33.4	codo	15	Potr [c]	30.5	codo	26	Potr [c]	35.2	codo
4	Abba [c]	50.9	domi	16	Potr [c]	32.8	codo	27	Abba	13.4	inte
5	Abba [c]	30.6	codo	17	Abba	17.0	inte	28	Abba	11.1	inte
6	Abba	14.1	inte	18	Abba	18.3	inte	29	Abba	17.0	inte
7	Abba	14.4	inte	19	Potr	28.4	codo	30	Pigl [c]	26.7	codo
8	Abba [d]	2.8	supp	20	Abba	9.2	inte	31	Potr [c]	36.7	domi
9	Abba [d]	6.9	supp	21	Abba	13.7	inte	32	Abba	11.5	inte
10	Abba	11.1	inte	22	Potr [d]	26.4	codo	33	Pigl	37.8	domi
11	Potr [c]	25.8	codo	23	Pigl [d]	33.2	codo	—[e]	—	—	—
Plot 4 (point sample)											
2	Pigl	33.2	codo	6	Potr	36.7	codo	10	Potr	27.7	codo
3	Pigl [d]	55.8	domi	7	Pigl	48.5	domi	11	Potr [c]	25.4	codo
4	Pigl [d]	41.7	codo	8	Potr [d]	20.4	codo	12	Abba	19.4	inte
5	Potr [c]	28.7	codo	9	Abba	18.8	inte	—	—	—	—
Plot 5 (point sample)											
1	Abba	14.5	inte	9	Potr [c]	27.4	domi	17	Potr	21.1	codo
2	Potr	25.6	codo	10	Abba	15.7	inte	18	Abba	9.9	inte
3	Pigl [c]	46.4	domi	11	Abba	11.4	inte	19	Abba	12.1	inte
4	Abba	12.2	inte	12	Potr	21.1	codo	20	Abba	13.9	inte
5	Potr	27.5	domi	13	Abba	11.5	inte	21	Abba	15.1	inte
6	Abba	6.4	inte	14	Potr [c]	27.0	domi	22	Potr	27.4	domi
7	Poba	10.4	inte	15	Pigl	22.0	codo	23	Pigl	19.1	inte
8	Potr	20.2	codo	16	Potr	26.1	domi	24	Pigl [c]	29.6	domi

[a] Abba = *Abies balsamea*, Pigl = *Picea glauca*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pigl	48.3	domi	104	31.4	21.8	5.7	3.8	25	6
2	Pigl	32.4	codo	97	25.8	11.6	3.3	2.6	18	3
3	Potr	33.4	codo	115	28.4	20.2	6.3	4.8	47	5
6	Abba	14.1	inte	44	12.7	5.1	2.8	1.7	13	1
31	Potr	36.7	domi	106	23.1	16.3	5.9	4.8	54	11
Plot 4										
2	Pigl	33.2	codo	92	25.4	8.2	4.1	4.6	35	8
7	Pigl	48.5	domi	112	29.0	16.0	4.3	6.2	64	9
12	Abba	19.4	inte	44	15.0	2.3	3.9	1.9	9	5
Plot 5										
1	Abba	14.5	inte	52	11.0	6.1	2.3	2.9	26	3
15	Pigl	22.0	codo	—[c]	18.0	15.0	2.2	3.6	51	6
24	Pigl	29.6	domi	84	25.0	1.3	2.8	4.9	29	5

[a] Abba = *Abies balsamea*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*.

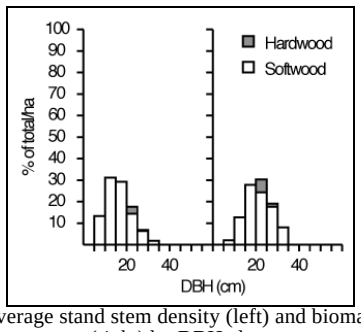
[b] codo = codominant, domi = dominant, inte = intermediate. [c] Dashes indicate no measurement taken.

SITE CODE: SASK MW-1b (2) Southern Aux. Site

Stand values

Parameter	Plot 2	Plot 3	Plot 6	Average
Date of measurements (y/m/d)	93/07/21	93/07/21	94/06/09	na [a]
Point sampling BAF (m^2 ha^{-1})	1.148	1.148	2.296	na
Basal area, live (m^2 ha^{-1})	52.8	34.4	25.3	37.5
Basal area, dead (m^2 ha^{-1})	2.3	5.7	4.6	4.2
Stem density, live (ha^{-1})	2925	1001	963	1630
Stem volume, live (m^3 ha^{-1})	398	242	190	277
Biomass (t ha^{-1})	195	123	97	138

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (point sample)											
1	Abba	33.8	domi	17	Abba	29.6	domi	33	Pima	9.1	inte
2	Pima	14.1	inte	18	Abba	32.3	domi	34	Pigl	18.9	codo
3	Pigl	14.2	codo	19	Pigl	18.0	codo	35	Pima	15.3	codo
4	Pigl	16.1	codo	20	Pigl	17.4	codo	36	Pigl	19.3	codo
5	Pigl	16.0	codo	21	Pigl	19.8	codo	37	Pima	24.9	codo
6	Pigl	25.5	codo	22	Pigl	20.7	codo	38	Pigl	8.7	inte
7	Pigl	17.3	codo	23	Pigl	11.7	inte	39	Pigl	10.2	inte
8	Pigl	25.0	codo	24	Pigl	18.8	codo	40	Pigl	12.3	inte
9	Pigl	18.7	codo	25	Pigl	13.8	codo	41	Pigl	17.4	codo
10	Pigl	16.9	codo	26	Pigl[c]	12.3	codo	42	Pigl	20.8	codo
11	Pima	17.9	codo	27	Pigl	14.6	codo	43	Pigl	22.9	codo
12	Pigl	21.3	codo	28	Pima	7.2	inte	44	Pima	23.6	codo
13	Pima[d]	18.5	codo	29	Pigl	12.1	inte	45	Pima	15.1	codo
14	Pigl	10.5	inte	30	Pigl	13.3	codo	46	Pigl	15.7	codo
15	Pigl	20.4	codo	31	Pima	15.8	codo	47	Pigl	15.2	codo
16	Pigl	22.3	codo	32	Pigl[d]	19.2	codo	48	Pisp[c]	14.5	supp
Plot 3 (point sample)											
1	Pigl[c]	17.3	inte	13	Posp[c]	11.6	inte	25	Piba	26.1	codo
2	Piba[c]	22.7	codo	14	Pigl	23.8	codo	26	Piba	24.9	codo
3	Piba	25.9	codo	15	Pigl	25.9	codo	27	Pigl	24.5	codo
4	Piba	20.6	codo	16	Pigl[d]	13.5	inte	28	Pigl	21.5	codo
5	Piba	24.3	codo	17	Pigl	20.6	inte	29	Pigl	18.9	codo
6	Potr	26.4	codo	18	Piba	31.3	domi	30	Pigl	14.4	inte
7	Potr[d]	20.4	codo	19	Pigl	30.0	codo	31	Piba	26.8	codo
8	Pigl	21.2	codo	20	Pigl	16.2	inte	32	Pigl	17.0	codo
9	Pigl	20.0	codo	21	Piba[c]	11.7	inte	33	Piba	22.5	codo
10	Piba	29.2	codo	22	Posp[c]	12.1	inte	34	Pigl	17.4	codo
11	Pigl	22.4	codo	23	Pigl	16.7	codo	35	Pigl	21.7	codo
12	Piba	26.4	codo	24	Piba	20.5	codo	—[e]	—	—	—
Plot 6 (point sample)											
1	Pigl	27.2	domi	6	Pigl	12.7	inte	11	Potr[c]	17.0	codo
2	Pigl	25.8	domi	7	Potr[c]	18.1	codo	13	Pigl	25.6	domi
3	Pigl	32.4	domi	8	Pigl	20.4	domi	14	Pigl	19.0	codo
4	Pigl	11.0	codo	9	Potr	21.9	codo	—	—	—	—
5	Pigl[d]	16.2	codo	10	Potr	21.9	codo	—	—	—	—

[a] Abba = *Abies balsamea*, Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Pima = *Picea mariana*, Pisp = *Picea* sp., Posp = *Populus* sp., Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.

[c] Tree is dead.

[d] Visual indications of poor health.

[e] Dashes indicate no measurement taken.

SITE CODE: SASK MW-1b (1) concluded

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
1	Abba	33.8	domi	106	23.5	5.0	5.1	2.0	15	1
2	Pima	14.1	inte	67	15.3	9.0	2.1	1.0	12	1
12	Pigl	21.3	codo	95	19.7	9.2	2.1	1.4	22	5
13	Pima	18.5	codo	107	18.0	9.6	1.3	1.3	35	2
14	Pigl	10.5	inte	68	11.6	5.9	1.9	1.0	10	2
Plot 3										
3	Piba	25.9	codo	101	17.2	5.7	3.2	2.4	54	2
6	Potr	26.4	codo	60	22.4	16.8	5.3	3.7	27	11
7	Potr	20.4	codo	50 +	19.6	16.8	2.9	1.1	32	10
8	Pigl	21.2	codo	85	20.4	7.0	3.5	2.4	32	4
16	Pigl	13.5	inte	75	8.3	2.0	2.1	0.7	27	3
18	Piba	31.3	domi	107	21.8	13.6	4.2	3.1	38	8
Plot 6										
1	Pigl	27.2	domi	105	21.5	10.0	3.0	3.0	33	8
6	Pigl	12.7	inte	92	12.5	9.2	3.0	1.3	34	2
10	Potr	21.9	codo	—[c]	17.1	14.3	1.9	5.3	—	5

[a] Abba = *Abies balsamea*, Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.

[b] codo = codominant, domi = dominant, inte = intermediate.

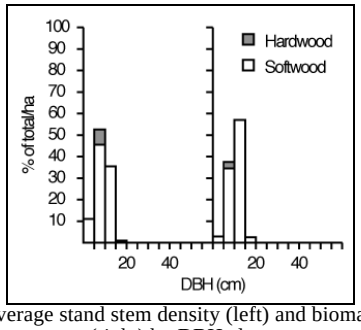
[c] Dashes indicate no measurement taken.

SITE CODE: MAN G-BI-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/12	94/08/12	94/08/12	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	20.7	36.7	25.3	27.6
Basal area, dead (m^2 ha^{-1})	0.0	0.0	2.3	0.8
Stem density, live (ha^{-1})	2461	7086	2476	4008
Stem volume, live (m^3 ha^{-1})	93	150	127	123
Biomass (t ha^{-1})	51	92	67	70

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	9.6	codo	4	Pima	7.0	inte	7	Pima	11.9	domi
2	Pima	13.5	domi	5	Pima	11.3	domi	8	Pima	10.2	codo
3	Pima	12.1	codo	6	Pima	11.4	domi	9	Pima	10.9	codo
Plot 2 (point sample)											
1	Pima	10.8	codo	7	Pima [c]	8.8	inte	13	Pima	15.9	domi
2	Pima	7.2	inte	8	Pima	9.5	inte	14	Pima	13.8	codo
3	Pima [c]	10.2	inte	9	Pima	6.7	inte	15	Pima	9.4	inte
4	Pima	6.8	inte	10	Sasp	5.9	supp	16	Pima	10.5	codo
5	Pima	9.1	inte	11	Pima	8.9	inte	—[d]	—	—	—
6	Pima	10.7	inte	12	Pima [c]	4.7	supp	—	—	—	—
Plot 3 (point sample)											
1	Pima [c]	13.9	domi	5	Pima [c]	11.9	codo	9	Pima [e]	16.0	inte
2	Pima	9.8	inte	6	Pima [c]	9.5	codo	10	Pima [c]	13.5	codo
3	Pima [c]	9.3	codo	7	Pima	11.3	codo	11	Pima	12.2	domi
4	Pima [c]	14.2	domi	8	Pima	11.5	codo	12	Pima	12.1	domi

[a] Pima = *Picea mariana*, Sasp = *Salix* sp. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health. [d] Dashes indicate no measurement taken. [e] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	9.6	codo	75	9.3	6.8	0.8	1.6	27	4
2	Pima	13.5	domi	75	10.3	6.0	2.0	1.2	42	4
4	Pima	7.0	inte	90	7.8	3.0	1.1	1.3	43	4
7	Pima	11.9	domi	85	11.3	7.0	1.6	1.0	42	5
9	Pima	10.9	codo	73	8.5	5.5	1.1	1.5	49	5
Plot 2										
1	Pima	10.8	codo	69	9.6	5.1	1.4	1.3	22	3
7	Pima	8.8	inte	71	10.3	2.0	1.1	1.2	26	4
8	Pima	9.5	inte	62	11.1	3.3	1.6	1.2	22	4
13	Pima	15.9	domi	73	10.0	6.0	2.2	1.1	24	3
16	Pima	10.5	codo	59	10.3	6.0	1.5	0.8	23	4
Plot 3										
1	Pima	13.9	domi	79	12.8	9.5	1.9	1.5	36	5
2	Pima	9.8	inte	65	8.9	3.6	1.5	0.7	20	4
3	Pima	9.3	codo	51	10.5	4.0	0.8	0.8	24	3
8	Pima	11.5	codo	70	10.3	4.0	1.3	1.2	29	4
12	Pima	12.1	domi	70	10.3	4.5	1.2	1.4	35	3

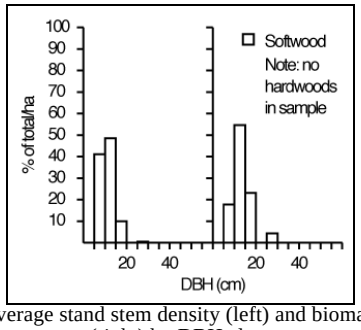
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: MAN G-BI-2 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/13	94/08/13	94/08/13	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	4.6	25.3	36.7	22.2
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	162	2362	4255	2260
Stem volume, live (m^3 ha^{-1})	23	116	155	98
Biomass (t ha^{-1})	13	63	87	54

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	15.1	codo	2	Pima	29.2	domi	—[d]	—	—	—
Plot 2 (point sample)											
1	Pima[c]	12.4	codo	5	Pima	14.0	domi	9	Pima[c]	13.3	codo
2	Pima	10.8	codo	6	Pima	6.9	inte	10	Pima[c]	16.6	inte
3	Pima[c]	13.6	domi	7	Pima[c]	15.9	domi	11	Pima	10.2	inte
4	Pima[c]	16.8	domi	8	Pima[c]	11.3	codo	—	—	—	—
Plot 3 (point sample)											
1	Pima[c]	16.1	domi	8	Pima	12.2	codo	14	Pima[c]	13.8	codo
2	Pima[c]	13.1	codo	9	Pima	7.1	inte	15	Pima[c]	12.8	domi
4	Pima[c]	13.9	codo	10	Pima[c]	10.3	inte	16	Pima[c]	16.5	domi
5	Pima	8.4	inte	11	Pima	9.0	inte	17	Pima	10.3	inte
6	Pima[c]	8.0	inte	12	Pima	10.8	inte	—	—	—	—
7	Pima	9.0	inte	13	Pima[c]	11.8	inte	—	—	—	—

[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	15.1	codo	65	11.1	1.3	3.0	2.2	26	4
2	Pima	29.2	domi	76	14.3	1.3	5.2	2.9	23	4
Plot 2										
1	Pima	12.4	codo	61	9.5	7.2	1.8	2.4	30	5
3	Pima	13.6	domi	60	11.7	9.0	1.4	2.0	24	7
6	Pima	6.9	inte	50	6.8	5.3	2.1	1.1	22	3
7	Pima	15.9	domi	61	10.9	4.8	2.4	1.4	26	5
8	Pima	11.3	codo	62	8.9	4.4	1.8	1.0	30	7
Plot 3										
1	Pima	16.1	domi	69	12.2	2.0	2.5	1.9	24	7
2	Pima	13.1	codo	72	10.9	9.7	1.7	0.9	25	5
5	Pima	8.4	inte	52	7.9	5.3	2.0	1.5	24	4
8	Pima	12.2	codo	59	10.9	5.5	1.8	1.4	27	4
16	Pima	16.5	domi	72	11.4	8.8	1.5	1.6	34	8

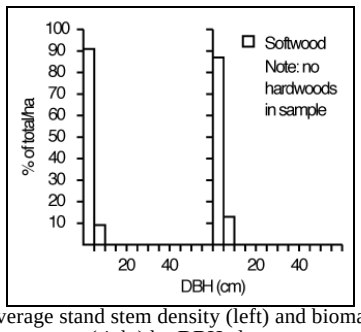
[a] Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: MAN N-JM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/27	94/06/27	94/06/27	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	6.6	3.0	5.4	5.0
Basal area, dead (m^2 ha^{-1})	0.6	0.4	1.3	0.8
Stem density, live (ha^{-1})	4400	3600	5200	4400
Stem volume, live (m^3 ha^{-1})	9	3	5	6
Biomass (t ha^{-1})	18	13	18	16

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Piba [c]	3.0	inte	6	Piba	3.8	codo	11	Piba [c]	4.0	inte
2	Piba [c]	6.0	domi	7	Piba [c]	4.2	inte	12	Piba [d]	2.8	codo
3	Piba	4.0	codo	8	Piba [c]	4.7	inte	13	Piba	2.7	supp
4	Piba [c]	4.7	inte	9	Piba [c]	3.8	inte	—[e]	—	—	—
5	Piba	5.8	codo	10	Piba [d]	3.4	supp	—	—	—	—
Plot 2 (fixed area plot)											
1	Piba	4.3	inte	6	Piba	2.2	inte	11	Piba [d]	1.1	supp
2	Piba [d]	1.6	supp	7	Piba [d]	1.6	supp	12	Piba	3.1	inte
3	Piba	2.2	inte	8	Piba [c]	2.6	inte	13	Piba [d]	2.2	inte
4	Piba	2.4	supp	9	Piba	1.8	supp	—	—	—	—
5	Piba [c]	4.3	inte	10	Piba [c]	4.7	codo	—	—	—	—
Plot 3 (fixed area plot)											
1	Piba [c]	3.6	codo	8	Pima	2.9	codo	15	Piba [c]	3.5	codo
2	Piba [d]	1.4	supp	9	Piba [d]	3.4	codo	16	Piba [d]	1.8	supp
3	Pima	6.4	domi	10	Pima	2.5	inte	17	Pima	2.9	codo
4	Piba	4.1	codo	11	Piba [d]	3.1	codo	18	Piba	3.8	codo
5	Pima	2.5	inte	12	Pima	1.8	supp	19	Piba	2.4	supp
6	Piba [d]	2.6	inte	13	Pima	4.8	domi	20	Piba	3.4	inte
7	Piba [d]	1.5	supp	14	Piba [d]	2.7	supp	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Piba	6.0	domi	—[c,d]	4.5	1.5	1.5	—	—	—
5	Piba	5.8	codo	—[d]	4.4	2.1	1.0	—	—	—
7	Piba	4.2	inte	—[d]	2.9	1.6	1.1	—	—	—
Plot 2										
4	Piba	2.4	supp	—[d]	2.1	0.7	0.4	—	—	—
6	Piba	2.2	inte	—[d]	2.7	1.2	0.4	—	—	—
10	Piba	4.7	codo	—[d]	3.1	1.5	0.7	—	—	—
Plot 3										
3	Pima	6.4	domi	—[d]	2.7	1.8	0.3	—	—	—
9	Piba	3.4	codo	—[d]	3.4	1.9	0.3	—	—	—
18	Piba	3.8	codo	—[d]	2.7	1.5	0.5	—	—	—

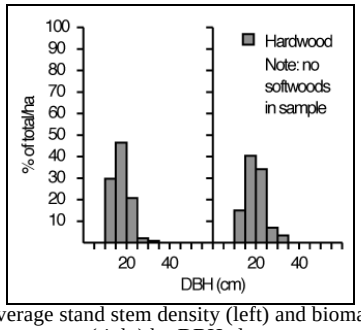
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken. [d] Core or stem sample taken at base of tree.

SITE CODE: MAN P-AM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/24	94/06/25	94/06/25	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	29.8	20.7	29.8	26.8
Basal area, dead (m^2 ha^{-1})	4.6	0.0	0.0	1.5
Stem density, live (ha^{-1})	1431	753	1049	1078
Stem volume, live (m^3 ha^{-1})	245	158	223	209
Biomass (t ha^{-1})	140	91	130	120

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	14.5	codo	6	Potr	21.5	domi	11	Potr	19.7	codo
2	Potr	21.0	domi	7	Potr	15.7	codo	12	Potr	13.1	codo
3	Potr [c]	10.1	inte	8	Potr [c]	10.1	inte	13	Potr	20.6	domi
4	Potr	12.2	codo	9	Potr	16.1	codo	14	Potr [d]	17.5	codo
5	Potr	15.8	codo	10	Potr	20.4	domi	15	Potr	14.6	codo
Plot 2 (point sample)											
1	Poba	13.6	codo	4	Potr	31.0	domi	7	Poba	19.7	codo
2	Poba	13.6	codo	5	Poba	23.7	domi	8	Potr	23.7	domi
3	Potr	29.9	domi	6	Poba	15.1	codo	9	Potr	21.0	domi
Plot 3 (point sample)											
1	Potr	17.6	codo	6	Potr [d]	22.8	codo	11	Potr	21.0	codo
2	Potr	28.5	domi	7	Potr	19.2	codo	12	Potr [d]	24.7	codo
3	Potr [d]	21.6	codo	8	Potr	16.8	codo	13	Potr	17.9	codo
4	Potr [d]	15.3	codo	9	Potr	18.4	codo	—[e]	—	—	—
5	Potr [d]	16.7	codo	10	Potr [d]	17.5	codo	—	—	—	—

[a] Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Potr	21.0	domi	—[c]	20.7	16.5	2.5	8.2	74	5
7	Potr	15.7	codo	—	17.8	15.9	2.7	3.9	42	4
15	Potr	14.6	codo	82	18.6	4.7	1.9	4.4	44	3
Plot 2										
1	Poba	13.6	codo	—	16.4	8.7	2.9	2.6	42	2
3	Potr	29.9	domi	—	21.1	15.4	6.4	3.8	35	3
7	Poba	19.7	codo	75	25.1	6.4	4.9	4.0	47	3
Plot 3										
2	Potr	28.5	domi	57	—	—	—	5.4	43	7
5	Potr	16.7	codo	69	16.8	14.5	—	4.5	48	6
9	Potr	18.4	codo	74	15.9	12.9	—	4.6	49	6
11	Potr	21.0	codo	56	18.1	15.1	—	4.2	34	6

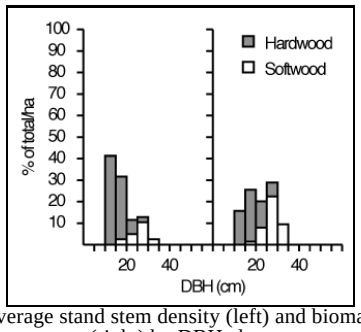
[a] Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant.
[c] Dashes indicate no measurement taken.

SITE CODE: MAN P-JM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/25	94/06/26	94/06/26	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	34.4	23.0	34.4	30.6
Basal area, dead (m^2 ha^{-1})	2.3	2.3	4.6	3.1
Stem density, live (ha^{-1})	1554	650	1243	1149
Stem volume, live (m^3 ha^{-1})	253	166	305	241
Biomass (t ha^{-1})	142	90	165	132

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	16.0	codo	7	Potr	16.8	codo	13	Piba	24.5	domi
2	Potr [c]	15.4	codo	8	Potr	18.3	domi	14	Piba	25.2	codo
3	Potr [c]	16.7	codo	9	Pigl	18.4	inte	15	Potr	10.5	inte
4	Potr	20.7	codo	10	Potr	17.5	domi	16	Potr	13.4	inte
5	Potr [d]	8.9	inte	11	Potr	26.2	codo	—[e]	—	—	—
6	Potr [c]	13.8	codo	12	Potr	23.6	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba	28.5	domi	5	Potr	25.9	codo	9	Piba	26.6	domi
2	Piba	27.5	domi	6	Potr	11.6	codo	10	Piba [c]	28.7	domi
3	Piba	29.0	domi	7	Poba [d]	11.7	inte	11	Piba	31.9	domi
4	Piba	25.2	codo	8	Poba	15.1	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	21.8	domi	7	Piba [c]	30.8	codo	13	Potr	18.1	codo
2	Piba	25.6	domi	8	Potr	12.3	codo	14	Potr	14.5	codo
3	Piba [d]	21.6	inte	9	Piba [c]	30.5	domi	15	Potr	19.6	domi
4	Piba [c]	28.4	codo	10	Potr	14.9	codo	16	Potr	19.0	domi
5	Piba	21.6	codo	11	Potr	22.4	domi	17	Potr	24.9	domi
6	Piba [d]	18.4	codo	12	Potr	13.5	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
4	Potr	20.7	codo	61	19.6	14.8	3.6	4.8	36	5
9	Pigl	18.4	inte	32	12.3	2.7	4.7	4.0	15	6
13	Piba	24.5	domi	72	21.3	15.9	2.5	2.4	29	2
Plot 2										
5	Potr	25.9	codo	100	22.6	15.4	5.4	6.4	56	10
8	Poba	15.1	codo	62	16.3	5.4	3.5	1.9	30	5
11	Piba	31.9	domi	93	20.0	10.8	5.0	3.2	48	7
Plot 3										
1	Piba	21.8	domi	87	20.8	13.6	1.9	1.4	24	4
5	Piba	21.6	codo	96	21.3	14.3	1.4	2.3	42	3
17	Potr	24.9	domi	—[c]	23.6	16.0	4.4	8.4	—	3

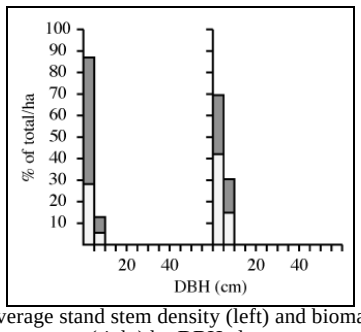
[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Poba = *Populus balsamifera*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate. [c] Dashes indicate no measurement taken.

SITE CODE: MAN S-AD-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Plot 4	Average
Date of measurements(y/m/d)	94/06/28	94/06/28	94/06/28	94/06/28	na [a]
Fixed plot area (m^2)	25	25	25	25	na
Basal area, live (m^2 ha^{-1})	14.6	13.2	18.3	13.2	14.8
Basal area, dead (m^2 ha^{-1})	0.5	0.0	0.4	0.3	0.3
Stem density, live (ha^{-1})	20400	6800	27200	16400	17700
Stem volume, live (m^3 ha^{-1})	27	27	42	23	30
Biomass (t ha^{-1})	65	32	35	25	39

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Piba	2.1	supp	19	Piba	2.1	inte	37	Pima	2.3	inte
2	Potr	2.4	codo	20	Potr	4.9	codo	38	Pima	1.9	inte
3	Piba	1.7	supp	21	Piba	1.5	supp	39	Pima	1.8	inte
4	Piba	2.4	codo	22	Piba	1.9	supp	40	Pima	1.6	inte
5	Piba	1.8	inte	23	Piba	1.5	supp	41	Pima	3.0	codo
6	Potr	2.4	codo	24	Piba	2.4	codo	42	Potr	5.9	domi
7	Piba	1.0	supp	25	Piba	2.5	codo	43	Piba	3.4	codo
8	Piba	3.3	domi	26	Piba [c]	1.2	supp	44	Piba	2.9	codo
9	Piba	6.2	domi	27	Piba	3.1	codo	45	Potr	3.4	codo
10	Piba	2.1	inte	28	Piba	2.3	codo	46	Piba [c]	3.6	inte
11	Potr	4.6	domi	29	Potr	4.2	domi	47	Potr [c]	0.9	supp
12	Potr	5.0	domi	30	Pima	3.0	codo	48	Piba	1.0	supp
13	Piba	3.3	inte	31	Pima	2.8	inte	49	Piba	1.8	supp
14	Piba	2.3	supp	32	Pima	1.7	supp	50	Piba	2.7	codo
15	Piba	3.2	codo	33	Pima	2.3	inte	51	Piba	2.3	inte
16	Piba	4.4	codo	34	Pima	2.0	inte	52	Piba	2.0	supp
17	Potr	4.1	codo	35	Pima	1.3	supp	53	Piba	1.3	supp
18	Potr	6.2	domi	36	Pima	2.4	inte	54	Piba	2.1	inte
Plot 2 (fixed area plot)											
1	Piba	5.0	inte	7	Potr	4.3	codo	13	Piba	2.2	supp
2	Piba	5.8	inte	8	Potr	6.4	codo	14	Piba	6.5	codo
3	Piba	2.3	supp	9	Piba	5.0	inte	15	Piba	3.2	inte
4	Piba	5.7	codo	10	Potr	3.2	inte	16	Piba	5.5	codo
5	Piba	6.2	codo	11	Piba	4.5	codo	17	Piba	4.5	codo
6	Piba	5.5	inte	12	Piba	5.8	codo	—[d]	—	—	—
Plot 3 (fixed area plot)											
1	Potr	5.2	domi	27	Potr	3.0	inte	53	Potr [c]	1.0	supp
2	Potr [c]	1.0	supp	28	Potr	3.5	codo	54	Potr	1.3	supp
3	Potr	3.5	domi	29	Potr	3.4	codo	55	Potr [c]	0.8	supp
4	Potr	3.7	domi	30	Potr	2.1	inte	56	Potr	3.8	codo
5	Potr	2.0	inte	31	Potr	3.9	codo	57	Potr	3.2	codo
6	Potr	1.3	supp	32	Potr [c]	0.9	supp	58	Potr	1.8	inte
7	Potr	3.8	codo	33	Potr	4.2	domi	59	Potr	5.1	domi
8	Potr	2.6	codo	34	Potr	1.3	supp	60	Potr	2.4	inte
9	Potr	2.8	codo	35	Potr	1.2	supp	61	Potr	1.4	supp
10	Potr	3.9	domi	36	Potr	1.0	supp	62	Potr	2.4	inte
11	Potr	1.5	inte	37	Potr	3.8	codo	63	Potr	1.8	supp
12	Potr	2.3	inte	38	Potr	2.2	inte	64	Potr [c]	1.8	supp
13	Potr	1.3	supp	39	Potr	1.9	inte	65	Potr	6.1	domi
14	Potr	3.0	codo	40	Potr	1.0	supp	66	Potr	6.1	domi
15	Potr	1.6	supp	41	Potr	1.6	inte	67	Potr	2.7	codo

SITE CODE: MAN S-AD-1 (1) concluded

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (concluded)											
16	Potr	2.7	inte	42	Potr	1.3	supp	68	Potr	1.5	supp
17	Potr	2.3	inte	43	Potr[c]	1.0	supp	69	Potr[c]	1.7	supp
18	Potr	3.0	codo	44	Potr	2.0	inte	70	Potr	3.5	codo
19	Potr	1.8	inte	45	Potr	2.2	inte	71	Potr	1.3	inte
20	Potr	1.9	inte	46	Potr	0.7	supp	72	Potr	1.2	supp
21	Potr	1.8	inte	47	Potr	2.2	inte	73	Potr	1.4	supp
22	Potr	4.1	codo	48	Potr	1.7	inte	74	Potr[c]	1.3	supp
23	Potr	1.6	supp	49	Potr	0.7	inte	75	Potr[c]	1.2	supp
24	Potr	4.6	codo	50	Potr	3.5	supp	76	Potr	4.3	domi
25	Potr	1.8	inte	51	Potr	5.2	domi	77	Potr	1.8	inte
26	Potr	2.0	inte	52	Potr	5.0	domi	—	—	—	—
Plot 4 (fixed area plot)											
1	Potr	3.7	codo	17	Potr[c]	1.7	inte	33	Piba	1.1	supp
2	Potr	3.2	codo	18	Pima	2.3	inte	34	Potr	2.0	inte
3	Potr	3.0	codo	19	Potr[e]	2.8	inte	35	Potr	2.3	inte
4	Potr	3.0	codo	20	Potr[c]	1.2	inte	36	Pima	3.0	inte
5	Potr[e]	1.4	inte	21	Potr	1.4	inte	37	Potr	1.6	inte
6	Potr	2.4	inte	22	Potr	5.0	codo	38	Potr	2.9	codo
7	Potr	1.5	inte	23	Potr	1.8	inte	39	Potr	1.5	supp
8	Potr	1.3	inte	24	Potr[c]	1.5	inte	40	Potr	4.4	codo
9	Potr	2.5	codo	25	Potr[c]	0.9	inte	41	Piba	1.8	supp
10	Potr	2.2	inte	26	Potr	1.9	codo	42	Potr	4.1	codo
11	Potr	2.3	inte	27	Potr	2.0	codo	43	Potr[e]	4.6	codo
12	Potr	2.7	inte	28	Potr	3.7	codo	44	Potr	4.1	codo
13	Potr[c]	1.3	inte	29	Potr	3.9	codo	45	Potr	5.3	codo
14	Potr	1.9	inte	30	Potr	3.0	inte	46	Potr	4.3	codo
15	Pima	3.5	codo	31	Potr	7.7	domi	47	Potr[c]	1.0	supp
16	Potr	3.2	codo	32	Potr	3.5	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Tree is dead. [d] Dashes indicate no measurement taken. [e] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Potr	2.4	codo	—[c,d]	3.6	2.2	3.6	—	—	—
5	Piba	1.8	inte	—[d]	2.6	0.5	1.4	—	—	—
12	Potr	5.0	domi	—[d]	5.7	0.8	3.3	—	—	—
Plot 2										
7	Potr	4.3	codo	—[d]	4.2	1.9	2.0	—	—	—
10	Potr	3.2	inte	—[d]	3.9	2.5	1.3	—	—	—
14	Piba	6.5	codo	—[d]	5.7	2.0	1.5	—	—	—
Plot 3										
5	Potr	2.0	inte	—[d]	3.9	1.5	0.3	—	—	—
18	Potr	3.0	codo	—[d]	4.7	3.0	0.3	—	—	—
51	Potr	5.2	domi	—[d]	6.3	3.7	0.5	—	—	—
Plot 4										
1	Potr	3.7	codo	—[d]	4.4	2.4	1.3	—	—	—
7	Potr	1.5	inte	—[d]	1.9	1.3	0.8	—	—	—
31	Potr	7.7	domi	—[d]	6.9	3.3	2.6	—	—	—

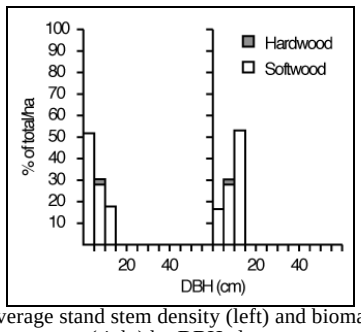
[a] Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken. [d] Core or stem sample taken at base of tree.

SITE CODE: MAN SO-M-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/26	94/06/29	94/06/29	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	na	na	na
Fixed plot area (m^2)	na	25	25	na
Basal area, live (m^2 ha^{-1})	29.8	3.1	25.0	19.3
Basal area, dead (m^2 ha^{-1})	6.9	2.0	1.3	3.4
Stem density, live (ha^{-1})	5094	5200	5200	5165
Stem volume, live (m^3 ha^{-1})	132	7	115	84
Biomass (t ha^{-1})	79	18	71	56

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	11.7	domi	7	Piba [c]	3.5	inte	13	Piba	9.7	codo
2	Piba [d]	9.5	codo	8	Piba [c]	4.1	inte	14	Piba	11.4	codo
3	Piba	4.9	inte	9	Piba [d]	5.3	inte	15	Piba	11.1	codo
4	Piba [d]	9.4	codo	10	Piba	11.8	domi	16	Piba	10.4	codo
5	Piba	13.2	domi	11	Piba	9.6	codo	—[e]	—	—	—
6	Piba [c]	2.7	inte	12	Piba	11.3	codo	—	—	—	—
Plot 2 (fixed area plot)											
1	Piba [d]	6.5	domi	7	Pima	2.2	supp	13	Pima	1.5	supp
2	Piba [c]	5.8	codo	8	Piba	4.3	codo	14	Piba [c]	3.1	codo
3	Piba [c]	2.1	supp	9	Pima	1.6	supp	15	Pima	1.7	supp
4	Bepa [c]	2.8	supp	10	Pima [d]	2.1	supp	16	Pima	1.6	supp
5	Pima	1.9	supp	11	Pima	2.7	supp	17	Pima [c]	2.8	supp
6	Pima	1.9	supp	12	Pima	1.5	supp	18	Pima	1.2	supp
Plot 3 (fixed area plot)											
1	Pima	2.1	supp	6	Pima	8.3	codo	11	Pima	4.5	inte
2	Piba	14.2	domi	7	Pima	6.5	inte	12	Piba [d]	8.6	codo
3	Pima	5.3	inte	8	Bepa	5.8	codo	13	Pima	2.5	supp
4	Pima	1.3	supp	9	Pima [c]	4.1	inte	14	Piba	12.7	domi
5	Pima	2.0	supp	10	Bepa [c]	5.0	inte	15	Piba	12.2	domi

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	11.7	domi	28	12.6	7.2	1.8	2.6	21	4
5	Piba	13.2	domi	30	11.8	6.3	1.9	3.2	21	3
12	Piba	11.3	codo	32	11.1	5.9	2.0	1.8	18	4
Plot 2										
1	Piba	6.5	domi	—[c,d]	7.1	5.5	4.8	—	—	—
7	Pima	2.2	supp	—[d]	2.3	0.8	0.3	—	—	—
8	Piba	4.3	codo	—[d]	6.3	4.6	0.3	—	—	—
Plot 3										
2	Piba	14.2	domi	31	12.8	5.8	2.9	3.7	22	3
8	Bepa	5.8	codo	—[d]	8.7	6.0	1.6	—	—	—
15	Piba	12.2	domi	30	11.8	5.9	2.4	2.7	23	5

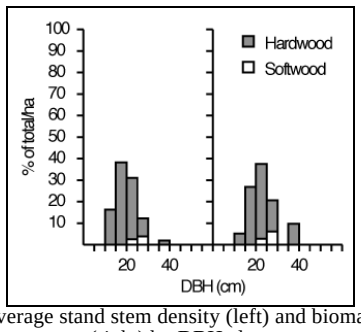
[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Dashes indicate no measurement taken. [d] Core or stem sample taken at stump height.

SITE CODE: MAN T-AM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/23	94/06/23	94/06/24	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	20.7	27.6	20.7	23.0
Basal area, dead (m^2 ha^{-1})	6.9	9.2	0.0	5.4
Stem density, live (ha^{-1})	541	958	564	688
Stem volume, live (m^3 ha^{-1})	163	220	194	192
Biomass (t ha^{-1})	95	124	113	111

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	29.8	domi	5	Potr [c]	10.3	inte	9	Potr	23.5	domi
2	Potr	21.6	domi	6	Potr [c]	12.4	inte	10	Potr	22.9	domi
3	Potr	18.5	domi	7	Potr	22.9	domi	11	Potr [d]	25.3	domi
4	Potr	19.7	domi	8	Potr [c]	15.2	codo	12	Potr	19.8	codo
Plot 2 (point sample)											
1	Potr	19.2	codo	7	Potr	18.6	codo	13	Potr [c]	18.9	codo
2	Pigl	23.7	domi	8	Potr	12.2	codo	14	Potr	20.3	codo
3	Potr [c]	18.4	domi	9	Potr [c]	11.8	inte	15	Potr	23.0	domi
4	Piba	25.0	codo	10	Potr	17.5	inte	16	Potr	25.4	domi
5	Potr	16.7	codo	11	Potr	21.4	inte	—[e]	—	—	—
6	Potr	21.5	codo	12	Potr [c]	19.7	codo	—	—	—	—
Plot 3 (point sample)											
1	Potr [d]	14.4	codo	4	Potr	36.5	domi	7	Potr	17.5	codo
2	Potr	17.5	codo	5	Piba [d]	29.1	codo	8	Potr	25.2	codo
3	Potr	37.8	domi	6	Potr	23.7	codo	9	Potr	22.7	codo

[a] Piba = *Pinus banksiana*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Potr	29.8	domi	71	20.0	15.0	3.2	6.8	46	11
4	Potr	19.7	domi	—[c]	18.4	16.4	1.9	2.5	23	7
10	Potr	22.9	domi	66	20.5	18.2	1.9	3.9	44	5
Plot 2										
1	Potr	19.2	codo	92	19.3	12.1	1.9	7.3	63	6
10	Potr	17.5	inte	69	17.8	11.1	2.1	2.7	30	7
16	Potr	25.4	domi	93	21.3	15.3	5.0	4.2	48	7
Plot 3										
1	Potr	14.4	codo	61	17.8	14.4	1.3	3.3	36	3
3	Potr	37.8	domi	103	25.4	18.5	5.7	6.6	44	18
9	Potr	22.7	codo	94	23.7	20.5	2.8	4.8	48	4

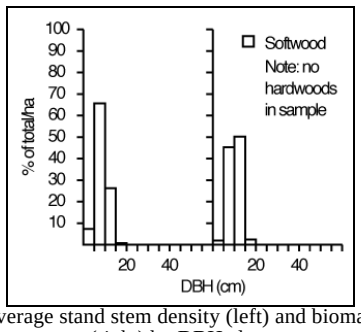
[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: MAN T-BI-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/09	94/08/09	94/08/09	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	41.3	39.0	41.3	40.6
Basal area, dead (m^2 ha^{-1})	2.3	0.0	2.3	1.5
Stem density, live (ha^{-1})	5160	5343	9180	6561
Stem volume, live (m^3 ha^{-1})	219	194	169	194
Biomass (t ha^{-1})	116	105	103	108

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	8.0	inte	8	Pima	14.5	domi	15	Pima	14.2	domi
2	Pima	9.9	inte	9	Pima	13.6	codo	16	Pima	11.5	domi
3	Pima[c]	11.1	domi	10	Pima	9.3	codo	17	Pima	11.1	codo
4	Pima	10.6	domi	11	Pima	10.6	domi	18	Pima	9.4	codo
5	Pima[c]	6.6	inte	12	Pima	9.9	codo	19	Pima	11.2	codo
6	Pima	7.1	inte	13	Pima	14.1	domi	—[e]	—	—	—
7	Pima	14.0	codo	14	Pima[d]	6.6	supp	—	—	—	—
Plot 2 (point sample)											
1	Pima	10.4	codo	7	Pima	8.4	codo	13	Pima[c]	11.8	domi
2	Pima	6.1	inte	8	Pima	11.5	domi	14	Pima[c]	8.5	codo
3	Pima	12.1	domi	9	Pima	11.8	domi	15	Pima	11.8	domi
4	Pima	11.4	domi	10	Pima	12.4	domi	16	Pima	12.7	domi
5	Pima	12.4	domi	11	Pima	6.4	inte	17	Pima	6.9	inte
6	Pima	12.9	domi	12	Pima[c]	15.1	domi	—	—	—	—
Plot 3 (point sample)											
1	Pima	8.8	codo	8	Pima	11.3	domi	15	Pima[c]	9.1	codo
2	Pima	6.9	inte	9	Pima	9.8	domi	16	Pima	11.9	domi
3	Pima	6.1	inte	10	Pima	5.7	supp	17	Pima[c]	9.9	codo
4	Pima	7.7	codo	11	Pima	7.8	inte	18	Pima	8.3	codo
5	Pima	6.6	inte	12	Pima	7.6	inte	19	Pima	9.6	codo
6	Bepa[d]	7.4	supp	13	Pima	7.6	inte	—	—	—	—
7	Pima	4.5	supp	14	Pima	10.4	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Visual indications of poor health. [d] Tree is dead. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	8.0	inte	72	9.3	6.4	1.3	1.3	32	4
2	Pima	9.9	inte	77	11.0	7.5	1.5	1.6	37	4
6	Pima	7.1	inte	71	9.5	5.7	1.2	1.3	28	4
8	Pima	14.5	domi	95	10.0	6.8	1.6	1.0	52	3
13	Pima	14.1	domi	82	13.8	10.4	1.9	1.3	31	8
Plot 2										
1	Pima	10.4	codo	56	10.5	6.8	1.7	0.9	15	4
6	Pima	12.9	domi	63	12.6	9.0	1.3	1.6	22	5
7	Pima	8.4	codo	71	9.6	6.3	1.8	0.8	27	4
11	Pima	6.4	inte	49	6.8	1.8	1.6	1.2	15	3
13	Pima	11.8	domi	71	9.8	7.5	1.2	1.6	35	5
Plot 3										
2	Pima	6.9	inte	60	7.1	5.0	1.2	0.6	20	3
4	Pima	7.7	codo	46	9.8	5.7	0.6	0.6	16	3
8	Pima	11.3	domi	74	11.0	6.0	1.0	0.7	27	2
9	Pima	9.8	domi	65	9.4	5.2	1.2	1.5	29	5
11	Pima	7.8	inte	60	7.4	3.8	1.2	0.9	24	3

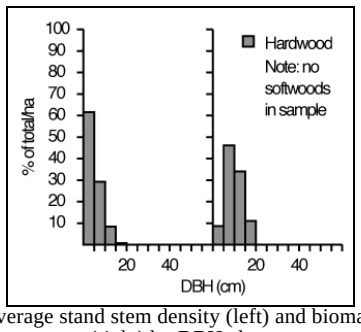
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: SASK B-AM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/02	94/06/02	94/06/02	na [a]
Point sampling BAF (m^2 ha^{-1})	3.000	na	3.000	na
Fixed plot area (m^2)	na	100	na	na
Basal area, live (m^2 ha^{-1})	12.0	10.5	12.0	11.5
Basal area, dead (m^2 ha^{-1})	9.0	0.8	0.0	3.3
Stem density, live (ha^{-1})	9955	2400	2201	4852
Stem volume, live (m^3 ha^{-1})	33	29	34	32
Biomass (t ha^{-1})	23	18	21	21

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr [c]	5.1	inte	4	Potr [c]	7.4	inte	7	Potr [d]	7.4	codo
2	Potr [d]	8.8	codo	5	Potr [d]	2.1	inte	—[e]	—	—	—
3	Potr [d]	19.3	codo	6	Potr [c]	1.9	inte	—	—	—	—
Plot 2 (fixed area plot)											
1	Potr [d]	5.3	codo	10	Potr [d]	5.2	codo	19	Potr [d]	6.7	codo
2	Potr [d]	4.7	codo	11	Potr [d]	7.7	codo	20	Potr [d]	7.1	codo
3	Potr [d]	6.5	codo	12	Potr [d]	6.6	codo	21	Potr [d]	6.3	codo
4	Potr [d]	8.3	codo	13	Potr [c]	3.5	inte	22	Potr [d]	5.1	codo
5	Potr [d]	11.2	domi	14	Potr [d]	10.9	domi	23	Potr [d]	5.0	codo
6	Potr [d]	9.5	codo	15	Potr [d]	9.5	domi	24	Potr [d]	4.4	codo
7	Potr [d]	9.7	codo	16	Potr [d]	7.7	codo	25	Potr [d]	7.8	codo
8	Potr [c]	9.2	codo	17	Potr [d]	6.3	codo	26	Potr [d]	7.9	codo
9	Potr [d]	8.6	codo	18	Potr [d]	4.7	codo	—	—	—	—
Plot 3 (point sample)											
1	Potr [d]	10.5	domi	3	Potr [d]	11.2	domi	—	—	—	—
2	Potr [d]	10.1	domi	4	Potr [d]	5.7	codo	—	—	—	—

[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Potr	8.8	codo	31	8.1	4.3	2.1	2.1	18	6
3	Potr	19.3	codo	—[c]	9.3	7.1	3.0	2.4	56	12
7	Potr	7.4	codo	—	7.0	4.3	1.3	1.6	20	6
Plot 2										
3	Potr	6.5	codo	22	4.6	2.0	2.6	1.4	13	5
7	Potr	9.7	codo	43	7.4	5.6	2.5	2.5	32	6
11	Potr	7.7	codo	34	7.2	5.6	1.8	2.1	29	5
20	Potr	7.1	codo	28	6.7	4.7	1.8	1.3	14	5
Plot 3										
1	Potr	10.5	domi	34	7.5	3.1	3.2	2.3	16	5
2	Potr	10.1	domi	43	7.8	4.7	2.9	1.8	22	4
3	Potr	11.2	domi	51	7.7	4.6	3.2	1.8	24	5

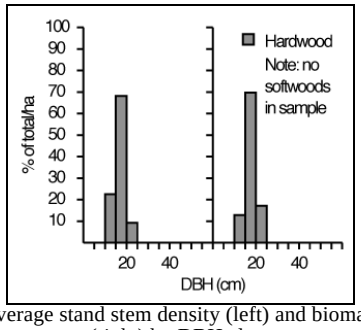
[a] Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK F-AM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/27	94/08/27	94/08/27	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	29.8	25.3	34.4	29.8
Basal area, dead (m^2 ha^{-1})	6.9	2.3	9.2	6.1
Stem density, live (ha^{-1})	1269	1220	1411	1300
Stem volume, live (m^3 ha^{-1})	249	177	280	235
Biomass (t ha^{-1})	143	102	161	135

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	15.9	codo	7	Potr	15.0	codo	13	Potr	22.8	domi
2	Potr	16.8	codo	8	Potr	18.2	domi	14	Potr [c]	8.3	supp
3	Potr	15.9	codo	9	Potr	24.1	domi	15	Potr [c]	9.1	supp
4	Potr	20.3	codo	10	Potr	17.4	codo	16	Potr	14.8	codo
5	Potr	14.3	codo	11	Bepa [c]	9.5	supp	—[d]	—	—	—
6	Potr	18.2	codo	12	Potr	19.5	domi	—	—	—	—
Plot 2 (point sample)											
1	Potr	15.0	codo	5	Potr	14.4	codo	9	Potr	16.2	codo
2	Potr	12.7	codo	6	Potr	18.4	domi	10	Potr	14.5	codo
3	Potr	20.6	domi	7	Potr	19.4	codo	11	Potr	17.7	domi
4	Potr [c]	8.8	supp	8	Potr	19.7	domi	12	Potr	15.9	codo
Plot 3 (point sample)											
1	Potr	19.8	codo	8	Potr [c]	11.9	codo	16	Potr	15.6	codo
2	Potr	19.2	codo	9	Potr	19.8	domi	17	Potr	14.2	codo
3	Potr	24.3	domi	11	Potr [c]	12.3	supp	18	Potr	19.6	domi
4	Potr	15.8	codo	12	Potr	16.7	codo	19	Potr	16.2	codo
5	Potr [c]	8.5	supp	13	Potr	21.6	domi	20	Potr	19.2	domi
6	Potr	18.9	codo	14	Potr	15.3	domi	—	—	—	—
7	Potr	16.3	codo	15	Potr [c]	12.0	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, supp = suppressed.
[c] Tree is dead. [d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
7	Potr	15.0	codo	—[c]	20.8	15.1	2.6	3.1	—	3
8	Potr	18.2	domi	—	20.9	13.4	2.0	1.9	—	5
9	Potr	24.1	domi	—	20.1	13.0	4.0	4.5	—	5
10	Potr	17.4	codo	—	17.9	12.3	3.5	3.8	—	4
Plot 2										
1	Potr	15.0	codo	—	15.3	11.9	2.9	2.3	—	6
2	Potr	12.7	codo	—	14.8	12.7	2.1	1.7	—	4
3	Potr	20.6	domi	—	17.2	11.0	3.1	5.7	—	5
Plot 3										
1	Potr	19.8	codo	56	20.3	14.2	3.6	4.2	39	4
3	Potr	24.3	domi	56	19.8	13.7	5.3	5.5	38	15
12	Potr	16.7	codo	56	21.5	15.4	3.0	3.5	39	8

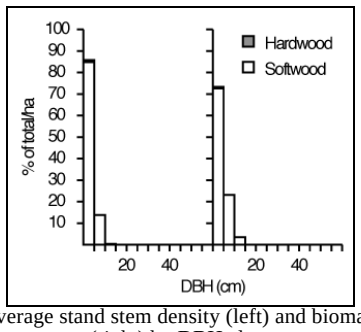
[a] Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK F-BD-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/14	94/06/14	94/06/14	na [a]
Point sampling BAF (m^2 ha^{-1})	na	2.296	na	na
Fixed plot area (m^2)	25	na	25	na
Basal area, live (m^2 ha^{-1})	25.7	16.1	40.8	27.5
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	47600	7020	38000	30873
Stem volume, live (m^3 ha^{-1})	47	42	107	65
Biomass (t ha^{-1})	156	39	158	118

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Pima	1.2	supp	41	Pima	0.9	supp	81	Pima	1.8	supp
2	Pima	4.1	codo	42	Pima	1.0	supp	82	Pima	1.1	supp
3	Pima	1.0	codo	43	Pima	1.7	supp	83	Pima	2.8	codo
4	Pima	4.2	codo	44	Pima	2.1	codo	84	Pima	1.7	supp
5	Pima	1.6	supp	45	Pima	3.3	codo	85	Pima	1.1	supp
6	Pima	3.1	codo	46	Pima	3.0	codo	86	Pima	3.2	codo
7	Pima	2.2	codo	47	Pima	2.0	codo	87	Pima	1.5	supp
8	Pima	2.0	supp	48	Pima	1.9	supp	88	Bepa	2.0	codo
9	Pima	4.0	codo	49	Pima	4.0	codo	89	Pima	1.7	supp
10	Pima	3.7	codo	50	Pima	5.5	codo	90	Pima	4.7	codo
11	Pima	1.8	supp	51	Pima	1.6	supp	91	Pima	1.1	supp
12	Pima	3.2	codo	52	Pima	2.7	codo	92	Pima	2.2	codo
13	Pima	2.0	supp	53	Pima	5.5	codo	93	Pima	1.1	supp
14	Pima	3.1	codo	54	Pima	3.6	codo	94	Pima	3.2	codo
15	Pima	3.3	codo	55	Pima	1.2	supp	95	Pima	1.7	supp
16	Pima	1.7	supp	56	Pima	1.1	supp	96	Pima	1.1	supp
17	Pima	3.8	codo	57	Pima	0.8	supp	97	Pima	1.8	supp
18	Pima	2.2	codo	58	Pima	0.6	supp	98	Pima	4.2	codo
19	Pima	2.1	codo	59	Pima	1.1	supp	99	Bepa	2.3	codo
20	Pima	2.5	codo	60	Pima	2.4	codo	100	Pima	1.9	supp
21	Pima	2.1	supp	61	Pima	2.4	codo	101	Pima	0.5	supp
22	Pima	2.5	codo	62	Pima	1.8	supp	102	Pima	4.1	codo
23	Pima	0.8	supp	63	Pima	1.2	supp	103	Pima	3.5	codo
24	Pima	1.5	inte	64	Pima	2.7	codo	104	Pima	4.6	codo
25	Pima	2.0	codo	65	Pima	1.5	supp	105	Pima	4.2	codo
26	Pima	2.5	codo	66	Pima	3.6	codo	106	Pima	4.0	codo
27	Pima	1.5	supp	67	Pima	3.1	codo	107	Pima	2.5	codo
28	Pima	2.4	codo	68	Pima	4.4	codo	108	Pima	0.5	supp
29	Pima	3.9	codo	69	Pima	1.1	supp	109	Pima	1.1	supp
30	Pima	4.3	codo	70	Pima	1.4	supp	110	Pima	1.8	supp
31	Pima	2.2	codo	71	Pima	2.1	codo	111	Pima	1.5	supp
32	Pima	2.4	codo	72	Pima	3.6	codo	112	Pima	3.3	codo
33	Pima	2.2	codo	73	Pima	3.1	codo	113	Pima	2.9	codo
34	Pima	0.6	supp	74	Pima	4.4	codo	114	Pima	1.5	supp
35	Pima	1.8	supp	75	Pima	1.1	supp	115	Pima	2.5	codo
36	Pima	1.9	supp	76	Pima	1.4	supp	116	Pima	1.7	supp
37	Pima	1.9	supp	77	Pima	2.1	codo	117	Pima	4.1	codo
38	Pima	2.4	codo	78	Pima	3.6	codo	118	Pima	2.5	codo
39	Pima	2.5	codo	79	Pima	3.2	codo	119	Pima	1.2	supp
40	Pima	1.7	supp	80	Pima	1.7	supp	—[c]	—	—	—
Plot 2 (point sample)											
1	Pima	5.5	codo	4	Pima	4.9	codo	7	Pima	6.9	codo
2	Pima	5.1	codo	5	Pima	5.8	codo	—	—	—	—
3	Pima	4.5	codo	6	Pima	6.1	codo	—	—	—	—

SITE CODE: SASK F-BD-1 (1) continued

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (fixed area plot)											
1	Pima	2.0	codo	33	Pima	3.0	codo	65	Pima	2.5	inte
2	Pima	2.5	codo	34	Pima	0.8	inte	66	Pima	1.5	inte
3	Pima	3.0	codo	35	Pima	1.5	inte	67	Pima	2.0	inte
4	Pima	2.0	codo	36	Pima	5.5	codo	68	Pima	1.0	inte
5	Pima	3.5	codo	37	Pima	5.5	codo	69	Pima	1.5	inte
6	Pima	6.0	codo	38	Pima	0.6	inte	70	Pima	2.5	inte
7	Pima	2.0	codo	39	Pima	5.5	codo	71	Pima	5.0	codo
8	Pima	2.5	codo	40	Pima	1.5	inte	72	Pima	2.5	inte
9	Pima	1.0	inte	41	Pima	0.8	inte	73	Pima	1.0	inte
10	Pima	1.0	inte	42	Pima[d]	1.5	inte	74	Pima	2.0	inte
11	Pima	1.0	inte	43	Pima	6.5	codo	75	Pima	2.0	inte
12	Pima	1.5	inte	44	Pima	4.5	codo	76	Pima	2.0	inte
13	Pima	4.5	codo	45	Pima	0.6	inte	77	Pima	1.0	inte
14	Pima	3.0	codo	46	Pima	1.5	inte	78	Pima	1.0	inte
15	Pima	1.0	inte	47	Pima	2.4	inte	79	Pima	2.5	inte
16	Pima	1.5	inte	48	Pima	6.5	codo	80	Pima	2.0	inte
17	Pima	2.0	inte	49	Pima	1.5	inte	81	Pima	4.0	codo
18	Pima	6.0	codo	50	Pima	1.5	inte	82	Pima	6.0	codo
19	Pima	2.0	codo	51	Pima	1.5	inte	83	Pima	1.5	inte
20	Pima	2.0	codo	52	Pima	1.5	inte	84	Pima	1.0	inte
21	Pima	3.0	codo	53	Pima	3.0	codo	85	Pima	1.5	inte
22	Pima	4.0	codo	54	Pima	5.5	codo	86	Pima	2.0	inte
23	Pima	5.0	codo	55	Pima	3.5	codo	87	Pima	2.5	inte
24	Pima	7.5	domi	56	Pima	4.0	codo	88	Pima	1.5	inte
25	Pima	6.0	codo	57	Pima	2.5	inte	89	Pima	4.5	codo
26	Pima	7.0	codo	58	Pima	9.0	domi	90	Pima	5.0	codo
27	Pima	2.5	inte	59	Pima	1.0	inte	91	Pima	5.0	codo
28	Pima	6.0	codo	60	Pima	2.5	inte	92	Pima	3.0	codo
29	Pima	4.0	codo	61	Pima	2.5	inte	93	Pima	5.0	codo
30	Pima	4.5	codo	62	Pima	4.5	codo	94	Pima	4.0	codo
31	Pima	1.5	inte	63	Piba	12.5	domi	95	Pima	1.5	inte
32	Pima	2.5	inte	64	Pima	2.5	inte	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Dashes indicate no measurement taken. [d] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
6	Pima	3.1	codo	—[c,d]	3.5	2.5	0.7	—	—	—
9	Pima	4.0	codo	—[d]	4.2	3.5	0.5	—	—	—
Plot 2										
1	Pima	5.5	codo	36	6.0	5.5	0.4	0.6	11	2
4	Pima	4.9	codo	32	4.5	3.5	0.7	0.9	14	2
7	Pima	6.9	codo	42	6.5	5.5	0.4	1.2	20	2
Plot 3										
6	Pima	6.0	codo	38	4.0	2.5	—	1.0	18	1
17	Pima	2.0	inte	—	2.7	1.9	0.6	—	—	—
24	Pima	7.5	domi	—	7.2	4.5	1.2	.8	12	1

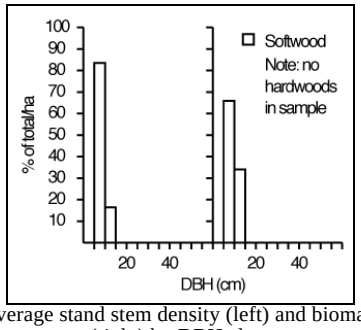
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken. [d] Core or stem sample taken at base of tree.

SITE CODE: SASK F-BI-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/25	94/08/25	94/08/25	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	23.0	18.4	18.4	19.9
Basal area, dead (m^2 ha^{-1})	2.3	0.0	2.3	1.5
Stem density, live (ha^{-1})	3507	4178	3392	3692
Stem volume, live (m^3 ha^{-1})	104	73	75	84
Biomass (t ha^{-1})	58	46	44	49

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	7.3	supp	5	Pima	8.4	codo	10	Pima	10.2	codo
2	Piba [c]	6.5	supp	6	Pima	8.3	domi	11	Pima	13.5	domi
3	Pima	7.6	supp	7	Pima [d]	10.5	domi	12	Piba [d]	8.8	codo
4	Pima	10.0	codo	9	Pima	11.1	codo	—[e]	—	—	—
Plot 2 (point sample)											
1	Pima	6.9	supp	4	Pima [d]	6.8	supp	7	Pima	11.3	domi
2	Pima	6.0	supp	5	Piba	11.5	domi	8	Pima	6.9	codo
3	Piba	8.5	domi	6	Piba [d]	6.7	domi	—	—	—	—
Plot 3 (point sample)											
1	Pima	8.6	codo	4	Pima	8.7	codo	7	Pima	8.1	domi
2	Pima	14.1	domi	5	Pima	7.4	codo	8	Pima [d]	9.5	domi
3	Pima	7.1	codo	6	Pima	7.1	domi	9	Pima [c]	8.2	codo

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	7.3	supp	35	8.8	5.6	0.8	2.0	20	3
5	Pima	8.4	codo	38	9.3	4.7	1.0	1.3	18	3
7	Pima	10.5	domi	59	10.3	4.9	1.3	2.1	21	3
11	Pima	13.5	domi	58	11.6	4.8	1.9	1.9	31	3
Plot 2										
3	Piba	8.5	domi	47	9.7	6.0	1.2	2.0	30	2
7	Pima	11.3	domi	44	11.0	4.7	1.7	3.0	19	2
8	Pima	6.9	codo	38	7.2	4.4	0.9	3.0	16	2
Plot 3										
1	Pima	8.6	codo	38	8.7	4.2	1.1	1.7	14	5
5	Pima	7.4	codo	45	6.7	3.2	0.9	1.1	20	2
8	Pima	9.5	domi	51	9.8	3.5	1.3	1.7	26	5

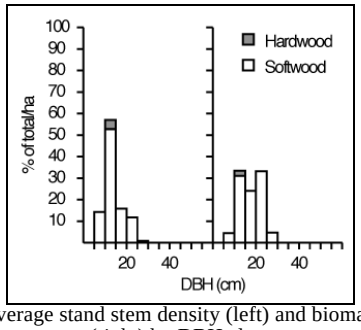
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.

SITE CODE: SASK F-BM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/12	94/06/13	94/06/13	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	39.0	32.1	6.9	26.0
Basal area, dead (m^2 ha^{-1})	2.3	2.3	0.0	1.5
Stem density, live (ha^{-1})	2675	1546	475	1565
Stem volume, live (m^3 ha^{-1})	299	260	43	201
Biomass (t ha^{-1})	150	129	23	100

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	13.5	codo	7	Pima[c]	9.7	codo	15	Pima	10.5	codo
2	Pima[d]	18.5	domi	8	Pima	22.0	domi	16	Pima	9.7	codo
3	Pima	9.0	inte	9	Piba	10.8	codo	17	Pima	26.7	domi
4	Pima	20.4	domi	10	Pima	14.5	domi	18	Pima[d]	21.5	domi
5	Pima	23.9	domi	13	Pima	16.1	codo	19	Pima	13.7	codo
6	Pima	13.2	codo	14	Pima	13.9	codo	20	Pima	11.3	codo
Plot 2 (point sample)											
1	Pima	18.5	domi	6	Pima	17.5	domi	11	Pima	20.8	domi
2	Pima	12.9	codo	7	Pima	23.8	domi	12	Pima	17.9	domi
3	Pima	20.0	domi	8	Pima[d]	12.2	codo	13	Pima	18.0	domi
4	Pima	17.5	codo	9	Pima	11.3	inte	14	Pima	14.2	codo
5	Pima[c]	12.7	inte	10	Pima	18.4	domi	15	Pima	21.5	domi
Plot 3 (point sample)											
1	Pima	11.6	domi	2	Pima[d]	23.2	codo	3	Potr[d]	12.0	inte

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead.
[d] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Pima	9.0	inte	—[c]	12.3	12.0	0.8	—	—	—
10	Pima	14.5	domi	90	14.3	8.3	1.1	1.0	25	4
13	Pima	16.1	codo	101	15.1	14.5	1.8	1.1	26	3
Plot 2										
1	Pima	18.5	domi	57	17.4	8.4	1.9	1.8	24	5
4	Pima	17.5	codo	121	15.8	8.6	1.7	1.3	30	5
9	Pima	11.3	inte	80	14.4	9.0	1.0	1.4	31	2
Plot 3										
1	Pima	11.6	domi	47	12.4	6.0	1.7	2.4	24	2
2	Pima	23.2	codo	72	18.0	8.6	2.0	1.2	21	5
3	Potr	12.0	inte	—	12.8	8.6	1.7	2.3	25	3

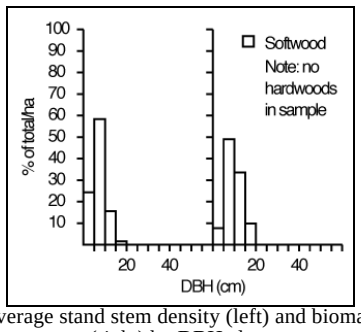
[a] Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK F-BM-2 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/13	94/06/13	94/06/13	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	25.3	13.8	16.1	18.4
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	2880	2741	6079	3900
Stem volume, live (m^3 ha^{-1})	107	39	51	66
Biomass (t ha^{-1})	59	27	42	43

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	10.8	codo	5	Pima	9.5	inte	9	Piba	17.5	domi
2	Pima	12.1	codo	6	Pima	8.8	inte	10	Piba	17.8	domi
3	Pima	8.4	inte	7	Pima	9.3	codo	11	Pima	10.0	inte
4	Pima	9.4	inte	8	Pima	13.3	domi	—[d]	—	—	—
Plot 2 (point sample)											
1	Pima[c]	8.8	codo	3	Piba	10.3	codo	5	Piba[c]	5.2	inte
2	Piba[c]	9.2	codo	4	Piba	12.7	codo	6	Pima[c]	7.8	inte
Plot 3 (point sample)											
1	Pima	5.7	inte	4	Pima	6.0	inte	7	Piba	6.7	inte
2	Piba	10.2	codo	5	Pima	3.2	supp	—	—	—	—
3	Piba[c]	12.9	domi	6	Piba	8.5	domi	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	10.8	codo	51	9.4	4.1	1.4	1.9	26	2
9	Piba	17.5	domi	53	12.2	8.0	2.0	2.7	31	3
11	Pima	10.0	inte	52	8.5	3.9	1.2	0.9	15	3
Plot 2										
1	Pima	8.8	codo	44	6.4	1.0	1.3	1.2	19	3
4	Piba	12.7	codo	62	9.4	4.6	2.0	1.9	32	2
6	Pima	7.8	inte	40	4.2	1.4	1.2	0.7	13	2
Plot 3										
1	Pima	5.7	inte	36	5.9	1.1	1.0	0.7	16	3
5	Pima	3.2	supp	—[c,d]	3.4	1.8	0.6	—	—	—
6	Piba	8.5	domi	39	7.7	5.0	0.8	2.4	32	2

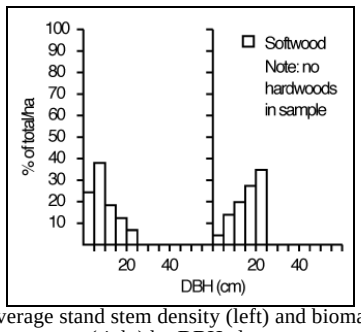
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken.
[d] Core or stem sample taken at base of tree.

SITE CODE: SASK F-BM-3 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/29	94/08/29	94/08/29	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	16.1	16.1	18.4	16.8
Basal area, dead (m^2 ha^{-1})	6.9	2.3	0.0	3.1
Stem density, live (ha^{-1})	3093	1168	738	1666
Stem volume, live (m^3 ha^{-1})	64	72	97	78
Biomass (t ha^{-1})	40	40	52	44

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	6.5	supp	5	Pima	9.8	supp	10	Lala[c]	15.7	domi
2	Pima	14.5	codo	6	Pima[d]	8.1	supp	11	Pima[c]	4.9	supp
3	Pima	12.5	domi	7	Lala[d]	20.7	domi	—[e]	—	—	—
4	Pima[d]	6.6	supp	8	Pima	8.2	supp	—	—	—	—
Plot 2 (point sample)											
1	Pima[c]	7.9	supp	4	Pima	13.8	supp	7	Pima	11.5	codo
2	Pima	16.5	codo	5	Piba	23.8	domi	9	Piba[c]	20.7	domi
3	Piba[d]	17.9	domi	6	Pima	17.3	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	24.5	domi	4	Piba	16.4	supp	7	Pima[c]	20.7	domi
2	Pima[c]	11.5	codo	5	Piba	24.3	domi	8	Pima	23.0	domi
3	Pima	19.9	domi	6	Pima	16.1	supp	—	—	—	—

[a] Lala = *Larix laricina*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Pima	14.5	codo	78	11.4	6.0	1.7	1.2	20	6
3	Pima	12.5	domi	69	12.3	7.2	0.9	1.5	32	4
8	Pima	8.2	supp	47	6.6	3.7	1.6	1.5	20	3
9	Lala	15.5	domi	80	12.7	7.3	2.3	1.5	29	2
Plot 2										
2	Pima	16.5	codo	48	10.9	2.3	2.8	1.2	14	5
5	Piba	23.8	domi	50	16.7	11.8	1.9	1.8	27	5
6	Pima	17.3	codo	44	10.2	3.1	2.6	2.2	14	5
Plot 3										
3	Pima	19.9	domi	40	11.7	2.7	3.9	3.3	15	5
5	Piba	24.3	domi	68	16.1	9.8	3.5	4.0	43	4
6	Pima	16.1	supp	37	10.9	2.5	3.1	2.7	15	5

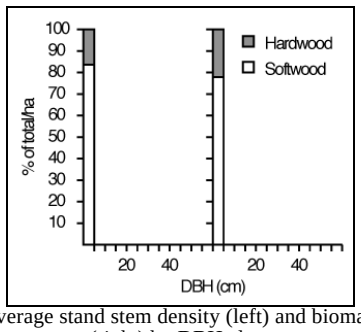
[a] Lala = *Larix laricina*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.

SITE CODE: SASK F-JD-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/15	94/06/15	94/06/15	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	12.3	10.2	11.1	11.2
Basal area, dead (m^2 ha^{-1})	0.0	0.0	0.0	0.0
Stem density, live (ha^{-1})	31600	27600	41200	33467
Stem volume, live (m^3 ha^{-1})	18	16	13	16
Biomass (t ha^{-1})	105	117	130	117

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Piba	2.7	codo	28	Piba	1.0	codo	55	Piba	1.2	codo
2	Piba	1.6	supp	29	Piba	1.6	codo	56	Piba	1.6	codo
3	Piba	3.2	domi	30	Piba	2.8	codo	57	Piba	3.4	codo
4	Piba	1.4	supp	31	Piba	2.2	codo	58	Piba	2.4	codo
5	Piba	1.8	supp	32	Piba	2.4	codo	59	Piba	1.2	codo
6	Piba	0.6	supp	33	Piba	2.4	codo	60	Piba	1.3	codo
7	Piba	0.7	supp	34	Piba	1.4	codo	61	Piba	2.5	codo
8	Piba	2.1	codo	35	Piba	3.7	codo	62	Piba	2.0	codo
9	Piba	2.5	codo	36	Piba	2.0	codo	63	Piba	2.6	codo
10	Piba	2.4	codo	37	Piba	2.7	codo	64	Sasp	1.0	codo
11	Piba	2.9	codo	38	Piba	3.4	codo	65	Piba	1.5	codo
12	Piba	3.9	codo	39	Piba	1.4	codo	66	Piba	1.6	codo
13	Piba	1.4	supp	40	Piba	1.7	codo	67	Piba	1.9	codo
14	Piba	1.9	supp	41	Piba	1.9	codo	68	Piba	1.5	codo
15	Piba	1.9	supp	42	Piba	2.1	codo	69	Pima	1.0	codo
16	Piba	2.7	codo	43	Piba	2.6	codo	70	Piba	0.6	codo
17	Piba	4.2	codo	44	Piba	0.7	codo	71	Piba	2.4	codo
18	Piba	2.8	codo	45	Piba	2.7	codo	72	Piba	3.6	codo
19	Piba	1.4	supp	46	Piba	1.8	codo	73	Piba	2.1	codo
20	Piba	3.8	codo	47	Piba	2.1	codo	74	Piba	0.6	codo
21	Piba	2.7	codo	48	Piba	1.6	codo	75	Piba	3.4	codo
22	Piba	2.2	codo	49	Piba	0.6	codo	76	Piba	1.1	codo
23	Piba	2.8	codo	50	Piba	0.8	codo	77	Piba	3.0	codo
24	Piba	2.8	codo	51	Piba	3.1	codo	78	Piba	1.8	codo
25	Piba	2.9	codo	52	Piba	1.6	codo	79	Piba	1.7	codo
26	Piba	2.6	codo	53	Piba	1.0	codo	—[c]	—	—	—
27	Piba	0.7	codo	54	Piba	1.0	codo	—	—	—	—
Plot 2 (fixed area plot)											
1	Bepa	3.5	domi	24	Alcr	1.4	inte	47	Alcr	1.8	inte
2	Bepa	2.6	codo	25	Alcr	1.6	inte	48	Alcr	0.8	inte
3	Bepa	3.2	domi	26	Alcr	1.4	inte	49	Alcr	1.2	inte
4	Piba	3.0	codo	27	Alcr	2.2	codo	50	Alcr	1.2	inte
5	Piba	2.2	codo	28	Alcr	0.8	inte	51	Alcr	1.3	inte
6	Piba	1.8	inte	29	Piba	1.6	inte	52	Alcr	0.8	inte
7	Piba	1.4	inte	30	Piba	4.0	domi	53	Alcr	1.0	inte
8	Piba	1.8	inte	31	Piba	3.0	codo	54	Alcr	1.4	inte
9	Piba	2.4	codo	32	Piba	1.2	inte	55	Alcr	0.7	inte
10	Piba	1.6	inte	33	Piba	2.6	codo	56	Alcr	0.6	inte
11	Piba	3.6	codo	34	Piba	1.8	inte	57	Alcr	0.6	inte
12	Piba	1.4	inte	35	Piba	4.6	domi	58	Alcr	0.6	inte
13	Piba	4.3	codo	36	Pima	1.0	supp	59	Alcr	1.2	inte
14	Sasp	1.3	inte	37	Piba	2.4	codo	60	Alcr	1.5	inte
15	Piba	4.0	domi	38	Piba	2.4	codo	61	Alcr	1.5	inte
16	Piba	1.5	inte	39	Alcr	1.0	inte	62	Alcr	1.9	codo
17	Piba	4.4	codo	40	Piba	1.6	inte	63	Alcr	1.4	inte
18	Piba	1.8	inte	41	Piba	4.2	domi	64	Alcr	1.8	codo
19	Potr	1.4	inte	42	Alcr	1.2	inte	65	Alcr	1.4	inte
20	Potr	3.2	codo	43	Alcr	0.8	inte	66	Alcr	1.0	inte
21	Alcr	2.0	codo	44	Alcr	1.4	inte	67	Piba	1.8	inte
22	Alcr	2.4	codo	45	Alcr	1.1	inte	68	Piba	2.0	codo
23	Alcr	2.3	codo	46	Alcr	1.2	inte	69	Piba	3.4	domi

SITE CODE: SASK F-JD-1 (1) concluded

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 3 (fixed area plot)											
1	Piba	1.4	inte	36	Piba	0.8	inte	71	Piba	2.5	codo
2	Piba	1.6	codo	37	Piba	1.4	inte	72	Piba	1.8	codo
3	Piba	1.6	inte	38	Piba	1.7	inte	73	Piba	3.0	domi
4	Piba	1.0	inte	39	Piba	0.5	inte	74	Piba	3.5	domi
5	Piba	0.4	supp	40	Piba	0.4	inte	75	Piba	0.5	inte
6	Piba	1.0	inte	41	Piba	1.7	inte	76	Piba	1.1	inte
7	Piba	1.0	inte	42	Piba	1.8	inte	77	Piba	1.7	inte
8	Piba	2.2	inte	43	Piba	2.2	codo	78	Piba	1.3	codo
9	Piba	2.4	codo	44	Piba	2.2	codo	79	Piba	1.2	inte
10	Piba	1.0	inte	45	Piba	1.6	inte	80	Piba	1.8	codo
11	Piba	3.6	codo	46	Piba	1.6	inte	81	Piba	1.1	inte
12	Piba	3.2	codo	47	Piba	2.4	codo	82	Piba	0.8	inte
13	Piba	1.7	inte	48	Piba	1.0	inte	83	Piba	0.8	inte
14	Piba	2.7	codo	49	Piba	1.1	inte	84	Piba	1.8	codo
15	Piba	1.7	inte	50	Piba	2.0	inte	85	Piba	2.3	codo
16	Piba	1.9	codo	51	Piba	1.7	inte	86	Piba	3.8	domi
17	Piba	2.4	codo	52	Piba	2.5	codo	87	Piba	1.7	inte
18	Piba	0.8	inte	53	Piba	1.5	inte	88	Piba	1.8	inte
19	Piba	1.9	inte	54	Piba	2.0	codo	89	Piba	1.8	inte
20	Piba	1.0	inte	55	Piba	2.0	codo	90	Piba	1.5	inte
21	Piba	1.0	inte	56	Piba	1.5	codo	91	Piba	1.8	inte
22	Piba	1.0	inte	57	Piba	0.8	inte	92	Piba	1.5	inte
23	Piba	1.4	inte	58	Piba	0.5	inte	93	Piba	2.0	inte
24	Piba	1.6	inte	59	Piba	1.9	inte	94	Piba	2.1	inte
25	Piba	3.7	codo	60	Piba	0.5	inte	95	Piba	1.4	inte
26	Piba	1.1	inte	61	Piba	1.4	inte	96	Piba	1.5	inte
27	Piba	2.1	inte	62	Piba	1.2	inte	97	Piba	2.0	codo
28	Piba	1.1	inte	63	Piba	2.0	inte	98	Piba	2.5	codo
29	Piba	0.5	inte	64	Piba	4.1	domi	99	Piba	1.7	inte
30	Piba	3.4	codo	65	Piba	1.7	inte	100	Piba	2.0	inte
31	Piba	1.5	inte	66	Piba	1.0	inte	101	Piba	0.8	inte
32	Piba	1.1	inte	67	Piba	3.5	codo	102	Piba	1.1	inte
33	Piba	2.2	inte	68	Piba	0.5	inte	103	Piba	2.3	codo
34	Piba	1.9	inte	69	Piba	0.5	inte	—	—	—	—
35	Piba	1.1	inte	70	Piba	1.7	inte	—	—	—	—

[a] Alcr = *Alnus crispa*, Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*, Sasp = *Salix* sp. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Piba	3.2	domi	13[c]	4.1	0.7	0.7	1.6	9	2
4	Piba	1.4	supp	13[c]	2.6	0.5	0.5	0.8	10	1
71	Piba	2.4	codo	11[c]	3.6	0.5	0.5	1.3	9	1
Plot 2										
1	Bepa	3.5	domi	12[c]	4.7	2.6	1.2	1.2	8	2
4	Piba	3.0	codo	13[c]	4.1	1.1	0.6	1.3	10	1
15	Piba	4.0	domi	13[c]	5.0	2.0	0.8	1.6	9	2
Plot 3										
6	Piba	1.0	inte	14[d]	1.9	1.3	0.2	0.6	9	1
14	Piba	2.7	codo	13[c]	3.5	1.6	0.6	1.2	9	1
64	Piba	4.1	domi	13[c]	3.9	1.5	0.8	1.9	11	2

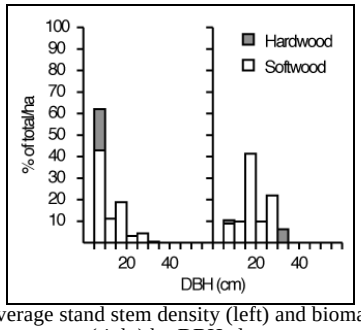
[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*. [b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed. [c] Core or stem sample taken at stump height. [d] Core or stem sample taken at base of tree.

SITE CODE: SASK F-JM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/11	94/06/11	94/06/11	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	27.6	23.0	16.1	22.2
Basal area, dead (m^2 ha^{-1})	2.3	0.0	0.0	0.8
Stem density, live (ha^{-1})	2518	1003	1914	1811
Stem volume, live (m^3 ha^{-1})	174	194	97	155
Biomass (t ha^{-1})	88	99	55	81

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima [c]	11.0	inte	6	Piba [c]	23.7	domi	11	Piba	19.9	codo
2	Abba	17.1	codo	7	Potr	5.3	inte	12	Pima	13.5	inte
3	Pima	17.7	codo	8	Pima	15.7	codo	13	Pima	9.7	inte
4	Pima	11.9	inte	9	Piba [d]	28.3	domi	—[e]	—	—	—
5	Pima	18.7	codo	10	Piba	28.3	domi	—	—	—	—
Plot 2 (point sample)											
1	Piba [c]	20.0	codo	5	Potr [c]	32.4	domi	9	Piba [c]	19.9	codo
2	Pima	28.9	domi	6	Piba [c]	19.6	inte	10	Pima [c]	9.6	inte
3	Pima [c]	16.9	codo	7	Piba [c]	16.4	inte	—	—	—	—
4	Piba [c]	16.0	codo	8	Piba [c]	19.8	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba [c]	25.1	codo	4	Pima	7.1	inte	7	Piba [c]	27.0	codo
2	Piba [c]	24.2	codo	5	Pima	5.1	inte	—	—	—	—
3	Piba [c]	28.2	domi	6	Piba [c]	28.3	domi	—	—	—	—

[a] Abba = *Abies balsamea*, Piba = *Pinus banksiana*, Pima = *Picea mariana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
2	Abba	17.1	codo	39	13.3	6.7	2.7	3.4	20	5
10	Piba	28.3	domi	—[c]	10.9	3.3	2.0	2.6	34	5
12	Pima	13.5	inte	42	16.5	11.7	2.9	2.0	13	6
Plot 2										
2	Pima	28.9	domi	102	22.5	13.1	3.9	2.6	27	4
7	Piba	16.4	inte	—	18.2	15.3	2.6	1.7	34	3
9	Piba	19.9	codo	—	21.3	16.3	3.2	1.7	29	3
Plot 3										
1	Piba	25.1	codo	—	16.0	9.2	2.3	8.2	52	3
4	Pima	7.1	inte	20	5.8	1.0	2.1	2.2	10	3
6	Piba	28.3	domi	117	20.2	9.6	2.5	3.7	47	4

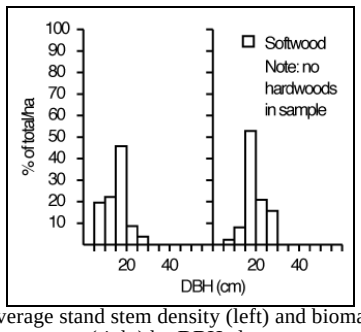
[a] Abba = *Abies balsamea*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK F-JM-2 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/12	94/06/12	94/06/12	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	27.6	25.3	9.2	20.7
Basal area, dead (m^2 ha^{-1})	4.6	2.3	0.0	2.3
Stem density, live (ha^{-1})	1118	1684	359	1053
Stem volume, live (m^3 ha^{-1})	183	120	36	113
Biomass (t ha^{-1})	94	66	20	60

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	10.4	inte	6	Piba [c]	19.1	domi	11	Piba [d]	20.4	codo
2	Piba	23.1	domi	7	Piba [d]	14.3	codo	12	Pima [c]	15.1	codo
3	Piba [c]	16.1	domi	8	Piba [c]	17.9	domi	13	Piba	19.8	codo
4	Piba	18.8	domi	9	Piba [c]	25.1	domi	14	Piba	27.0	domi
5	Piba [c]	23.3	domi	10	Piba [c]	18.8	codo	—[e]	—	—	—
Plot 2 (point sample)											
1	Pima	16.4	codo	5	Piba [c]	23.0	domi	9	Piba [c]	6.9	inte
2	Piba [c]	17.5	codo	6	Piba [c]	16.6	codo	10	Piba [c]	18.8	codo
3	Piba [c]	10.5	inte	7	Pima [c]	13.2	inte	11	Piba [d]	18.2	codo
4	Piba	21.8	codo	8	Piba [c]	29.5	domi	12	Pima [c]	17.7	codo
Plot 3 (point sample)											
1	Piba [c]	15.2	codo	3	Piba [c]	24.0	domi	—	—	—	—
2	Piba [c]	18.0	codo	4	Piba	17.9	codo	—	—	—	—

[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	10.4	inte	59	9.0	7.4	1.4	1.9	24	4
5	Piba	23.3	domi	111	17.2	10.6	1.6	2.0	61	4
10	Piba	18.8	codo	109	15.2	9.6	1.9	1.5	55	4
Plot 2										
4	Piba	21.8	codo	130	12.9	7.2	2.0	1.8	57	3
5	Piba	23.0	domi	124	15.1	6.4	2.3	3.1	53	7
7	Pima	13.2	inte	89	8.9	1.6	1.4	1.2	24	2
Plot 3										
1	Piba	15.2	codo	97	10.4	6.2	1.3	1.4	43	3
3	Piba	24.0	domi	129	11.6	6.6	1.5	1.7	43	7
4	Piba	17.9	codo	—[c]	6.4	3.8	1.3	—	—	2

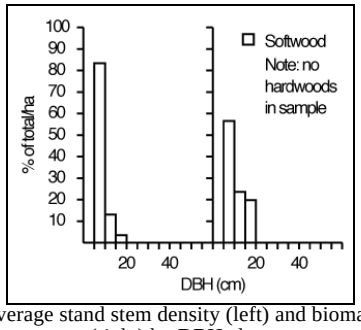
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK F-JM-4 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/28	94/08/28	94/08/28	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	13.8	2.3	34.4	16.8
Basal area, dead (m^2 ha^{-1})	0.0	0.0	4.6	1.5
Stem density, live (ha^{-1})	3270	580	4344	2731
Stem volume, live (m^3 ha^{-1})	39	4	174	72
Biomass (t ha^{-1})	29	4	94	42

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba	8.8	codo	3	Piba	9.4	supp	5	Piba	5.3	supp
2	Piba	12.0	domi	4	Piba	6.0	supp	7	Piba	7.6	codo
Plot 2 (point sample)											
1	Piba [c]	7.1	supp	—[d]	—	—	—	—	—	—	—
Plot 3 (point sample)											
1	Piba [c]	11.0	supp	8	Pima	14.0	domi	14	Pima	18.4	domi
3	Pima	9.8	domi	9	Pima	16.4	domi	15	Pima	9.3	codo
4	Pima [c]	12.4	domi	10	Pima	7.5	supp	16	Pima	10.1	codo
5	Pima	9.5	codo	11	Bepa [e]	8.6	supp	17	Pima	9.5	codo
6	Pima	7.3	supp	12	Bepa [e]	7.3	supp	18	Pima	7.6	supp
7	Pima	9.5	supp	13	Piba	17.7	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Visual indications of poor health.
[d] Dashes indicate no measurement taken.
[e] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	8.8	codo	40	6.9	5.3	1.2	1.0	13	2
2	Piba	12.0	domi	62	9.3	4.1	1.5	2.3	29	2
6	Piba	5.2	supp	—[c,d]	4.7	3.1	0.7	—	—	—
7	Piba	7.6	codo	37	6.3	3.7	0.7	0.6	11	1
Plot 2										
1	Piba	7.1	supp	40	4.6	2.6	1.5	0.9	23	2
2	Piba	9.5	domi	46	7.3	2.2	1.5	1.1	18	3
Plot 3										
1	Piba	11.0	supp	32	10.9	7.5	1.6	2.0	21	3
4	Pima	12.4	domi	52	12.9	9.2	1.7	1.4	22	4
5	Pima	9.5	codo	40	10.1	1.4	1.7	2.5	22	3
8	Pima	14.0	domi	45	11.4	5.7	2.0	2.2	22	4

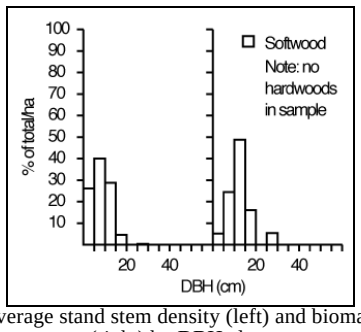
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Dashes indicate no measurement taken.
[d] Core or stem sample taken at base of tree.

SITE CODE: SASK F-JM-5 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/30	94/08/30	94/08/30	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	25.3	18.4	18.4	20.7
Basal area, dead (m^2 ha^{-1})	0.0	4.6	2.3	2.3
Stem density, live (ha^{-1})	2117	2195	4794	3035
Stem volume, live (m^3 ha^{-1})	113	93	66	91
Biomass (t ha^{-1})	65	51	45	54

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima [c]	29.0	domi	6	Pima [c]	12.1	codo	10	Lala	11.0	codo
2	Pima [c]	17.0	codo	7	Pima [c]	13.6	codo	11	Pima [c]	7.5	supp
4	Pima [c]	17.7	domi	8	Pima [c]	9.0	supp	12	Lala	17.1	domi
5	Pima [c]	15.4	codo	9	Lala	12.6	codo	—[e]	—	—	—
Plot 2 (point sample)											
1	Piba [c]	10.7	codo	5	Piba [c]	11.8	codo	9	Pima [c]	7.2	supp
2	Piba [c]	12.1	codo	6	Piba [c]	11.5	codo	10	Piba [d]	7.8	supp
3	Piba [c]	14.5	domi	7	Piba [d]	4.1	supp	—	—	—	—
4	Piba [c]	13.5	domi	8	Pima [c]	8.1	supp	—	—	—	—
Plot 3 (point sample)											
1	Pima [c]	7.8	supp	4	Pima [c]	8.9	supp	7	Piba [d]	5.9	supp
2	Piba [c]	14.4	domi	5	Piba [c]	10.1	domi	8	Pima [c]	7.5	supp
3	Pima [c]	8.7	supp	6	Pima [c]	11.4	domi	9	Pima [c]	3.5	supp

[a] Lala = *Larix laricina*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	29.0	domi	68	17.4	3.2	3.6	3.1	24	7
3	Pima	12.6	codo	39	10.0	3.5	2.1	2.1	17	4
4	Pima	17.7	domi	58	12.3	5.2	2.9	2.6	21	5
Plot 2										
2	Piba	12.1	codo	51	11.6	7.2	1.5	1.7	28	2
4	Piba	13.5	domi	41	12.2	8.1	1.7	1.5	21	3
5	Piba	11.8	codo	42	13.5	9.2	2.1	1.5	24	2
8	Pima	8.1	supp	36	8.4	4.3	1.3	2.2	19	3
Plot 3										
2	Piba	14.4	domi	56	9.8	5.3	1.7	1.6	14	2
5	Piba	10.1	domi	—[c]	10.1	6.0	1.1	1.1	—	3
6	Pima	11.4	domi	50	10.2	2.1	1.6	1.8	22	4

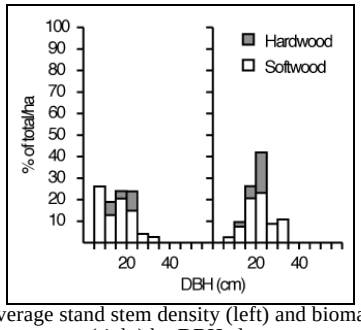
[a] Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK F-M-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/26	94/08/26	94/08/26	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	11.5	16.1	23.0	16.8
Basal area, dead (m^2 ha^{-1})	6.9	6.9	0.0	4.6
Stem density, live (ha^{-1})	371	724	1115	736
Stem volume, live (m^3 ha^{-1})	82	93	136	104
Biomass (t ha^{-1})	41	53	83	59

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Bepa [c]	13.4	codo	4	Piba	19.4	codo	7	Piba	20.4	codo
2	Bepa [c]	14.7	codo	5	Bepa [c]	19.8	supp	8	Piba	19.3	codo
3	Piba	19.5	domi	6	Piba [d]	20.8	domi	—[e]	—	—	—
Plot 2 (point sample)											
1	Piba	14.6	codo	5	Bepa [d]	21.0	supp	9	Pima	21.3	supp
2	Sasp [c]	10.8	supp	6	Pima	21.8	domi	10	Bepa [c]	14.9	supp
3	Sasp	14.7	supp	7	Pima [d]	16.3	codo	—	—	—	—
4	Pima [c]	14.3	domi	8	Piba	14.0	codo	—	—	—	—
Plot 3 (point sample)											
1	Piba	32.1	domi	5	Bepa [d]	21.4	codo	9	Piba [d]	16.4	codo
2	Bepa [d]	20.6	codo	6	Pima	7.1	supp	10	Piba [d]	20.9	codo
3	Piba	25.6	domi	7	Piba	30.6	domi	—	—	—	—
4	Bepa	19.5	codo	8	Piba	25.4	codo	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
3	Piba	19.5	domi	57	15.4	7.6	2.8	3.4	30	6
7	Piba	20.4	codo	53	17.9	10.0	2.6	3.7	33	7
8	Piba	19.3	codo	55	15.5	7.9	2.8	2.5	29	8
Plot 2										
1	Piba	14.6	codo	37	12.8	5.5	2.2	4.8	17	4
6	Pima	21.8	domi	47	16.3	3.5	3.7	3.8	13	6
7	Pima	16.3	codo	45	14.0	4.7	—[c]	3.3	18	5
Plot 3										
1	Piba	32.1	domi	135	19.9	12.3	—	3.9	51	4
3	Piba	25.6	domi	123	15.5	10.3	—	2.5	52	2
4	Bepa	19.5	codo	—	14.0	6.1	—	—	—	3
6	Pima	7.1	supp	26	5.8	1.3	—	2.4	16	3

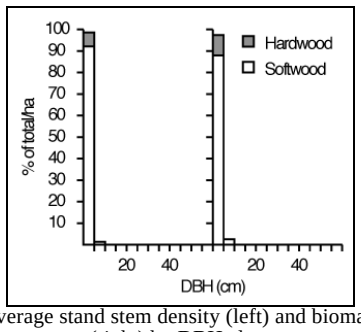
[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Dashes indicate no measurement taken.

SITE CODE: SASK M-BD-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/31	94/07/10	94/07/10	na [a]
Fixed plot area (m^2)	25	25	25	na
Basal area, live (m^2 ha^{-1})	8.0	14.0	4.9	8.9
Basal area, dead (m^2 ha^{-1})	0.0	0.1	0.2	0.1
Stem density, live (ha^{-1})	31600	28400	26000	28667
Stem volume, live (m^3 ha^{-1})	8	23	6	12
Biomass (t ha^{-1})	97	91	82	90

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (fixed area plot)											
1	Pima	1.6	codo	28	Pima	1.4	codo	55	Pima	1.1	codo
2	Pima	2.0	codo	29	Pima	1.8	codo	56	Pima	0.6	codo
3	Pima	1.3	codo	30	Pima	1.6	codo	57	Pima	1.3	codo
4	Pima	1.6	codo	31	Pima	1.3	codo	58	Pima	1.5	codo
5	Pima	2.0	codo	32	Pima	1.4	codo	59	Pima	0.9	codo
6	Pima	1.1	codo	33	Pima	1.2	codo	60	Sasp	0.9	codo
7	Pima	0.9	codo	34	Pima	1.2	codo	61	Pima	0.5	codo
8	Pima	0.9	codo	35	Pima	1.2	codo	62	Pima	3.4	codo
9	Pima	2.5	codo	36	Pima	2.9	codo	63	Pima	0.9	codo
10	Pima	0.8	codo	37	Pima	1.8	codo	64	Pima	1.9	codo
11	Pima	2.1	codo	38	Pima	2.2	codo	65	Pima	0.7	codo
12	Pima	3.9	codo	39	Pima	1.8	codo	66	Pima	0.9	codo
13	Pima	1.8	codo	40	Pima	2.8	codo	67	Pima	1.8	codo
14	Pima	2.8	codo	41	Sasp	2.4	codo	68	Pima	3.7	codo
15	Pima	3.0	codo	42	Pima	2.3	codo	69	Sasp	1.3	codo
16	Pima	1.6	codo	43	Pima	0.9	codo	70	Sasp	1.1	codo
17	Pima	1.4	codo	44	Pima	1.1	codo	71	Pima	2.1	codo
18	Pima	1.8	codo	45	Pima	1.1	codo	72	Pima	1.8	codo
19	Pima	1.8	codo	46	Pima	1.6	codo	73	Pima	2.2	codo
20	Pima	1.3	codo	47	Pima	1.9	codo	74	Pima	1.1	codo
21	Pima	1.2	codo	48	Pima	1.2	codo	75	Pima	2.2	codo
22	Pima	0.7	codo	49	Pima	2.0	codo	76	Pima	0.3	codo
23	Pima	3.6	codo	50	Pima	1.2	codo	77	Pima	0.6	codo
24	Pima	1.9	codo	51	Pima	0.8	codo	78	Pima	1.0	codo
25	Pima	1.4	codo	52	Pima	2.4	codo	79	Pima	2.6	codo
26	Pima	1.8	codo	53	Pima	0.9	codo	—[c]	—	—	—
27	Pima	1.5	codo	54	Pima	1.3	codo	—	—	—	—
Plot 2 (fixed area plot)											
1	Pima	6.0	domi	27	Pima	2.2	inte	53	Pima	2.6	inte
2	Pima	3.4	codo	28	Pima	2.5	inte	54	Pima	6.2	domi
3	Pima	2.8	inte	29	Pima	0.8	supp	55	Pima	2.0	supp
4	Pima	4.2	codo	30	Pima	1.5	supp	56	Pima	2.2	supp
5	Pima	3.6	codo	31	Pima	3.2	inte	57	Pima	1.8	supp
6	Pima	4.8	codo	32	Sasp	0.6	supp	58	Pima	4.0	codo
7	Pima	2.0	inte	33	Sasp[d]	1.2	supp	59	Pima	0.4	supp
8	Pima	0.6	supp	34	Sasp[d]	0.6	supp	60	Pima	0.6	supp
9	Pima	5.1	codo	35	Sasp[d]	0.5	supp	61	Pima	0.3	supp
10	Pima	0.4	supp	36	Pima	1.0	supp	62	Pima	1.8	inte
11	Pima	2.2	inte	37	Pima	1.7	supp	63	Pima	2.5	inte
12	Pima	0.7	supp	38	Pima	3.8	codo	64	Pima	2.8	inte
13	Pima	1.4	supp	39	Pima	0.4	supp	65	Pima	1.9	inte
14	Pima	1.6	supp	40	Pima	0.5	supp	66	Pima	2.7	inte
15	Pima	1.4	supp	41	Pima	2.4	inte	67	Pima	2.8	inte
16	Pima	1.3	supp	42	Pima	0.8	supp	68	Pima	1.2	supp

SITE CODE: SASK M-BD-1 (1) concluded

Individual tree values (concluded)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 2 (concluded)											
17	Pima	2.0	supp	43	Pima	0.7	supp	69	Pima	2.0	inte
18	Pima	1.2	supp	44	Pima	2.5	supp	70	Pima	0.6	supp
19	Pima	2.4	inte	45	Sasp[d]	0.5	supp	71	Sasp[d]	0.4	supp
20	Pima[e]	3.9	codo	46	Pima	1.0	supp	72	Potr[e]	3.0	codo
21	Pima	0.5	supp	47	Pima	4.7	codo	73	Pima	0.8	supp
22	Pima	0.4	supp	48	Pima	0.8	supp	74	Pima	0.9	supp
23	Pima	0.3	supp	49	Pima	3.0	inte	75	Pima	0.9	supp
24	Pima	0.8	supp	50	Pima	2.6	inte	76	Pima	4.5	codo
25	Pima	2.4	inte	51	Pima	2.7	inte	—	—	—	—
26	Pima	1.4	inte	52	Pima	2.3	inte	—	—	—	—
Plot 3 (fixed area plot)											
1	Sasp	0.3	supp	25	Pima	1.1	codo	49	Pima	2.3	codo
2	Sasp	0.3	supp	26	Pima	0.5	supp	50	Pima	1.5	codo
3	Sasp	0.4	supp	27	Potr	4.7	domi	51	Pima	1.1	codo
4	Sasp	0.4	supp	28	Pima	0.4	supp	52	Pima	1.7	codo
5	Sasp[d]	1.1	supp	29	Pima	1.0	supp	53	Pima	0.5	codo
6	Sasp[d]	0.8	supp	30	Pima	1.0	supp	54	Pima	2.4	codo
7	Sasp[d]	0.4	supp	31	Pima	1.2	supp	55	Pima	0.6	supp
8	Sasp[d]	1.0	supp	32	Pima	1.3	codo	56	Pima	2.0	codo
9	Pima	0.4	supp	33	Pima	0.7	supp	57	Pima	0.5	supp
10	Pima	0.3	supp	34	Pima	0.6	supp	58	Pima	0.5	supp
11	Pima	1.5	codo	35	Sasp	0.4	supp	59	Pima	0.5	supp
12	Pima	0.3	supp	36	Sasp	0.5	supp	60	Pima	2.1	supp
13	Pima	0.4	supp	37	Sasp	0.2	supp	61	Pima	0.6	supp
14	Pima	1.0	supp	38	Sasp[d]	1.6	supp	62	Pima	0.4	supp
15	Pima	1.9	codo	39	Pima	1.7	supp	63	Pima	1.6	supp
16	Pima	0.8	supp	40	Pima	4.2	domi	64	Pima	0.4	supp
17	Pima	1.1	codo	41	Pima	2.7	domi	65	Pima	2.5	supp
18	Pima	0.4	supp	42	Pima	0.4	supp	66	Pima	3.5	domi
19	Pima	1.7	codo	43	Pima	0.6	supp	67	Pima	1.4	codo
20	Pima	0.8	supp	44	Pima	0.6	supp	68	Pima	1.0	codo
21	Pima	0.7	supp	45	Pima	3.0	codo	69	Pima	1.3	codo
22	Pima	0.6	supp	46	Pima	1.6	codo	70	Pima	1.2	codo
23	Pima	3.5	domi	47	Pima	0.9	supp	—	—	—	—
24	Pima	1.4	codo	48	Pima	0.5	supp	—	—	—	—

[a] Pima = *Picea mariana*, Potr = *Populus tremuloides*, Sasp = *Salix* sp.
[b] codo = codominant, domi = dominant, inte = intermediate, supp = suppressed.
[c] Dashes indicate no measurement taken. [d] Tree is dead. [e] Visual indications of poor health.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 2										
1	Pima	6.0	domi	48[c]	5.1	2.1	0.6	—[d]	—	—
4	Pima	4.2	codo	41[c]	3.7	2.0	0.7	—	—	—
18	Pima	1.2	supp	39[c]	1.6	1.0	0.3	—	—	—
Plot 3										
28	Pima	0.4	supp	—[c]	1.3	1.0	0.3	—	—	—
54	Pima	2.4	codo	—[c]	2.1	1.7	0.3	—	—	—
66	Pima	3.5	domi	—[c]	2.8	1.1	0.6	—	—	—

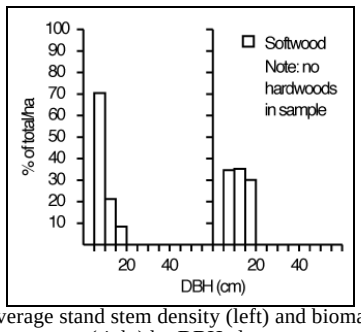
[a] Pima = *Picea mariana*.
[b] codo = codominant, domi = dominant, supp = suppressed.
[c] Core or stem sample taken at base of tree. [d] Dashes indicate no measurement taken.

SITE CODE: SASK NI-J-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/26	94/06/26	94/06/26	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	4.6	9.2	11.5	8.4
Basal area, dead (m^2 ha^{-1})	4.6	0.0	0.0	1.5
Stem density, live (ha^{-1})	716	1202	1311	1076
Stem volume, live (m^3 ha^{-1})	11	33	28	24
Biomass (t ha^{-1})	8	20	19	16

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Piba [c]	11.8	domi	3	Piba [d]	12.4	inte	—[e]	—	—	—
2	Piba [d]	23.2	domi	4	Piba [c]	7.6	codo	—	—	—	—
Plot 2 (point sample)											
1	Piba [c]	14.0	domi	3	Piba [c]	17.2	domi	—	—	—	—
2	Piba [c]	18.5	domi	4	Piba [c]	5.8	inte	—	—	—	—
Plot 3 (point sample)											
1	Piba [c]	18.5	domi	3	Piba	7.0	inte	5	Piba [c]	14.3	inte
2	Piba [c]	12.7	codo	4	Piba [c]	9.8	inte	—	—	—	—

[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Visual indications of poor health.
[d] Tree is dead.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Piba	11.8	domi	40	6.6	0.5	1.4	1.7	28	2
4	Piba	7.6	codo	34	5.3	0.8	1.3	2.4	22	3
Plot 2										
1	Piba	14.0	domi	43 [c]	10.0	1.1	2.3	4.3	32	6
2	Piba	18.5	domi	34 [c]	8.5	0.6	3.2	3.7	17	10
3	Piba	17.2	domi	33 [c]	11.4	1.0	2.8	3.6	19	5
Plot 3										
1	Piba	18.5	domi	39 [c]	7.4	—[d]	2.8	4.6	25	11
2	Piba	12.7	codo	38 [c]	5.9	1.7	2.0	3.9	25	7
3	Piba	7.0	inte	47 [c]	4.7	1.2	2.1	2.8	19	5
4	Piba	9.8	inte	23	5.0	2.0	2.4	4.6	27	3

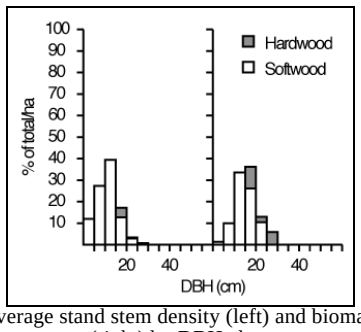
[a] Piba = *Pinus banksiana*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Core or stem sample taken at stump height.
[d] Dashes indicate no measurement taken.

SITE CODE: SASK PA-BM-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/30	94/05/31	94/05/31	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	48.2	34.4	52.8	45.2
Basal area, dead (m^2 ha^{-1})	6.9	2.3	0.0	3.1
Stem density, live (ha^{-1})	3895	4878	2743	3838
Stem volume, live (m^3 ha^{-1})	271	179	412	287
Biomass (t ha^{-1})	142	97	216	152

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pima	21.6	codo	9	Pima	11.0	codo	17	Pima	8.9	inte
2	Pima	21.1	domi	10	Pima	11.5	codo	18	Pima[c]	6.5	inte
3	Pima	12.5	inte	11	Pima	9.4	inte	19	Pima[c]	4.0	inte
4	Pima	11.3	inte	12	Pima	13.1	codo	20	Pima	11.2	inte
5	Pima	18.5	codo	13	Pima	16.6	domi	21	Pima	15.6	domi
6	Pima	14.7	domi	14	Pima	14.3	codo	22	Pima	18.0	inte
7	Pima	17.6	domi	15	Pima	7.1	inte	23	Pima	13.5	inte
8	Pima	12.1	codo	16	Pima[c]	4.1	inte	24	Pima	20.4	domi
Plot 2 (point sample)											
1	Pima	15.2	domi	7	Pima	8.9	codo	13	Pima[d]	17.7	domi
2	Pima	11.8	codo	8	Pima	9.5	codo	14	Pima[d]	12.6	codo
3	Pima	10.6	codo	9	Pima	4.6	inte	15	Pima[d]	10.0	codo
4	Pima	10.6	codo	10	Pima	10.4	codo	16	Pima[c]	9.4	codo
5	Pima	8.8	codo	11	Pima[d]	11.8	codo	—[e]	—	—	—
6	Pima	9.0	codo	12	Pima[d]	13.6	domi	—	—	—	—
Plot 3 (point sample)											
1	Pima	15.9	domi	9	Pima	16.4	domi	17	Pima	16.8	domi
2	Pima	22.5	domi	10	Potr	18.3	domi	18	Potr	28.0	domi
3	Pima	14.3	codo	11	Potr	15.9	codo	19	Pima	17.4	codo
4	Pima	8.2	inte	12	Pima	14.2	codo	20	Potr	28.0	domi
5	Pima	17.1	domi	13	Pima	14.7	codo	21	Pima	16.4	codo
6	Potr	22.6	domi	14	Pima	13.8	codo	22	Pima	15.9	domi
7	Potr	18.0	domi	15	Potr	16.0	domi	23	Pima	12.0	inte
8	Potr	16.3	codo	16	Pima	20.1	domi	—	—	—	—

[a] Pima = *Picea mariana*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead. [d] Visual indications of poor health. [e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pima	21.6	codo	107	12.9	5.8	2.4	2.6	51	7
2	Pima	21.1	domi	104	18.2	7.0	2.2	1.9	47	6
11	Pima	9.4	inte	77	11.4	9.2	1.2	0.8	26	4
Plot 2										
1	Pima	15.2	domi	83	13.2	6.9	1.2	1.5	25	5
3	Pima	10.6	codo	73	11.0	7.4	1.2	1.1	22	4
6	Pima	9.0	codo	85	10.0	7.0	0.8	0.7	34	3
14	Pima	12.6	codo	69	13.2	6.1	0.8	1.1	35	5
Plot 3										
1	Pima	15.9	domi	71	18.0	10.0	2.7	1.1	21	4
3	Pima	14.3	codo	92	15.6	10.8	2.1	1.2	38	3
17	Pima	16.8	domi	77	17.1	10.8	1.6	1.0	16	3

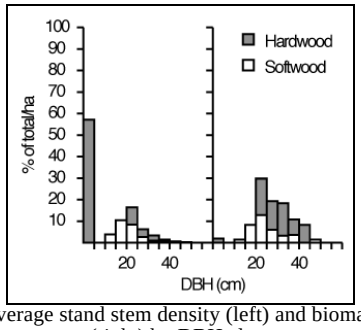
[a] Pima = *Picea mariana*. [b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: SASK PA-M-1 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/29	94/05/30	94/05/30	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	39.0	36.7	32.1	36.0
Basal area, dead (m^2 ha^{-1})	0.0	4.6	2.3	2.3
Stem density, live (ha^{-1})	1153	741	3785	1893
Stem volume, live (m^3 ha^{-1})	353	340	308	334
Biomass (t ha^{-1})	186	190	185	187

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Pigl	28.9	domi	7	Pigl	15.9	codo	13	Potr	25.3	domi
2	Pigl	21.8	domi	8	Potr	31.3	domi	14	Potr	24.3	domi
3	Potr	34.1	domi	9	Potr	24.1	domi	15	Potr	22.3	codo
4	Pigl	11.5	inte	10	Potr	22.1	domi	16	Potr	21.1	codo
5	Pigl	22.6	domi	11	Pigl	18.5	codo	17	Pigl	23.0	codo
6	Pigl	19.7	domi	12	Pigl	21.7	domi	—[c]	—	—	—
Plot 2 (point sample)											
1	Potr	32.4	domi	7	Potr	22.7	codo	13	Potr	29.4	domi
2	Potr	21.8	codo	8	Potr[e]	22.8	codo	14	Pigl	25.5	codo
3	Pigl[d]	19.9	inte	9	Pigl	35.0	domi	15	Potr	25.5	domi
4	Potr	23.4	codo	10	Pigl[d]	36.2	domi	16	Pigl	28.3	domi
5	Potr[e]	24.1	codo	11	Pigl	21.9	codo	17	Pigl	15.9	inte
6	Pigl	28.0	codo	12	Potr	32.8	domi	18	Potr[d]	38.4	domi
Plot 3 (point sample)											
1	Pigl	45.2	domi	6	Pigl	21.3	codo	11	Pigl	15.5	codo
2	Potr	34.4	domi	7	Potr	35.9	domi	12	Pigl	30.7	domi
3	Potr	25.4	domi	8	Pigl	23.5	codo	13	Pigl[d]	33.4	domi
4	Potr	27.8	domi	9	Potr[d]	41.4	domi	14	Potr	43.8	domi
5	Potr[e]	22.8	codo	10	Pigl	21.4	codo	15	Bepa	3.0	inte

[a] Bepa = *Betula papyrifera*, Pigl = *Picea glauca*, Potr = *Populus tremuloides*. [b] codo = codominant, domi = dominant, inte = intermediate. [c] Dashes indicate no measurement taken. [d] Visual indications of poor health. [e] Tree is dead.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
1	Pigl	28.9	domi	98	20.4	9.4	3.7	1.7	15	7
4	Pigl	11.5	inte	80	16.8	12.8	3.2	1.3	29	5
9	Potr	24.1	domi	76	21.2	16.8	2.9	4.8	43	4
10	Potr	22.1	domi	73	19.4	15.6	2.7	4.2	37	4
Plot 2										
4	Potr	23.4	codo	95	23.8	19.4	4.1	4.2	56	9
6	Pigl	28.0	codo	83	17.4	4.2	4.5	5.2	39	5
10	Pigl	36.2	domi	85	21.4	8.8	4.8	2.7	21	8
17	Pigl	15.9	inte	52	14.4	3.4	3.0	2.7	16	6
Plot 3										
1	Pigl	45.2	domi	55	19.9	11.3	4.8	3.7	23	7
4	Potr	27.8	domi	68	29.7	22.5	4.0	6.0	38	11
6	Pigl	21.3	codo	90	17.0	3.4	3.8	3.0	27	12
11	Pigl	15.5	codo	74	11.6	7.3	3.4	1.2	30	6

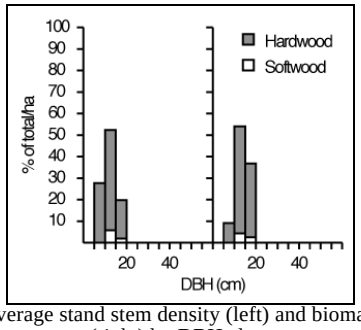
[a] Pigl = *Picea glauca*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.

SITE CODE: SASK PA-M-2 (1) Transect Site

Stand values

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/29	94/05/29	94/05/29	na [a]
Point sampling BAF (m^2 ha^{-1})	2.296	2.296	2.296	na
Basal area, live (m^2 ha^{-1})	27.6	20.7	23.0	23.7
Basal area, dead (m^2 ha^{-1})	4.6	0.0	0.0	1.5
Stem density, live (ha^{-1})	2763	1317	1471	1850
Stem volume, live (m^3 ha^{-1})	175	128	200	167
Biomass (t ha^{-1})	101	83	113	99

[a] na = not applicable.



Average stand stem density (left) and biomass (right) by DBH class.

Individual tree values

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]	Tree no.	Species[a]	DBH (cm)	Canopy class[b]
Plot 1 (point sample)											
1	Potr	11.7	domi	6	Potr [c]	16.6	domi	11	Potr [d]	16.5	domi
2	Potr	7.6	inte	7	Potr	14.2	domi	12	Potr [d]	9.8	codo
3	Potr	9.8	codo	8	Potr [c]	11.3	codo	13	Potr [d]	16.7	domi
4	Potr	11.7	domi	9	Potr	11.8	domi	14	Potr [d]	17.6	domi
5	Potr	14.7	domi	10	Potr [d]	8.3	inte	—[e]	—	—	—
Plot 2 (point sample)											
1	Potr	13.4	codo	4	Bepa	14.7	codo	7	Bepa	15.5	codo
2	Piba	13.7	codo	5	Bepa	15.8	domi	8	Bepa	11.5	codo
3	Piba	13.2	codo	6	Piba	16.5	domi	9	Potr	15.1	domi
Plot 3 (point sample)											
1	Potr	12.2	codo	5	Potr	17.5	domi	9	Potr	12.9	codo
2	Potr	13.0	codo	6	Potr	13.8	codo	10	Potr	17.3	domi
3	Potr	13.1	domi	7	Potr	14.0	domi	—	—	—	—
4	Potr	15.2	domi	8	Potr	14.8	domi	—	—	—	—

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant, inte = intermediate.
[c] Tree is dead.
[d] Visual indications of poor health.
[e] Dashes indicate no measurement taken.

Field data from cored/aged trees (cored at breast height unless otherwise noted)

Tree no.	Species[a]	DBH (cm)	Canopy class[b]	No. of rings	Height (m)	Crown base (m)	Crown width (m)	Sapwood thickness (cm)	No. of sapwood rings	Bark thickness (mm)
Plot 1										
11	Potr	16.5	domi	62	17.6	13.0	2.6	4.7	49	2
12	Potr	9.8	codo	39	14.1	10.8	1.5	1.9	34	1
14	Potr	17.6	domi	58	18.0	10.0	2.1	4.2	40	3
Plot 2										
1	Potr	13.4	codo	40	16.2	11.4	2.8	1.1	16	1
5	Bepa	15.8	domi	52	15.4	9.2	3.9	1.2	12	4
6	Piba	16.5	domi	70	14.7	10.8	3.9	3.9	47	5
Plot 3										
3	Potr	13.1	domi	36	20.4	12.6	3.1	2.9	20	2
5	Potr	17.5	domi	58	24.4	13.6	3.7	4.9	43	2
9	Potr	12.9	codo	38	16.2	14.4	2.6	2.4	23	5

[a] Bepa = *Betula papyrifera*, Piba = *Pinus banksiana*, Potr = *Populus tremuloides*.
[b] codo = codominant, domi = dominant.

Understory Data

Data are listed by site, with one table per site.

Sites are organized into four groups:

Within each group, sites are listed alphabetically by full site name (province, site code).

SITE CODE: MAN TE-OA (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/08	94/07/08	94/07/08	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	25	25	15	22
Salix sp.	0	0	5	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus sp.	30	40	20	30
Viburnum edule	15	5	10	10
Rubus sp.	0	0	10	3
Rubus pubescens	5	1	0	2
Populus tremuloides	0	5	0	2
Rosa sp.	1	1	0	1
Rosa acicularis	0	0	2	1
Arctostaphylos uva-ursi	1	0	0	pr [b]
Ledum groenlandicum	1	0	0	pr
Betula papyrifera	0	1	0	pr
Herbs				
Cornus canadensis	10	40	70	40
Aster sp.	0	5	10	5
Pyrola asarifolia	1	10	2	4
Mitella nuda	5	0	1	2
Pyrola sp.	5	0	0	2
Petasites palmatus	0	5	0	2
Lathyrus ochroleucus	1	2	0	1
Epilobium angustifolium	1	0	1	1
Fragaria sp.	0	1	0	pr
Pyrola secunda	0	1	0	pr
Grass sp.	0	0	1	pr
Mertensia paniculata	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	5	5	0	3
Arctostaphylos uva-ursi	0	2	0	1
Mosses				
Dicranum sp.	1	3	0	1
Hylocomium splendens	1	1	1	1
Moss sp.	1	0	1	1
Pleurozium schreberi	1	1	0	1
Lichens				
Lichen sp.	1	1	0	1
Peltigera aphthosa	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: MAN TE-OBS (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/10	94/07/10	94/07/10	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	5	15	10	10
Salix sp.	0	5	0	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	0	5	30	12
Ledum groenlandicum	10	20	0	10
Arctostaphylos sp.	0	5	0	2
Salix sp.	0	4	0	1
Viburnum edule	0	0	2	1
Rosa sp.	0	0	1	pr [b]
Herbs				
Equisetum sp.	1	10	5	5
Forb sp.	0	5	10	5
Orchid sp.	0	5	0	2
Cornus canadensis	0	0	5	2
Carex sp.	0	2	1	1
Grass sp.	0	2	1	1
Lathyrus ochroleucus	0	0	2	1
Mitella nuda	0	1	0	pr
Epilobium angustifolium	0	0	1	pr
Galium boreale	0	0	1	pr
Petasites palmatus	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	0	0	10	3
Vaccinium vitis-idaea	0	2	0	1
Arctostaphylos uva-ursi	1	0	0	pr
Salix sp.	1	0	0	pr
Herbs				
Equisetum scirpoides	0	0	2	1
Mosses				
Pleurozium schreberi	90	15	20	42
Sphagnum sp.	0	40	0	13
Hylocomium splendens	0	5	15	7
Dicranum sp.	1	2	4	2
Lichens				
Cladina mitis	0	2	10	4
Peltigera aphthosa	0	2	1	1
Lichen sp.	0	0	3	1
Cladina sp.	1	1	0	1

[a] na = not applicable.

[b] pr = present.

SITE CODE: MAN TE-OJP (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/09	94/07/09	94/07/09	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	5	0	0	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	15	40	5	20
Herbs				
Forb sp.	2	5	1	3
Maianthemum canadense	0	0	2	1
Epilobium angustifolium	1	0	0	pr [b]
Lycopodium complanatum	1	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos sp.	0	0	30	10
Vaccinium vitis-idaea	5	15	0	7
Linnaea borealis	5	5	5	5
Herbs				
Lycopodium complanatum	0	0	10	3
Maianthemum canadense	1	1	0	1
Pyrola virens	0	0	1	pr
Mosses				
Pleurozium schreberi	30	60	2	31
Dicranum sp.	0	2	20	7
Lichens				
Cladina mitis	40	5	20	22
Cladina sp.	0	0	5	2
Lichen sp.	1	0	1	1

[a] na = not applicable.
[b] pr = present.

The following sites were visited in October, 1994, and data on understory vegetation was not collected because of the lateness in the growing season.

SASK POM-MW (1)
SASK POM-OBS (1)
SASK POM-OJP (1)
SASK POM-YJP (1)

SITE CODE: SASK TE-MW (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/22	94/06/22	94/06/23	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea glauca	20	0	0	7
Picea mariana	0	0	10	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	20	0	1	7
Rosa sp.	0	10	2	4
Viburnum edule	10	0	0	3
Arctostaphylos uva-ursi	0	5	1	2
Symphoricarpos albus	0	5	0	2
Picea mariana	0	0	5	2
Vaccinium sp.	0	0	5	2
Linnaea borealis	0	2	0	1
Populus tremuloides	0	1	0	pr [b]
Herbs				
Cornus canadensis	10	0	5	5
Aralia nudicaulis	10	0	0	3
Grass sp.	0	1	5	2
Fragaria virginiana	0	5	0	2
Maianthemum canadense	2	1	1	1
Petasites palmatus	2	0	1	1
Pyrola secunda	2	1	0	1
Lathyrus ochroleucus	2	0	0	1
Epilobium angustifolium	0	2	0	1
Agropyron repens	0	1	0	pr
Carex sp.	0	1	0	pr
Equisetum sp.	0	1	0	pr
Pyrola asarifolia	0	1	0	pr
Sonchus arvensis	0	1	0	pr
Viola sp.	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	2	0	2	1
Herbs				
Lycopodium annotinum	2	0	0	1
Mosses				
Pleurozium schreberi	10	0	1	4
Polytrichum commune	5	0	0	2
Moss sp.	0	2	3	2
Dicranum sp.	0	1	1	1
Lichens				
Peltigera aphthosa	2	1	1	1
Lichen sp.	0	2	1	1

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK TE-OA (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/08	94/06/08	94/06/08	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Corylus cornuta	80	0	0	27
Amelanchier alnifolia	5	0	0	2
Populus tremuloides	5	0	0	2
Salix sp.	0	0	5	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Corylus cornuta	75	0	5	27
Vaccinium sp.	0	0	55	18
Rosa acicularis	1	2	10	4
Rubus idaeus	0	7	0	2
Symphoricarpos albus	1	0	5	2
Linnaea borealis	0	5	0	2
Viburnum edule	0	2	0	1
Ribes triste	0	0	2	1
Amelanchier alnifolia	1	0	0	pr [b]
Lonicera sp.	0	0	1	pr
Herbs				
Calamagrostis sp.	0	0	80	27
Calamagrostis canadensis	0	65	0	22
Aralia nudicaulis	10	2	8	7
Lathyrus ochroleucus	1	6	3	3
Maianthemum canadense	0	5	2	2
Listera cordata	0	1	5	2
Cornus canadensis	0	2	3	2
Galium boreale	0	2	3	2
Mertensia paniculata	0	3	2	2
Thalictrum venulosum	0	0	5	2
Epilobium angustifolium	0	1	3	1
Fragaria virginiana	0	0	3	1
Petasites palmatus	0	2	0	1
Actaea rubra	1	0	0	pr
Carex sp.	1	0	0	pr
Equisetum sp.	1	0	0	pr
Fragaria vesca	1	0	0	pr
Galium triflorum	1	0	0	pr
Grass sp.	1	0	0	pr
Pyrola asarifolia	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	20	0	0	7
Herbs				
Maianthemum canadense	10	0	0	3
Cornus canadensis	5	0	0	2
Pyrola asarifolia	1	0	0	pr
Pyrola sp.	1	0	0	pr
Mosses				
Moss sp.	1	pr	pr	pr
Lichens				
Peltigera malacea	0	pr	0	pr

[a] na = not applicable. [b] pr = present.

SITE CODE: SASK TE-OBS (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/27	94/07/09	na [a]
1.5 to 2.5 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Picea mariana	8	20	14
0.05 to 1.5 m height layer			
Sample plot size (m)	2x2	2x2	na
Shrubs			
Ledum groenlandicum	30	50	40
Rosa acicularis	10	5	8
Vaccinium myrtilloides	5	10	8
Salix sp.	1	10	6
Picea mariana	10	0	5
Potentilla fruticosa	0	10	5
Picea glauca	0	5	3
Vaccinium vitis-idaea	0	5	3
Lonicera sp.	1	0	1
Herbs			
Mitella nuda	0	5	3
Carex sp.	2	0	1
Equisetum scirpoides	1	0	1
Equisetum sp.	1	0	1
Petasites palmatus	1	0	1
0 to 0.05 m height layer			
Sample plot size (m)	2x2	2x2	na
Shrubs			
Arctostaphylos uva-ursi	2	0	1
Linnaea borealis	2	0	1
Herbs			
Petasites palmatus	1	0	1
Ranunculus sp.	1	0	1
Mosses			
Pleurozium schreberi	50	60	55
Hylocomium splendens	20	0	10
Dicranum polysetum	0	20	10
Aulacomnium sp.	1	0	1
Lichens			
Cladonia cornuta	0	30	15
Cladina mitis	2	10	6
Cladina sp.	5	0	3
Lichen sp.	1	0	1

[a] na = not applicable.

SITE CODE: SASK TE-OJP (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/08	94/07/08	94/07/08	na [a]
1.5 to 2.5 m height layer				
No vegetation present in this height class.				
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	15	15	40	23
Amelanchier alnifolia	0	0	1	pr [b]
Pinus banksiana	0	0	1	pr
Vaccinium myrtilloides	0	0	1	pr
Herbs				
Apocynum androsaemifolium	0	5	2	2
Elymus innovatus	5	0	0	2
Disporum trachycarpum	2	0	0	1
Maianthemum canadense	0	0	2	1
Aster ciliolatus	1	0	0	pr
Mertensia paniculata	0	1	0	pr
Carex concinna	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	2	0	1	1
Mosses				
Pleurozium schreberi	20	0	0	7
Dicranum polysetum	2	1	0	1
Polytrichum commune	0	1	0	pr
Hylocomium splendens	0	0	1	pr
Lichens				
Cladina mitis	50	60	75	62
Cladina stellaris	10	5	0	5
Cladonia cornuta	5	2	0	2
Peltigera aphthosa	2	0	0	1
Cladina sp.	0	0	1	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK TF-YA (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/11	94/07/11	94/07/11	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Populus tremuloides	70	15	10	32
Corylus cornuta	0	25	25	17
Alnus crispa	10	25	0	12
Salix bebbiana	0	0	2	1
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Corylus cornuta	80	10	5	32
Rosa acicularis	15	10	15	13
Viburnum edule	15	10	5	10
Rubus idaeus	10	10	0	7
Salix sp.	10	5	0	5
Populus tremuloides	10	0	0	3
Alnus crispa	0	10	0	3
Salix bebbiana	0	0	10	3
Lonicera dioica	0	5	0	2
Rubus pubescens	0	5	0	2
Herbs				
Calamagrostis sp.	2	30	0	11
Lathyrus ochroleucus	5	0	2	2
Aster conspicuus	5	0	0	2
Disporum trachycarpum	0	0	5	2
Listera cordata	2	0	0	1
Trientalis borealis	2	0	0	1
Mitella nuda	0	2	0	1
Pyrola asarifolia	0	2	0	1
Vicia americana	0	2	0	1
Galium triflorum	0	1	0	pr [b]
Epilobium angustifolium	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Herbs				
Elymus canadensis	0	0	90	30
Aralia nudicaulis	5	15	5	8
Petasites palmatus	10	10	5	8
Cornus canadensis	20	2	0	7
Fragaria virginiana	10	2	0	4
Maianthemum canadense	10	0	0	3
Epilobium angustifolium	5	0	0	2
Mosses				
Polytrichum sp.	0	1	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK TF-YJP (1) Tower Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/09	94/07/09	94/07/09	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Pinus banksiana	10	15	0	8
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	5	0	0	2
Vaccinium myrtilloides	1	2	0	1
Amelanchier alnifolia	0	1	2	1
Rosa acicularis	0	0	1	pr [b]
Herbs				
Elymus innovatus	3	2	20	8
Galium boreale	1	1	2	1
Maianthemum canadense	2	0	0	1
Mertensia paniculata	0	1	1	1
Epilobium angustifolium	0	0	2	1
Aster conspicuus	1	0	0	pr
Unidentified	1	0	0	pr
Disporum trachycarpum	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	0	80	30	37
Mosses				
Dicranum sp.	2	0	0	1
Polytrichum commune	2	0	0	1
Polytrichum sp.	0	0	1	pr
Lichens				
Cladonia sp.	1	5	10	5
Peltigera sp.	0	5	5	3
Cladina mitis	2	5	2	3
Lichen sp.	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: MAN AIH-14 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/17	93/08/17	93/08/17	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	0	0	50	17
Salix sp.	15	10	2	9
Alnus sp.	15	2	0	6
Betula papyrifera	0	15	0	5
Populus tremuloides	0	1	10	4
Viburnum edule	3	0	0	1
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Viburnum edule	5	2	8	5
Rosa woodsii	10	2	2	5
Alnus sp.	5	0	0	2
Populus tremuloides	0	2	0	1
Salix sp.	1	pr [b]	0	pr
Rubus idaeus	pr	0	0	pr
Herbs				
Mertensia paniculata	0	1	10	4
Maianthemum canadense	0	pr	5	2
Epilobium angustifolium	pr	pr	2	1
Geocaulon lividum	1	0	0	pr
Fragaria sp.	0	pr	0	pr
Lathyrus sp.	0	pr	0	pr
Mitella nuda	0	pr	0	pr
Actaea rubra	0	0	pr	pr
Forb sp.	0	0	pr	pr
Senecio sp.	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Rubus pubescens	10	pr	10	7
Linnaea borealis	1	pr	1	1
Vaccinium vitis-idaea	0	pr	0	pr
Arctostaphylos uva-ursi	0	0	pr	pr
Vaccinium myrtilloides	0	0	pr	pr
Herbs				
Cornus canadensis	40	20	20	27
Petasites palmatus	0	0	5	2
Pyrola asarifolia	1	2	pr	1
Aralia nudicaulis	0	0	pr	pr
Maianthemum canadense	0	0	pr	pr
Mitella nuda	0	0	pr	pr
Pyrola secunda	0	0	pr	pr
Mosses				
Hylocomium splendens	2	10	5	6
Moss sp.	0	0	1	pr
Lichens				
Cladonia sp.	0	1	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: MAN AIH-30 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/21	93/08/21	93/08/21	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	0	70	70	47
Alnus crispa	70	0	0	23
Salix sp.	0	5	20	8
Populus tremuloides	pr [b]	pr	pr	pr
Picea mariana	pr	0	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	0	40	10	17
Alnus crispa	20	0	0	7
Viburnum edule	5	1	1	2
Rosa woodsii	2	2	2	2
Picea mariana	pr	3	1	1
Ledum groenlandicum	0	3	0	1
Rubus idaeus	0	1	0	pr
Ribes lacustre	0	pr	0	pr
Salix sp.	0	0	pr	pr
Herbs				
Mertensia paniculata	25	2	0	9
Epilobium angustifolium	10	2	2	5
Geocaulon lividum	0	0	5	2
Comandra umbellata	1	0	0	pr
Vicia sp.	pr	0	0	pr
Actaea rubra	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Rubus pubescens	2	0	0	1
Vaccinium vitis-idaea	pr	pr	1	pr
Linnaea borealis	pr	pr	pr	pr
Arctostaphylos uva-ursi	pr	0	0	pr
Herbs				
Cornus canadensis	40	10	10	20
Pyrola asarifolia	pr	4	1	2
Petasites palmatus	1	1	0	1
Mitella nuda	pr	pr	0	pr
Pyrola secunda	pr	0	0	pr
Viola sp.	pr	0	0	pr
Mosses				
Hylocomium splendens	0	0	30	10
Pleurozium schreberi	1	3	0	1
Lichens				
Peltigera aphthosa	0	0	1	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN AIM-1 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/18	93/08/18	94/07/22	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Alnus crispa	1 [c]	pr [c,d]	pr	pr
Picea mariana	pr [c]	0	0	pr
Populus tremuloides	0 [c]	pr	0	pr
Picea glauca	0	0	pr	pr
Salix sp.	pr [c]	0	0	pr
Betula sp.	pr [c]	0	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea glauca	0	0	40	13
Linnaea borealis	10	10	0	7
Rosa acicularis	2	5	0	2
Viburnum edule	1	2	0	1
Alnus crispa	2	0	0	1
Ledum groenlandicum	2	0	0	1
Picea mariana	pr	1	0	pr
Salix sp.	0	0	1	pr
Rubus pubescens	pr	0	0	pr
Herbs				
Cornus canadensis	1	7	5	4
Forb sp.	0	5	0	2
Epilobium angustifolium	2	pr	1	1
Petasites palmatus	pr	pr	2	1
Mertensia paniculata	pr	2	0	1
Equisetum pratense	1	0	0	pr
Fragaria sp.	0	1	0	pr
Arnica sp.	0	0	1	pr
Mitella nuda	pr	pr	0	pr
Lycopodium annotinum	pr	0	0	pr
Mosses				
Pleurozium schreberi	2	0	0	1
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	0	0	1	pr
Herbs				
Fragaria virginiana	0	0	1	pr
Mosses				
Dicranum sp.	20	0	10	10
Pleurozium schreberi	0	0	10	3
Hylocomium splendens	0	0	1	pr
Lichens				
Peltigera aphthosa	pr	0	5	2

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

[d] pr = present.

SITE CODE: MAN AIM-20 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/21	93/08/21	93/08/21	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Salix sp.	pr [b]	0	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Rosa acicularis	5	2	5	4
Populus tremuloides	pr	2	1	1
Alnus sp.	0	2	0	1
Salix sp.	0	2	0	1
Alnus crispa	0	0	1	pr
Arctostaphylos uva-ursi	0	pr	pr	pr
Rubus pubescens	0	pr	pr	pr
Linnaea borealis	pr	0	0	pr
Shepherdia canadensis	pr	0	0	pr
Vaccinium vitis-idaea	pr	0	0	pr
Viburnum edule	pr	0	0	pr
Picea mariana	0	pr	0	pr
Rubus idaeus	0	pr	0	pr
Ledum groenlandicum	0	0	pr	pr
Herbs				
Cornus canadensis	7	0	0	2
Mertensia paniculata	pr	1	5	2
Fragaria sp.	3	pr	1	1
Epilobium angustifolium	1	2	1	1
Grass sp.	pr	2	pr	1
Pyrola secunda	2	0	0	1
Pyrola asarifolia	1	0	0	pr
Achillea sp.	pr	pr	pr	pr
Petasites palmatus	pr	pr	pr	pr
Aster sp.	pr	pr	0	pr
Senecio sp.	pr	pr	0	pr
Vicia sp.	pr	0	pr	pr
Equisetum sp.	pr	0	0	pr
Lycopodium complanatum	pr	0	0	pr
Viola sp.	pr	0	0	pr
Equisetum pratense	0	pr	0	pr
Carex sp.	0	0	pr	pr
Lathyrus ochroleucus	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Mosses				
Hylocomium splendens	0	5	0	2
Pleurozium schreberi	0	0	pr	pr
Lichens				
Cladonia squamosa	5	15	15	12
Cladina mitis	pr	2	5	2
Peltigera aphthosa	0	5	0	2
Cladonia cornuta	pr	pr	pr	pr
Cladonia carneola	pr	pr	0	pr
Cladonia crispata	pr	0	0	pr
Cladonia sp.	0	0	pr	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BDH-3a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 5	Average
Date of measurements (y/m/d)	93/08/13	93/08/13	94/07/24	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	5x5	2x2	5x5	na
Shrubs				
Picea mariana	pr [c,d]	pr	20	7
Salix sp.	0	pr	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Ledum groenlandicum	50	20	25	32
Picea mariana	pr	2	40	14
Vaccinium caespitosum	0	0	20	7
Vaccinium uliginosum	0	10	5	5
Salix sp.	0	2	5	2
Betula glandulosa	0	0	5	2
Shepherdia canadensis	0	0	5	2
Lonicera villosa	2	0	0	1
Rosa woodsii	1	0	0	pr
Alnus sp.	0	1	0	pr
Viburnum edule	0	pr	0	pr
Herbs				
Carex sp.	0	0	40	13
Petasites palmatus	0	1	1	1
Equisetum sp.	0	0	1	pr
Smilacina stellata	0	0	1	pr
Equisetum sylvaticum	pr	0	0	pr
Trientalis borealis	pr	0	0	pr
Epilobium angustifolium	0	pr	0	pr
Equisetum pratense	0	pr	0	pr
Fragaria sp.	0	pr	0	pr
Parnassia sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	7	0	2
Arctostaphylos rubra	1	0	0	pr
Betula glandulosa	pr	0	0	pr
Salix sp.	pr	0	0	pr
Herbs				
Grass sp.	25	0	0	8
Carex sp.	10	0	0	3
Petasites palmatus	5	0	0	2
Mosses				
Dicranum polysetum	0	0	50	17
Hylocomium splendens	0	40	0	13
Pleurozium schreberi	0	30	10	13
Sphagnum sp.	30	0	0	10
Dicranum sp.	20	pr	0	7
Lichens				
Cladina mitis	0	2	0	1
Peltigera aphthosa	0	2	0	1

[a] na = not applicable.
[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.
[c] pr = present.
[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BDH-3b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 3	Plot 4	Plot 6	Average
Date of measurements (y/m/d)	93/08/13	93/08/13	94/07/24	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Picea mariana	pr [c,d]	pr [d]	pr	pr
Salix sp.	pr [d]	pr [d]	pr	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	1	1	35	12
Alnus crispa	15	2	0	6
Arctostaphylos sp.	0	15	0	5
Linnaea borealis	0	5	0	2
Viburnum edule	2	2	0	1
Rosa acicularis	1	2	0	1
Ledum groenlandicum	0	2	0	1
Rosa sp.	0	0	1	pr
Rubus pubescens	0	0	1	pr
Herbs				
Maianthemum canadense	0	7	0	2
Cornus canadensis	1	0	1	1
Carex sp.	0	0	1	pr
Equisetum sp.	0	0	1	pr
Epilobium angustifolium	pr	pr	0	pr
Grass sp.	pr	pr	0	pr
Pyrola sp.	pr	0	0	pr
Equisetum pratense	0	pr	0	pr
Trientalis borealis	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	0	10	3
Linnaea borealis	0	0	1	pr
Mosses				
Hylocomium splendens	40	25	30	32
Pleurozium schreberi	30	25	10	22
Dicranum sp.	0	pr	5	2
Sphagnum sp.	0	2	0	1
Lichens				
Cladina mitis	15	25	5	15
Peltigera aphthosa	10	15	1	9
Cladonia crispata	0	25	0	8
Cladonia cornuta	pr	pr	0	pr
Cladonia borealis	0	pr	0	pr
Cladonia cariosa	0	pr	0	pr
Cladonia deformis	0	pr	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BIH-1a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 5	Plot 6	Average
Date of measurements (y/m/d)	93/08/15	94/07/21	94/07/21	na [a]
1.5 to 2.5 m height layer [b]				
No vegetation present in this height class.				
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Ledum groenlandicum	25	1	10	12
Picea mariana	2	1	5	3
Viburnum edule	pr [c]	1	1	1
Rosa sp.	0	1	1	1
Rosa woodsii	1	0	0	pr
Herbs				
Grass sp.	10	0	0	3
Elymus sp.	0	1	1	1
Equisetum sp.	0	1	1	1
Epilobium angustifolium	1	0	0	pr
Maianthemum canadense	1	0	0	pr
Mertensia paniculata	1	0	0	pr
Petasites palmatus	0	1	0	pr
Equisetum pratense	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	5	3	1	3
Linnaea borealis	1	1	1	1
Ledum groenlandicum	2	0	0	1
Arctostaphylos rubra	1	0	0	pr
Salix sp.	0	0	1	pr
Herbs				
Cornus canadensis	2	2	0	1
Petasites palmatus	1	0	0	pr
Fragaria sp.	pr	0	0	pr
Mitella nuda	pr	0	0	pr
Pyrola asarifolia	pr	0	0	pr
Mosses				
Pleurozium schreberi	40	85	80	68
Hylocomium splendens	40	5	10	18
Ptilium crista-castrensis	0	5	0	2
Polytrichum commune	0	1	0	pr
Lichens				
Peltigera aphthosa	20	1	0	7
Cladina mitis	3	1	0	1
Cladina stellaris	1	0	0	pr
Peltigera sp.	0	0	1	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: MAN BIH-1b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 2	Plot 4	Plot 7	Average
Date of measurements (y/m/d)	93/08/15	93/08/15	94/07/21	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	1	20	pr [c]	7
Salix sp.	0	5	0	2
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Ledum groenlandicum	60	15	40	38
Picea mariana	1	10	5	5
Lonicera villosa	0	pr	0	pr
Herbs				
Forb sp.	0	1	0	pr
Equisetum sp.	0	0	1	pr
Mertensia paniculata	1	0	0	pr
Epilobium angustifolium	pr	0	0	pr
Equisetum arvense	pr	0	0	pr
Vicia sp.	pr	0	0	pr
Equisetum sylvaticum	0	pr	0	pr
Geocaulon lividum	0	pr	0	pr
Pyrola asarifolia	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Vaccinium vitis-idaea	10	2	1	4
Ledum groenlandicum	10	0	0	3
Arctostaphylos rubra	2	1	0	1
Ribes triste	1	0	0	pr
Oxycoccus microcarpus	0	0	1	pr
Rubus sp.	0	pr	0	pr
Herbs				
Cornus canadensis	2	pr	1	1
Fragaria sp.	1	0	0	pr
Mertensia paniculata	1	0	0	pr
Mosses				
Pleurozium schreberi	30	90	80	67
Hylocomium splendens	60	0	10	23
Sphagnum sp.	0	0	3	1
Dicranum sp.	0	0	1	pr
Lichens				
Cladina mitis	6	5	1	4
Peltigera aphthosa	10	0	0	3
Peltigera canina	5	0	0	2

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

SITE CODE: MAN BIH-1c (3) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 3	Plot 8	Plot 9	Average
Date of measurements (y/m/d)	93/08/15	94/07/21	94/07/22	na [a]
1.5 to 2.5 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Salix sp.	15	0	0	5
Picea mariana	2	pr [c]	10	4
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Ledum groenlandicum	60	30	30	40
Rubus chamaemorus	0	0	15	5
Picea mariana	1	3	5	3
Salix sp.	2	3	0	2
Vaccinium uliginosum	5	0	0	2
Larix laricina	0	0	1	pr
Herbs				
Equisetum sp.	0	1	5	2
Elymus sp.	0	1	1	1
Petasites palmatus	0	1	0	pr
Equisetum arvense	pr	0	0	pr
Equisetum sylvaticum	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Arctostaphylos rubra	10	0	0	3
Salix sp.	10	0	0	3
Vaccinium vitis-idaea	2	2	3	2
Oxycoccus microcarpus	2	0	0	1
Vaccinium uliginosum	1	0	0	pr
Picea mariana	pr	0	0	pr
Herbs				
Cornus canadensis	pr	2	0	1
Mosses				
Pleurozium schreberi	50	80	85	72
Hylocomium splendens	40	10	5	18
Sphagnum sp.	10	0	0	3
Ptilium crista-castrensis	0	5	0	2
Lichens				
Cladina mitis	8	3	1	4
Cladina stellaris	0	2	1	1
Peltigera aphthosa	0	1	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: MAN BIH-9 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/13	93/08/13	93/08/13	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	0	20	20	13
Alnus crispa	30	0	0	10
Salix sp.	10	10	10	10
Picea mariana	10	5	5	7
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	10	0	0	3
Alnus sp.	0	5	5	3
Picea mariana	1	2	1	1
Rosa woodsii	pr [b]	1	pr	pr
Linnaea borealis	0	pr	0	pr
Viburnum edule	0	pr	0	pr
Herbs				
Maianthemum canadense	pr	pr	0	pr
Mertensia paniculata	pr	pr	0	pr
Epilobium angustifolium	0	pr	pr	pr
Equisetum pratense	0	pr	0	pr
Mitella nuda	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	5	0	0	2
Herbs				
Cornus canadensis	2	1	1	1
Petasites palmatus	1	1	1	1
Mosses				
Hylocomium splendens	40	40	70	50
Pleurozium schreberi	40	40	30	37
Lichens				
Cladonia sp.	0	0	pr	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN BIL-2 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/12	93/08/12	93/08/12	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	10	10	5	8
Salix sp.	0	2	10	4
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Ledum groenlandicum	30	20	30	27
Betula glandulosa	5	20	0	8
Picea mariana	20	5	0	8
Lonicera villosa	0	0	10	3
Vaccinium uliginosum	1	2	2	2
Salix sp.	0	5	0	2
Shepherdia canadensis	2	0	1	1
Alnus crispa	pr [b]	0	0	pr
Vaccinium vitis-idaea	0	pr	0	pr
Herbs				
Carex sp.	1	0	0	pr
Grass sp.	1	0	0	pr
Parnassia sp.	0	0	1	pr
Equisetum sylvaticum	pr	pr	0	pr
Equisetum pratense	pr	0	0	pr
Spiranthes romanzoffiana	0	pr	0	pr
Achillea sp.	0	0	pr	pr
Senecio sp.	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Ledum groenlandicum	5	1	10	5
Arctostaphylos rubra	10	0	1	4
Betula glandulosa	pr	5	2	2
Salix sp.	5	1	0	2
Picea mariana	0	1	0	pr
Oxycoccus microcarpus	pr	0	0	pr
Rosa woodsii	pr	0	0	pr
Vaccinium vitis-idaea	pr	0	0	pr
Rubus sp.	0	0	pr	pr
Herbs				
Petasites palmatus	1	0	0	pr
Parnassia sp.	pr	0	0	pr
Mosses				
Hylocomium splendens	30	80	30	47
Sphagnum sp.	30	0	0	10
Polytrichum sp.	0	0	10	3
Pleurozium schreberi	1	1	0	1
Lichens				
Cladina mitis	20	10	80	37
Cladina stellaris	0	0	1	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN BIM-12a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 3	Plot 6	Average
Date of measurements (y/m/d)	93/08/15	93/08/15	94/07/11	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Picea mariana	pr [c]	pr [d]	10	3
Salix sp.	0 [d]	0	2	1
Populus balsamifera	0	0	2	1
Rosa acicularis	0	pr	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	15	60	30	35
Vaccinium vitis-idaea	5	7	0	4
Rosa acicularis	5	0	0	2
Picea mariana	pr	2	0	1
Viburnum edule	0	2	0	1
Arctostaphylos sp.	0	1	0	pr
Vaccinium uliginosum	0	1	0	pr
Rosa sp.	0	0	1	pr
Larix laricina	0	pr	0	pr
Herbs				
Equisetum pratense	pr	1	0	pr
Petasites palmatus	pr	1	0	pr
Cornus canadensis	pr	pr	0	pr
Grass sp.	0	pr	0	pr
Pyrola sp.	0	pr	0	pr
Lichens				
Peltigera aphthosa	10	0	0	3
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	0	10	3
Salix sp.	0	0	5	2
Herbs				
Cornus canadensis	0	0	1	pr
Mosses				
Pleurozium schreberi	50	30	60	47
Hylocomium splendens	50	0	15	22
Sphagnum sp.	pr	0	10	3
Dicranum sp.	0	0	1	pr
Polytrichum sp.	pr	pr	0	pr
Lichens				
Peltigera aphthosa	10	pr	1	4
Cladina mitis	pr	5	0	2
Cladonia crispata	pr	0	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BIM-12b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 2	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/08/15	94/07/11	94/07/11	na [a]
1.5 to 2.5 m height layer [b]				
Sample plot size (m)	2x2	5x5	5x5	na
Shrubs				
Picea mariana	pr [c,d]	20	2	7
Salix sp.	pr [d]	0	20	7
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	15	20	40	25
Vaccinium vitis-idaea	10	0	0	3
Rubus chamaemorus	0	10	0	3
Salix sp.	0	0	5	2
Rosa acicularis	pr	0	2	1
Arctostaphylos uva-ursi	2	0	0	1
Picea mariana	1	0	1	1
Herbs				
Petasites palmatus	pr	0	5	2
Comandra sp.	0	0	5	2
Equisetum sp.	0	0	2	1
Carex sp.	0	0	1	pr
Equisetum scirpoides	0	0	1	pr
Orchid sp.	0	0	1	pr
Equisetum pratense	pr	0	0	pr
Grass sp.	pr	0	0	pr
Mertensia paniculata	pr	0	0	pr
Pyrola virens	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	5	10	5
Salix sp.	0	0	5	2
Oxycoccus microcarpus	0	2	2	1
Herbs				
Orchid sp.	0	1	0	pr
Mosses				
Pleurozium schreberi	60	80	20	53
Hylocomium splendens	50	2	20	24
Dicranum sp.	0	0	10	3
Sphagnum sp.	pr	2	5	2
Polytrichum sp.	pr	0	0	pr
Lichens				
Cladina sp.	0	0	15	5
Peltigera aphthosa	5	1	5	4
Cladina mitis	1	0	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BIM-1a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 2	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/08/18	94/07/23	94/07/23	na [a]
1.5 to 2.5 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Salix sp.	10	0	0	3
Picea mariana	1	0	0	pr [c]
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Ledum groenlandicum	1	40	0	14
Rosa sp.	0	3	3	2
Picea mariana	pr	1	2	1
Vaccinium vitis-idaea	0	0	2	1
Rosa woodsii	1	0	0	pr
Salix sp.	1	0	0	pr
Rubus pubescens	0	1	0	pr
Viburnum edule	pr	0	0	pr
Herbs				
Petasites palmatus	0	5	0	2
Cornus canadensis	0	1	3	1
Equisetum scirpoides	0	1	0	pr
Equisetum sylvaticum	0	1	0	pr
Mitella nuda	0	1	0	pr
Equisetum sp.	0	0	1	pr
Petasites sp.	0	0	1	pr
Epilobium angustifolium	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Linnaea borealis	1	0	1	1
Vaccinium vitis-idaea	pr	1	0	pr
Herbs				
Cornus canadensis	1	0	0	pr
Mitella nuda	0	0	1	pr
Petasites palmatus	pr	0	0	pr
Mosses				
Pleurozium schreberi	0	80	30	37
Hylocomium splendens	60	5	10	25
Dicranum sp.	1	5	10	5
Polytrichum sp.	5	1	1	2
Sphagnum sp.	pr	0	0	pr
Lichens				
Cladina mitis	25	2	8	12
Peltigera aphthosa	0	1	1	1
Cladina stellaris	0	1	0	pr
Cladonia sp.	0	0	1	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: MAN BIM-1b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 3	Plot 6	Plot 7	Average
Date of measurements (y/m/d)	93/08/18	94/07/23	94/07/23	na [a]
1.5 to 2.5 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	5	0	pr [c]	2
Salix sp.	2	0	0	1
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Ledum groenlandicum	pr	35	40	25
Vaccinium vitis-idaea	0	5	3	3
Rosa sp.	0	1	1	1
Picea mariana	pr	0	1	pr
Rosa woodsii	1	0	0	pr
Linnaea borealis	pr	0	0	pr
Viburnum edule	pr	0	0	pr
Herbs				
Mertensia paniculata	2	1	0	1
Cornus canadensis	0	1	1	1
Petasites palmatus	0	1	1	1
Equisetum sylvaticum	pr	0	1	pr
Epilobium angustifolium	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Linnaea borealis	0	0	5	2
Vaccinium myrtilloides	pr	0	0	pr
Vaccinium vitis-idaea	pr	0	0	pr
Herbs				
Petasites palmatus	2	0	0	1
Mitella nuda	0	0	1	pr
Cornus canadensis	pr	0	0	pr
Mosses				
Pleurozium schreberi	80	25	50	52
Sphagnum fuscum	0	30	0	10
Hylocomium splendens	0	5	10	5
Polytrichum sp.	10	1	1	4
Dicranum sp.	1	5	3	3
Lichens				
Cladina mitis	30	10	1	14
Peltigera aphthosa	5	1	0	2
Cladina stellaris	1	0	0	pr
Cladonia sp.	0	1	0	pr
Cladonia cenotea	0	0	1	pr
Cladonia cornuta	0	0	1	pr
Peltigera sp.	0	0	1	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: MAN BMH-6 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/17	93/08/17	93/08/17	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	0	0	2	1
Alnus sp.	pr [b,c]	pr [c]	pr [c]	pr
Picea mariana	pr [c]	pr	pr [c]	pr
Salix sp.	pr [c]	0	pr [c]	pr
Betula papyrifera	0	pr [c]	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Linnaea borealis	1	3	20	8
Picea mariana	1	0	5	2
Vaccinium vitis-idaea	pr	3	0	1
Rosa acicularis	1	pr	1	1
Viburnum edule	pr	pr	pr	pr
Shepherdia canadensis	pr	0	pr	pr
Ledum groenlandicum	0	pr	pr	pr
Rubus pubescens	0	pr	0	pr
Herbs				
Cornus canadensis	5	1	15	7
Epilobium angustifolium	1	pr	7	3
Mertensia paniculata	pr	pr	7	2
Fragaria sp.	2	pr	3	2
Mitella nuda	0	2	2	1
Petasites palmatus	0	0	2	1
Pyrola virens	1	0	0	pr
Actaea rubra	0	0	1	pr
Achillea sp.	pr	0	pr	pr
Equisetum pratense	pr	0	pr	pr
Grass sp.	pr	0	pr	pr
Pyrola secunda	pr	0	0	pr
Lathyrus ochroleucus	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Mosses				
Hylocomium splendens	40	70	60	57
Pleurozium schreberi	0	10	20	10
Polytrichum sp.	0	pr	0	pr
Lichens				
Peltigera aphthosa	0	3	0	1
Cladina mitis	pr	pr	pr	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BMH-7 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	93/08/19	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	0	pr [b,c]	pr [c]	pr
Salix sp.	0	0	pr [c]	pr
Alnus crispa	0	pr	0	pr
Alnus sp.	0	0	pr	pr
Rosa woodsii	0	0	pr	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Ledum groenlandicum	1	2	20	8
Picea mariana	2	10	0	4
Vaccinium vitis-idaea	3	1	1	2
Rosa woodsii	0	3	0	1
Linnaea borealis	0	1	0	pr
Viburnum edule	pr	0	0	pr
Alnus crispa	0	pr	0	pr
Arctostaphylos uva-ursi	0	0	pr	pr
Herbs				
Petasites palmatus	0	0	10	3
Equisetum pratense	0	pr	5	2
Equisetum sylvaticum	0	0	2	1
Pyrola secunda	pr	pr	0	pr
Grass sp.	0	pr	0	pr
Mitella nuda	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Mosses				
Pleurozium schreberi	70	20	70	53
Hylocomium splendens	30	20	20	23
Ptilium crista-castrensis	20	15	0	12
Sphagnum sp.	0	0	10	3
Sphagnum warnstorfii	0	0	10	3
Dicranum sp.	0	0	pr	pr
Lichens				
Peltigera aphthosa	pr	0	pr	pr
Cladonia cornuta	0	0	pr	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BML-21 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/12	93/08/12	93/08/12	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	pr [b,c]	1	10	4
Betula glandulosa	pr	5	pr	2
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	30	10	95	45
Arctostaphylos sp.	0	10	10	7
Arctostaphylos uva-ursi	15	0	0	5
Vaccinium vitis-idaea	0	15	0	5
Salix sp.	pr	7	pr	2
Kalmia polifolia	0	pr	0	pr
Rubus idaeus	0	pr	0	pr
Herbs				
Grass sp.	5	5	15	8
Achillea millefolium	0	1	0	pr
Equisetum pratense	pr	pr	pr	pr
Mertensia paniculata	pr	pr	0	pr
Petasites palmatus	pr	0	0	pr
Fragaria sp.	0	pr	0	pr
Maianthemum canadense	0	pr	0	pr
Pyrola sp.	0	pr	0	pr
Epilobium angustifolium	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	12	0	15	9
Mosses				
Pleurozium schreberi	40	15	70	42
Sphagnum sp.	pr	15	30	15
Hylocomium splendens	10	0	0	3
Dicranum sp.	0	0	pr	pr
Lichens				
Cladina mitis	25	10	25	20
Cladonia crispata	0	10	0	3
Peltigera aphthosa	2	0	0	1
Cladina stellaris	pr	0	0	pr
Cladonia cariosa	pr	0	0	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN BMM-8a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 5	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	94/07/12	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Alnus crispa	60	2	0	21
Ledum groenlandicum	40	0	0	13
Alnus sp.	0	0	30	10
Picea mariana	20	7	0	9
Populus tremuloides	pr [c]	0	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus sp.	0	0	20	7
Vaccinium vitis-idaea	0	10	0	3
Picea mariana	5	0	0	2
Linnaea borealis	1	0	0	pr
Rosa woodsii	pr	0	0	pr
Herbs				
Cornus canadensis	0	5	0	2
Pyrola secunda	0	1	0	pr
Epilobium angustifolium	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus sp.	0	0	10	3
Vaccinium vitis-idaea	0	0	5	2
Linnaea borealis	0	0	1	pr
Herbs				
Cornus canadensis	5	0	1	2
Pyrola secunda	pr	0	1	pr
Forb sp.	0	0	1	pr
Pyrola asarifolia	pr	0	0	pr
Mosses				
Pleurozium schreberi	20	50	30	33
Ptilium crista-castrensis	20	50	0	23
Hylocomium splendens	1	0	20	7
Lichens				
Cladina mitis	0	0	5	2
Cladina sp.	0	0	5	2
Peltigera aphthosa	0	0	1	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

SITE CODE: MAN BMM-8b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 3	Plot 4	Plot 6	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	94/07/12	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	3	pr [c,d]	20	8
Larix laricina	1	0	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Ledum groenlandicum	80	90	10	60
Salix sp.	0	20	0	7
Rubus chamaemorus	0	0	2	1
Vaccinium vitis-idaea	0	1	0	pr
Herbs				
Equisetum sp.	0	0	2	1
Forb sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Salix sp.	20	0	0	7
Arctostaphylos rubra	5	2	0	2
Vaccinium vitis-idaea	1	0	5	2
Rubus chamaemorus	5	0	0	2
Oxycoccus microcarpus	1	0	0	pr
Herbs				
Petasites palmatus	0	pr	0	pr
Mosses				
Sphagnum sp.	70	100	0	57
Pleurozium schreberi	20	0	5	8
Hylocomium splendens	0	10	0	3
Dicranum sp.	0	0	5	2
Lichens				
Cladina sp.	0	0	20	7
Cladina mitis	1	2	10	4
Lichen sp.	0	0	1	pr
Cladina stellaris	pr	0	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN JDH-3 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/11	93/08/11	93/08/11	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	5x5	5x5	na
Shrubs				
Pinus banksiana	4	pr [b,c]	pr [c]	2
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	5x5	5x5	na
Shrubs				
Pinus banksiana	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	5x5	5x5	na
Shrubs				
Vaccinium myrtilloides	20	5	10	12
Vaccinium vitis-idaea	2	5	5	4
Arctostaphylos uva-ursi	pr	pr	10	3
Pinus banksiana	pr	0	0	pr
Herbs				
Grass sp.	0	pr	0	pr
Lichens				
Cladina mitis	60	20	30	37
Cladonia sp.	1	2	pr	1

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN JDM-1 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/11	93/08/11	93/08/11	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Pinus banksiana	pr [b,c]	pr [c]	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	30	30	25	28
Vaccinium vitis-idaea	40	0	0	13
Pinus banksiana	7	0	10	6
Arctostaphylos uva-ursi	0	10	0	3
Herbs				
Pyrola asarifolia	2	0	0	1
Cornus canadensis	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Polytrichum sp.	5	0	5	3
Lichens				
Cladina mitis	5	25	20	17
Cladonia cariosa	2	2	2	2
Cladonia cornuta	0	0	5	2
Cladonia deformis	0	0	2	1
Cladonia borealis	0	0	1	pr
Stereocaulon sp.	0	pr	0	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN JIH-2 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/14	93/08/14	93/08/14	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	0	5	50	18
Picea mariana	10	5	0	5
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Vaccinium myrtilloides	0	15	0	5
Picea mariana	10	0	pr [b]	3
Ledum groenlandicum	0	2	0	1
Rosa woodsii	0	pr	pr	pr
Salix sp.	0	pr	0	pr
Herbs				
Epilobium angustifolium	0	pr	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Vaccinium vitis-idaea	1	20	5	9
Vaccinium myrtilloides	2	0	2	1
Empetrum nigrum	0	2	0	1
Linnaea borealis	0	1	1	1
Picea mariana	pr	1	0	pr
Viburnum edule	0	pr	0	pr
Rubus sp.	0	0	pr	pr
Herbs				
Lycopodium annotinum	0	2	5	2
Cornus canadensis	0	1	5	2
Pyrola asarifolia	0	pr	2	1
Equisetum sylvaticum	1	0	0	pr
Grass sp.	1	0	0	pr
Pyrola virens	0	0	pr	pr
Mosses				
Pleurozium schreberi	50	90	10	50
Polytrichum sp.	50	0	50	33
Ptilium crista-castrensis	0	0	20	7
Lichens				
Peltigera aphthosa	0	1	2	1
Cladina mitis	0	1	0	pr
Peltigera canina	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN JIL-1 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/12	93/08/12	93/08/12	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	5x5	2x2	na
Shrubs				
Pinus banksiana	0	pr [b]	2	1
Populus balsamifera	0	pr	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	5x5	2x2	na
Shrubs				
Vaccinium myrtilloides	7	15	20	14
Vaccinium vitis-idaea	20	10	0	10
Arctostaphylos uva-ursi	0	15	0	5
Arctostaphylos sp.	12	2	0	5
Salix bebbiana	0	pr	0	pr
Herbs				
Lycopodium complanatum	5	pr	10	5
Maianthemum canadense	5	0	0	2
Aralia nudicaulis	0	pr	0	pr
Cornus canadensis	0	pr	0	pr
Epilobium angustifolium	0	pr	0	pr
Forb sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	5x5	2x2	na
Lichens				
Cladina mitis	25	50	60	45
Cladina stellaris	15	0	10	8
Cladina sp.	0	7	0	2

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN JIM-4 (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/14	93/08/14	93/08/14	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	0	0	20	7
Salix sp.	pr [b]	pr	pr [c]	pr
Pinus banksiana	pr	pr	pr [c]	pr
Alnus sp.	pr	0	0	pr
Populus tremuloides	pr	0	0	pr
Picea mariana	0	pr	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	2	15	20	12
Vaccinium vitis-idaea	5	0	15	7
Ledum groenlandicum	10	pr	pr	3
Rosa acicularis	2	5	2	3
Linnaea borealis	2	0	3	2
Picea mariana	pr	pr	0	pr
Salix sp.	0	0	pr	pr
Herbs				
Cornus canadensis	0	10	20	10
Epilobium angustifolium	10	pr	5	5
Grass sp.	pr	0	pr	pr
Lycopodium complanatum	pr	0	0	pr
Spiranthes romanzoffiana	pr	0	0	pr
Lycopodium obscurum	0	pr	0	pr
Trientalis borealis	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	2	0	1
Linnaea borealis	0	pr	0	pr
Herbs				
Pyrola sp.	pr	0	0	pr
Mosses				
Polytrichum sp.	2	7	0	3
Lichens				
Cladina mitis	0	15	pr	5
Cladonia cornuta	1	1	pr	1
Peltigera aphthosa	1	0	0	pr
Cladonia borealis	pr	0	pr	pr
Cladonia cariosa	pr	pr	0	pr
Cladonia deformis	0	pr	0	pr
Cladonia multiformis	0	pr	0	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN MW-1a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 3	Average
Date of measurements (y/m/d)	93/08/19	93/08/19	na [a]
1.0 to 2.0 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Alnus sp.	20	0	10
Picea mariana	5	2	4
Salix sp.	0	5	3
Betula papyrifera	0	pr [b]	pr
0.05 to 1.0 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Alnus sp.	10	1	6
Picea mariana	2	pr	1
Rosa woodsii	0	1	1
Viburnum edule	pr	0	pr
Ledum groenlandicum	0	pr	pr
Populus tremuloides	0	pr	pr
0 to 0.05 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Vaccinium vitis-idaea	1	pr	1
Linnaea borealis	0	1	1
Rubus pubescens	0	pr	pr
Herbs			
Pyrola asarifolia	3	pr	2
Cornus canadensis	2	0	1
Mertensia paniculata	0	pr	pr
Mosses			
Hylocomium splendens	20	70	45
Pleurozium schreberi	50	30	40
Ptilium crista-castrensis	0	1	1
Lichens			
Peltigera aphthosa	pr	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN MW-1b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 2	Average
Date of measurements (y/m/d)	93/08/19	na [a]
1.0 to 2.0 m height layer		
Sample plot size (m)	5x5	na
Shrubs		
Picea mariana	1	1
0.05 to 1.0 m height layer		
Sample plot size (m)	5x5	na
Shrubs		
Alnus crispa	2	2
Rosa woodsii	2	2
Picea mariana	1	1
Viburnum edule	1	1
Herbs		
Mertensia paniculata	1	1
Epilobium angustifolium	pr [b]	pr
0 to 0.05 m height layer		
Sample plot size (m)	5x5	na
Shrubs		
Rubus pubescens	1	1
Betula papyrifera	pr	pr
Linnaea borealis	pr	pr
Ribes triste	pr	pr
Vaccinium vitis-idaea	pr	pr
Herbs		
Cornus canadensis	2	2
Forb sp.	pr	pr
Mitella nuda	pr	pr
Mosses		
Hylocomium splendens	60	60
Pleurozium schreberi	20	20
Lichens		
Peltigera aphthosa	2	2

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN MW-2a (1) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 3	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/08/20	93/08/20	94/08/07	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	50	0	0	17
Alnus crispa	0	30	pr [c]	10
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Alnus sp.	40	0	0	13
Alnus crispa	0	5	35	13
Rubus pubescens	20	10	5	12
Rubus idaeus	0	0	30	10
Viburnum edule	5	2	0	2
Linnaea borealis	0	5	0	2
Rosa woodsii	2	1	0	1
Rubus sp.	0	0	2	1
Populus tremuloides	1	0	0	pr
Viburnum sp.	0	0	1	pr
Salix sp.	pr	0	0	pr
Herbs				
Mertensia paniculata	15	0	2	6
Pyrola asarifolia	5	pr	0	2
Cornus canadensis	0	0	5	2
Epilobium angustifolium	pr	1	0	pr
Lathyrus sp.	1	0	0	pr
Grass sp.	0	1	0	pr
Comandra sp.	pr	0	0	pr
Maianthemum canadense	0	pr	0	pr
Pyrola secunda	0	pr	0	pr
Senecio sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Linnaea borealis	0	0	15	5
Herbs				
Cornus canadensis	30	10	0	13
Mitella nuda	pr	0	1	pr
Petasites palmatus	1	0	0	pr
Pyrola sp.	0	0	1	pr
Fragaria sp.	0	pr	0	pr
Viola sp.	0	pr	0	pr
Mosses				
Hylocomium splendens	0	1	1	1
Pleurozium schreberi	0	0	1	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

SITE CODE: MAN MW-2b (2) Northern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Average
Date of measurements (y/m/d)	93/08/20	93/08/20	na [a]
1.0 to 2.0 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Alnus sp.	50	0	25
Viburnum edule	0	pr [b]	pr
0.05 to 1.0 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Alnus sp.	5	40	23
Viburnum edule	20	0	10
Ledum groenlandicum	4	10	7
Ribes lacustre	1	0	1
Rosa woodsii	0	1	1
Lonicera dioica	0	pr	pr
Ribes triste	0	pr	pr
Symphoricarpos albus	0	pr	pr
Herbs			
Cornus canadensis	50	0	25
Aralia nudicaulis	0	15	8
Mertensia paniculata	3	0	2
Lycopodium annotinum	pr	0	pr
Pyrola asarifolia	pr	0	pr
Spiranthes romanzoffiana	pr	0	pr
Actaea rubra	0	pr	pr
Epilobium angustifolium	0	pr	pr
Equisetum pratense	0	pr	pr
Fragaria sp.	0	pr	pr
Lathyrus sp.	0	pr	pr
Viola sp.	0	pr	pr
0 to 0.05 m height layer			
Sample plot size (m)	5x5	5x5	na
Shrubs			
Rubus pubescens	1	5	3
Vaccinium vitis-idaea	1	1	1
Linnaea borealis	0	pr	pr
Herbs			
Cornus canadensis	0	30	15
Mitella nuda	pr	5	3
Petasites palmatus	pr	0	pr
Compositae sp.	0	pr	pr
Forb sp.	0	pr	pr
Spiranthes romanzoffiana	0	pr	pr
Mosses			
Hylocomium splendens	5	0	3
Pleurozium schreberi	5	0	3
Ptilium crista-castrensis	2	0	1

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK ADH-2 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1 Average		Plot 2	Plot 3
Date of measurements (y/m/d)	93/07/19	93/07/19	93/07/19	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Viburnum edule	5	pr [b,c]	pr [c]	2
Populus tremuloides	pr	pr	0	pr
Amelanchier alnifolia	pr [c]	0	pr	pr
Lonicera dioica	pr [c]	0	0	pr
Salix sp.	pr	0	0	pr
Cornus stolonifera	0	0	pr [c]	pr
Rosa acicularis	0	pr [c]	0	pr
Rubus idaeus	0	0	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Viburnum edule	15	5	10	10
Lonicera involucrata	0	15	5	7
Rosa acicularis	10	5	2	6
Rubus idaeus	1	0	5	2
Symphoricarpos albus	1	0	0	pr
Cornus stolonifera	0	1	0	pr
Rubus pubescens	0	1	0	pr
Herbs				
Aralia nudicaulis	20	5	10	12
Epilobium angustifolium	15	0	2	6
Mertensia paniculata	0	2	10	4
Petasites palmatus	5	1	5	4
Viola sp.	5	0	0	2
Grass sp.	0	5	0	2
Lathyrus ochroleucus	1	pr	2	1
Agropyron subsecundum	0	0	2	1
Galium boreale	1	1	0	1
Thalictrum venulosum	2	0	0	1
Cornus canadensis	0	1	0	pr
Actaea rubra	0	0	1	pr
Vicia americana	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Rubus pubescens	1	pr	1	1
Rosa acicularis	0	0	1	pr
Viburnum edule	0	0	1	pr
Rubus idaeus	pr	0	0	pr
Herbs				
Pyrola asarifolia	1	0	0	pr
Grass sp.	0	0	1	pr
Lathyrus ochroleucus	0	0	1	pr
Cornus canadensis	pr	pr	0	pr
Galium boreale	0	pr	0	pr
Galium triflorum	0	0	pr	pr
Viola sp.	0	0	pr	pr
Mosses				
Brachythecium sp.	5	1	2	3
Pleurozium schreberi	1	0	0	pr
Ptilium crista-castrensis	pr	0	0	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK ADM-3 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/07/07	94/07/07	94/07/07	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Populus tremuloides	6	30	30	22
Picea glauca	15	0	0	5
Viburnum edule	0	10	0	3
Salix bebbiana	8	0	0	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Viburnum edule	0	25	5	10
Picea glauca	20	0	5	8
Arctostaphylos uva-ursi	20	0	0	7
Rosa acicularis	0	20	0	7
Rubus idaeus	0	10	0	3
Ribes lacustre	0	5	0	2
Linnaea borealis	1	2	0	1
Populus balsamifera	2	0	0	1
Populus tremuloides	2	0	0	1
Herbs				
Calamagrostis sp.	0	30	20	17
Epilobium angustifolium	2	5	20	9
Petasites palmatus	2	10	5	6
Cornus canadensis	0	2	10	4
Lathyrus ochroleucus	5	5	0	3
Aralia nudicaulis	0	5	5	3
Disporum trachycarpum	0	5	2	2
Pyrola asarifolia	0	2	5	2
Vicia americana	0	2	5	2
Fragaria virginiana	2	2	2	2
Taraxacum officinale	5	0	0	2
Arnica cordifolia	0	0	5	2
Aster conspicuus	0	0	2	1
Pyrola secunda	0	0	2	1
Senecio sp.	0	0	2	1
Elymus sp.	1	0	0	pr [b]
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Moss sp.	1	2	0	1
Polytrichum commune	1	0	0	pr
Lichens				
Lichen sp.	0	0	2	1
Cladina mitis	1	0	0	pr
Peltigera aphthosa	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK AIH-3 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/19	93/07/18	93/07/17	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea glauca	0	pr [b,c]	pr	pr
Salix sp.	pr [c]	0	0	pr
Herbs				
Petasites sagitattus	pr	0	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Rosa acicularis	5	5	0	3
Rubus pubescens	10	0	0	3
Picea glauca	0	pr	0	pr
Herbs				
Cornus canadensis	0	20	20	13
Petasites palmatus	2	5	15	7
Agrostis sp.	15	0	0	5
Aralia nudicaulis	10	0	pr	3
Lathyrus venosus	7	2	0	3
Grass sp.	0	5	pr	2
Equisetum pratense	0	2	1	1
Fragaria virginiana	2	0	0	1
Maianthemum canadense	0	2	0	1
Pyrola virens	0	0	2	1
Equisetum arvense	0	0	1	pr
Epilobium angustifolium	pr	0	0	pr
Galium boreale	pr	0	0	pr
Lycopodium obscurum	0	0	pr	pr
Mosses				
Dicranum sp.	0	0	pr	pr
Pleurozium schreberi	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	10	75	25	37
Mosses				
Dicranum sp.	0	pr	0	pr
Pleurozium schreberi	0	pr	0	pr
Lichens				
Cladina sp.	0	0	pr	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK AIM-13 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/26	93/07/26	93/07/26	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Corylus cornuta	15	75	0	30
Salix sp.	1	0	pr [b,c]	pr
Amelanchier alnifolia	1	0	0	pr
Betula papyrifera	0	0	pr [c]	pr
Populus tremuloides	0	0	pr [c]	pr
Rosa acicularis	pr [c]	0	0	pr
Populus balsamifera	0	0	pr [c]	pr
Prunus pensylvanica	pr [c]	0	0	pr
Herbs				
Galeopsis tetrahit	pr	0	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Corylus cornuta	15	40	0	18
Rubus pubescens	10	5	2	6
Rosa acicularis	2	2	2	2
Rubus idaeus	pr	0	5	2
Symphoricarpos albus	2	2	0	1
Populus tremuloides	1	pr	1	1
Amelanchier alnifolia	2	0	0	1
Viburnum edule	0	1	pr	pr
Lonicera dioica	pr	0	0	pr
Herbs				
Aralia nudicaulis	20	20	40	27
Lathyrus ochroleucus	15	0	5	7
Vicia americana	10	0	0	3
Petasites palmatus	5	0	2	2
Epilobium angustifolium	pr	0	5	2
Fragaria sp.	5	0	0	2
Cornus canadensis	0	0	5	2
Trientalis borealis	0	0	5	2
Maianthemum canadense	0	pr	2	1
Galium boreale	2	0	0	1
Mertensia paniculata	0	0	2	1
Pyrola asarifolia	0	1	0	pr
Apocynum androsaemifolium	pr	0	0	pr
Aster sp.	pr	0	0	pr
Streptopus roseus	pr	0	0	pr
Equisetum sp.	0	0	pr	pr
Forb sp.	0	0	pr	pr
Grass sp.	0	0	pr	pr
Heracleum lanatum	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Symphoricarpos albus	2	pr	0	1
Herbs				
Maianthemum canadense	2	0	5	2
Trientalis borealis	0	pr	5	2
Cornus canadensis	0	0	5	2
Fragaria sp.	2	0	0	1
Pyrola asarifolia	0	pr	0	pr
Mosses				
Moss sp.	pr	pr	0	pr

[a] na = not applicable. [b] pr = present. [c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK AMH-16 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/20	93/07/20	93/07/19	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus rugosa	0	10	0	3
Rosa acicularis	2	2	0	1
Populus tremuloides	pr [b]	0	pr	pr
Viburnum edule	0	pr	pr	pr
Betula sp.	pr	0	0	pr
Salix sp.	pr	0	0	pr
Prunus pensylvanica	0	0	pr	pr
Rosa sp.	0	0	pr	pr
Alnus sp.	pr [c]	0	pr [c]	pr
Picea glauca	0	0	pr [c]	pr
Herbs				
Forb sp.	2	0	pr	1
Elymus innovatus	1	0	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Rosa acicularis	2	2	15	6
Viburnum edule	2	5	5	4
Rubus pubescens	4	2	0	2
Vaccinium myrtilloides	2	0	0	1
Symphoricarpos albus	1	pr	0	pr
Herbs				
Aralia nudicaulis	2	10	10	7
Trientalis borealis	4	7	10	7
Maianthemum canadense	2	2	5	3
Lathyrus venosus	1	0	7	3
Petasites palmatus	pr	0	7	2
Epilobium angustifolium	1	5	1	2
Grass sp.	0	5	pr	2
Cornus canadensis	5	0	0	2
Elymus innovatus	2	0	0	1
Mertensia paniculata	0	2	0	1
Galium triflorum	0	0	2	1
Mitella nuda	0	0	2	1
Pyrola virens	0	0	2	1
Galium boreale	pr	0	0	pr
Pyrola asarifolia	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	0	0	7	2
Vaccinium myrtilloides	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK AMM-12 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/27	93/07/27	93/07/27	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	20	65	15	33
Picea glauca	0	0	5	2
Populus tremuloides	2	0	0	1
Rosa acicularis	0	0	1	pr [b]
Populus balsamifera	pr	0	0	pr
Betula papyrifera	0	pr	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	0	20	15	12
Lonicera involucrata	25	0	0	8
Rosa acicularis	10	1	10	7
Rubus pubescens	0	5	10	5
Viburnum edule	pr	1	10	4
Corylus cornuta	0	10	0	3
Lonicera dioica	0	10	0	3
Rubus idaeus	5	0	0	2
Ribes triste	2	0	0	1
Herbs				
Cornus canadensis	2	5	10	6
Aralia nudicaulis	0	10	0	3
Lathyrus ochroleucus	0	10	0	3
Fragaria sp.	0	2	5	2
Mertensia paniculata	0	2	2	1
Pyrola asarifolia	pr	2	0	1
Aster sp.	0	pr	2	1
Streptopus roseus	0	2	0	1
Equisetum sp.	0	0	2	1
Petasites palmatus	0	0	2	1
Viola sp.	0	pr	1	pr
Galium triflorum	1	0	0	pr
Maianthemum canadense	1	0	0	pr
Trientalis borealis	1	0	0	pr
Grass sp.	pr	0	0	pr
Galium boreale	0	pr	0	pr
Pyrola secunda	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	0	10	5	5
Herbs				
Mitella nuda	10	2	5	6
Pyrola asarifolia	0	1	0	pr
Mosses				
Moss sp.	1	0	0	pr
Dicranum sp.	0	pr	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK B?L (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/24	93/07/25	93/07/25	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	10	pr [b,c]	pr [c]	3
Larix laricina	pr	pr [c]	0	pr
Betula glandulosa	pr [c]	pr [c]	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	40	0	10	17
Andromeda polifolia	5	10	10	8
Picea mariana	0	1	5	2
Betula glandulosa	pr	2	2	1
Salix sp.	pr	0	0	pr
Herbs				
Eriophorum sp.	0	15	0	5
Menyanthes trifoliata	0	10	5	5
Orchis rotundifolia	0	5	10	5
Carex sp.	1	0	1	1
Sarracenia purpurea	0	pr	1	pr
Equisetum sp.	0	0	1	pr
Iris sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Oxycoccus microcarpus	20	0	5	8
Herbs				
Drosera sp.	pr	0	0	pr
Mosses				
Sphagnum angustifolium	40	5	40	28
Aulacomnium palustre	pr	20	15	12
Tomenthypnum nitens	4	10	15	10
Sphagnum fuscum	15	0	0	5
Sphagnum warnstorfii	0	5	10	5
Hylocomium splendens	2	0	0	1
Polytrichum sp.	pr	0	0	pr
Lichens				
Cladina mitis	1	0	0	pr
Cladonia sp.	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK BDH-4 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/24	94/06/24	94/06/24	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Pinus banksiana	5	25	10	13
Populus tremuloides	0	10	0	3
Betula glandulosa	5	0	0	2
Picea mariana	5	0	0	2
Salix sp.	0	0	5	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	0	40	10	17
Salix sp.	30	0	15	15
Arctostaphylos uva-ursi	0	0	25	8
Rosa acicularis	0	15	0	5
Potentilla fruticosa	10	0	0	3
Ledum groenlandicum	5	2	0	2
Vaccinium sp.	0	5	0	2
Vaccinium myrtilloides	0	0	5	2
Betula glandulosa	2	0	0	1
Rhamnus alnifolia	2	0	0	1
Populus tremuloides	0	2	0	1
Herbs				
Carex sp.	25	0	10	12
Juncus sp.	10	0	0	3
Mertensia paniculata	10	0	0	3
Fragaria sp.	0	0	10	3
Epilobium angustifolium	1	5	0	2
Grass sp.	0	6	0	2
Achillea millefolium	0	0	5	2
Aster sp.	0	0	5	2
Petasites palmatus	0	0	5	2
Viola sp.	0	0	5	2
Cornus canadensis	0	1	2	1
Equisetum arvense	2	0	0	1
Galium boreale	1	0	0	pr [b]
Equisetum sp.	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Salix sp.	15	0	0	5
Arctostaphylos sp.	5	0	0	2
Linnaea borealis	0	2	0	1
Picea mariana	0	1	0	pr
Herbs				
Aster sp.	5	0	0	2
Petasites palmatus	2	0	0	1
Equisetum sp.	1	0	0	pr
Mosses				
Aulacomnium palustre	10	0	0	3
Moss sp.	0	1	3	1
Hylocomium splendens	0	0	2	1
Lichens				
Peltigera sp.	0	2	5	2
Lichen sp.	2	1	2	2

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK BDL-20 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/26	94/05/27	94/05/27	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Picea mariana	20	15	10	15
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	10	3	10	8
Picea mariana	0	0	20	7
Abies balsamea	5	0	0	2
Vaccinium vitis-idaea	0	3	0	1
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	3	0	5	3
Oxycoccus microcarpus	0	0	1	pr [b]
Picea mariana	0	0	1	pr
Andromeda polifolia	0	0	pr	pr
Herbs				
Carex sp.	3	3	0	2
Equisetum scirpoides	3	0	pr	1
Juncus sp.	0	0	1	pr
Pyrola sp.	0	0	pr	pr
Mosses				
Pleurozium schreberi	70	45	20	45
Hylocomium splendens	20	40	0	20
Sphagnum sp.	0	0	50	17
Dicranum sp.	3	3	0	2
Moss sp.	3	0	0	1
Ptilium crista-castrensis	3	0	0	1
Polytrichum sp.	0	0	2	1
Ditrichum flexicaule	0	0	1	pr
Lichens				
Peltigera aphthosa	3	0	0	1
Cladina mitis	0	0	2	1
Cladonia ecmocyna	0	0	pr	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK BIH (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 6	Plot 7	Average
Date of measurements (y/m/d)	93/07/23	94/06/11	94/06/12	na [a]
1.5 to 2.5 m height layer [b]				
Sample plot size (m)	2x2	5x5	5x5	na
Shrubs				
Picea mariana	pr [c,d]	30	20	17
Salix sp.	pr	0	8	3
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	0	0	5	2
Ribes glandulosum	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	0	1	0	pr
Vaccinium vitis-idaea	0	0	1	pr
Herbs				
Lycopodium sp.	0	1	0	pr
Equisetum scirpoides	0	0	1	pr
Mosses				
Pleurozium schreberi	60	80	30	57
Hylocomium splendens	20	5	15	13
Moss sp.	0	1	6	2
Dicranum sp.	pr	1	5	2
Ptilium crista-castrensis	0	1	0	pr
Lichens				
Cladina mitis	10	0	0	3
Peltigera aphthosa	10	0	0	3
Cladina sp.	0	1	5	2
Lichen sp.	0	1	2	1
Peltigera sp.	0	1	1	1

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK BMH (2) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 2	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/07/23	94/06/10	94/06/11	na [a]
1.5 to 2.5 m height layer [b]				
No vegetation present in this height class.				
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium uliginosum	1	0	0	pr [c]
Picea mariana	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Pleurozium schreberi	100	15	80	65
Hylocomium splendens	2	40	10	17
Ptilium crista-castrensis	0	30	0	10
Dicranum polysetum	0	5	0	2
Dicranum sp.	0	0	5	2
Lichens				
Peltigera aphthosa	0	5	0	2
Cladina mitis	0	1	1	1
Lichen sp.	0	0	2	1

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: SASK BMH-9 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/20	93/07/20	93/07/20	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	pr [b,c]	pr	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	0	5	10	5
Vaccinium vitis-idaea	0	0	pr	pr
Herbs				
Carex sp.	0	1	1	1
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	pr	0	pr	pr
Ledum groenlandicum	pr	0	0	pr
Herbs				
Mitella nuda	0	1	0	pr
Mosses				
Pleurozium schreberi	90	50	80	73
Hylocomium splendens	5	0	5	3
Ptilium crista-castrensis	0	5	0	2
Aulacomnium palustre	1	1	1	1
Lichens				
Peltigera aphthosa	pr	0	0	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK BMM-1a (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/20	94/06/13	94/06/14	na [a]
1.5 to 2.5 m height layer [b]				
Sample plot size (m)	2x2	5x5	5x5	na
Shrubs				
Picea mariana	0	0	5	2
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	25	40	40	35
Lonicera sp.	0	0	5	2
Rosa sp.	0	0	5	2
Salix sp.	0	0	5	2
Potentilla fruticosa	0	1	0	pr
Herbs				
Equisetum sp.	0	1	5	2
Cornus canadensis	0	5	0	2
Carex sp.	0	0	5	2
Aster sp.	0	1	2	1
Epilobium angustifolium	0	1	0	pr [c]
Grass sp.	0	1	0	pr
Petasites palmatus	0	1	0	pr
Equisetum pratense	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	0	5	1	2
Linnaea borealis	0	1	1	1
Vaccinium sp.	0	1	0	pr
Herbs				
Fragaria sp.	0	1	0	pr
Equisetum scirpoides	0	0	1	pr
Mosses				
Pleurozium schreberi	40	0	80	40
Hylocomium splendens	70	10	5	28
Moss sp.	0	70	0	23
Ptilium crista-castrensis	40	0	0	13
Dicranum sp.	0	0	1	pr
Lichens				
Cladina sp.	0	1	1	1
Lichen sp.	0	0	1	pr
Peltigera sp.	0	0	1	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: SASK BMM-1b (2) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/21	93/07/21	94/06/16	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Picea mariana	0	0	1	pr [c]
Salix sp.	0	0	0	0
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	60	40	50	50
Vaccinium vitis-idaea	0	5	0	2
Larix laricina	0	0	5	2
Rubus pubescens	0	1	0	pr
Rubus chamaemorus	0	0	1	pr
Herbs				
Grass sp.	0	20	0	7
Equisetum pratense	pr	15	0	5
Mitella nuda	0	15	0	5
Carex sp.	0	0	5	2
Orchid sp.	0	0	5	2
Petasites palmatus	0	2	0	1
Orchis rotundifolia	0	pr	0	pr
Mosses				
Pleurozium schreberi	0	90	0	30
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	30	0	0	10
Arctostaphylos uva-ursi	0	0	5	2
Herbs				
Carex sp.	0	0	5	2
Drosera rotundifolia	0	0	1	pr
Forb sp.	0	0	1	pr
Mitella nuda	0	0	1	pr
Mosses				
Pleurozium schreberi	30	0	40	23
Sphagnum sp.	15	0	40	18
Dicranum sp.	25	0	5	10
Hylocomium splendens	10	0	0	3
Polytrichum sp.	0	0	1	pr
Lichens				
Cladonia crispata	2	0	0	1

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

SITE CODE: SASK Jail House (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/01	94/06/01	94/06/01	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Abies balsamea	20	0	0	7
Alnus crispa	0	0	20	7
Populus tremuloides	0	0	20	7
Alnus sp.	0	10	0	3
Picea glauca	0	5	5	3
Rosa acicularis	0	0	2	1
Betula papyrifera	0	1	0	pr [b]
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus sp.	25	0	0	8
Rubus idaeus	0	5	2	2
Populus tremuloides	1	5	0	2
Rosa acicularis	1	5	0	2
Ledum groenlandicum	0	5	0	2
Rubus sp.	0	5	0	2
Viburnum sp.	0	2	0	1
Herbs				
Fragaria vesca	0	10	0	3
Maianthemum canadense	0	5	pr	2
Agropyron repens	0	5	0	2
Calamagrostis sp.	0	0	5	2
Cornus canadensis	0	0	2	1
Equisetum sp.	1	0	0	pr
Galium triflorum	0	1	0	pr
Lathyrus sp.	0	1	0	pr
Trientalis borealis	0	1	0	pr
Petasites palmatus	0	0	1	pr
Aster sp.	0	0	pr	pr
Mitella nuda	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	10	10	0	7
Rubus sp.	5	0	0	2
Herbs				
Lycopodium annotinum	0	0	80	27
Mitella nuda	10	15	0	8
Cornus canadensis	20	1	0	7
Maianthemum canadense	5	0	0	2
Aralia nudicaulis	1	0	0	pr
Mertensia paniculata	1	0	0	pr
Viola sp.	1	0	0	pr
Mosses				
Moss sp.	6	15	pr	7
Pleurozium schreberi	0	0	3	1
Hylocomium splendens	2	0	0	1
Lichens				
Cladina sp.	1	0	0	pr

[a] na = not applicable. [b] pr = present.

SITE CODE: SASK JDM-8 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/18	93/07/18	93/07/18	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Pinus banksiana	pr [b,c]	45	45	30
Populus tremuloides	pr [c]	15	0	5
Alnus crispa	pr	pr	pr [c]	pr
Prunus pensylvanica	pr	0	0	pr
Salix sp.	pr	0	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	5	10	10	8
Prunus pensylvanica	2	pr	1	1
Rosa acicularis	2	0	0	1
Alnus crispa	0	2	0	1
Pinus banksiana	0	2	0	1
Herbs				
Grass sp.	10	1	2	4
Galium boreale	3	0	0	1
Epilobium angustifolium	2	0	0	1
Apocynum androsaemifolium	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	20	0	0	7
Herbs				
Maianthemum canadense	0	pr	1	pr
Mosses				
Polytrichum sp.	pr	pr	15	5
Lichens				
Cladonia sp.	0	2	45	16
Cladina mitis	0	0	5	2

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK JIH-4 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/17	93/07/17	93/07/17	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea glauca	pr [b,c]	pr [c]	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	5	10	25	13
Viburnum edule	20	0	0	7
Vaccinium myrtilloides	0	2	2	1
Rosa acicularis	2	0	0	1
Vaccinium vitis-idaea	0	0	2	1
Picea glauca	pr	1	pr	pr
Linnaea borealis	pr	1	0	pr
Herbs				
Cornus canadensis	10	7	7	8
Grass sp.	0	pr	pr	pr
Maianthemum canadense	0	pr	0	pr
Epilobium angustifolium	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	5	7	0	4
Arctostaphylos uva-ursi	2	5	0	2
Vaccinium myrtilloides	pr	0	0	pr
Mosses				
Pleurozium schreberi	60	80	90	77
Dicranum sp.	0	pr	pr	pr
Lichens				
Cladina mitis	10	2	0	4
Cladonia crispata	10	2	0	4
Cladonia cariosa	pr	0	0	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK JIH-7 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/09/01	93/09/01	93/09/01	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	0	pr [b]	pr [c]	pr
Pinus banksiana	pr [c]	0	pr [c]	pr
Betula papyrifera	0	0	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Vaccinium vitis-idaea	35	0	0	12
Picea mariana	1	0	2	1
Abies balsamea	pr	0	1	pr
Vaccinium myrtilloides	1	0	0	pr
Salix sp.	0	0	pr	pr
Herbs				
Lycopodium annotinum	0	0	2	1
Trientalis borealis	1	0	0	pr
Campanula rotundifolia	pr	0	0	pr
Cornus canadensis	pr	0	0	pr
Grass sp.	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Linnaea borealis	1	0	1	1
Herbs				
Maianthemum canadense	15	0	0	5
Pyrola virens	pr	0	pr	pr
Mosses				
Pleurozium schreberi	90	95	95	93
Hylocomium splendens	1	4	0	2
Ptilium crista-castrensis	pr	1	pr	pr
Dicranum sp.	0	pr	pr	pr
Lichens				
Cladina mitis	0	0	1	pr

[a] na = not applicable.
[b] pr = present.
[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK JMH-5 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/08/31	93/08/31	93/08/31	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Populus tremuloides	pr [b]	0	0	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	0	1	0	pr
Vaccinium myrtilloides	0	pr	pr	pr
Herbs				
Cornus canadensis	0	0	2	1
Geocaulon lividum	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	2	0	1
Linnaea borealis	0	pr	0	pr
Mosses				
Hylocomium splendens	50	40	50	47
Pleurozium schreberi	30	50	45	42
Ptilidium ciliare	20	5	0	8
Dicranum polysetum	pr	1	pr	pr
Lichens				
Peltigera aphthosa	0	0	1	pr
Peltigera canina	0	pr	pr	pr
Cladina mitis	0	pr	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK JMH-10 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/17	93/07/17	93/07/17	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Prunus pensylvanica	0	5	0	2
Alnus crispa	pr [b]	1	pr [c]	pr
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	1	15	0	5
Alnus crispa	0	10	0	3
Prunus pensylvanica	0	10	0	3
Vaccinium uliginosum	2	0	0	1
Rosa acicularis	0	1	pr	pr
Herbs				
Cornus canadensis	1	5	0	2
Maianthemum canadense	0	5	0	2
Geocaulon lividum	2	0	0	1
Aralia nudicaulis	1	0	0	pr
Grass sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	1	10	0	4
Arctostaphylos uva-ursi	1	0	1	1
Vaccinium vitis-idaea	0	1	pr	pr
Mosses				
Pleurozium schreberi	90	90	2	61
Dicranum sp.	pr	pr	2	1
Hylocomium splendens	0	pr	0	pr
Lichens				
Cladina mitis	2	0	35	12
Cladonia sp.	0	0	1	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK JMH-A1 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 3	Plot 4	Plot 6	Average
Date of measurements (y/m/d)	93/09/02	93/09/02	94/06/25	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	10	0	0	3
Betula papyrifera	5	0	0	2
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Picea mariana	35	0	0	12
Rosa acicularis	0	pr [c]	5	2
Alnus rugosa	1	0	0	pr
Betula papyrifera	1	0	0	pr
Vaccinium myrtilloides	0	1	0	pr
Ledum groenlandicum	0	0	1	pr
Viburnum edule	0	pr	0	pr
Herbs				
Cornus canadensis	0	0	1	pr
Epilobium angustifolium	0	0	1	pr
Forb sp.	0	0	1	pr
Petasites palmatus	0	0	1	pr
Grass sp.	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	5x5	2x2	na
Shrubs				
Linnaea borealis	1	pr	1	1
Arctostaphylos uva-ursi	0	0	1	pr
Herbs				
Lycopodium complanatum	2	0	0	1
Equisetum scirpoides	0	0	1	pr
Goodyera repens	pr	0	0	pr
Mosses				
Pleurozium schreberi	85	65	30	60
Hylocomium splendens	10	20	30	20
Ptilium crista-castrensis	2	5	5	4
Dicranum sp.	pr	2	0	1
Dicranum polysetum	0	0	1	pr
Lichens				
Cladina mitis	pr	0	2	1
Peltigera aphthosa	0	1	1	1
Lichen sp.	0	0	1	pr
Peltigera canina	0	pr	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

SITE CODE: SASK JMH-A2 (2) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 5	Average
Date of measurements (y/m/d)	93/09/01	93/09/01	94/06/25	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Alnus rugosa	0	0	60	20
Alnus crispa	20	3	0	8
Populus tremuloides	10	pr [c]	0	3
Betula papyrifera	0	10	0	3
Picea mariana	0	3	0	1
Salix bebbiana	0	2	0	1
Picea glauca	pr [d]	0	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	0	35	10	15
Ledum groenlandicum	0	0	20	7
Salix sp.	0	0	15	5
Alnus sp.	0	0	10	3
Vaccinium vitis-idaea	0	5	0	2
Rosa acicularis	0	0	5	2
Betula papyrifera	0	2	0	1
Linnaea borealis	0	2	0	1
Ribes sp.	0	0	1	pr
Pinus banksiana	0	pr	0	pr
Rubus idaeus	0	pr	0	pr
Herbs				
Lycopodium complanatum	15	0	0	5
Carex sp.	0	0	15	5
Cornus canadensis	10	1	0	4
Aralia nudicaulis	10	0	0	3
Lycopodium annotinum	10	0	0	3
Maianthemum canadense	5	1	0	2
Mitella nuda	0	0	5	2
Ranunculus sp.	0	0	5	2
Pyrola secunda	2	0	0	1
Equisetum sp.	0	0	2	1
Orchid sp.	0	0	2	1
Grass sp.	1	0	0	pr
Aster sp.	0	0	1	pr
Equisetum scirpoides	0	0	1	pr
Galium triflorum	0	0	1	pr
Trientalis borealis	pr	pr	0	pr
Goodyera repens	pr	0	0	pr
Epilobium angustifolium	0	pr	0	pr
Geocaulon lividum	0	pr	0	pr
Viola renifolia	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	2	0	5	2
Vaccinium vitis-idaea	7	0	0	2
Herbs				
Lycopodium clavatum	5	0	0	2
Mitella nuda	pr	0	0	pr
Mosses				
Hylocomium splendens	40	30	10	27
Pleurozium schreberi	25	40	10	25
Moss sp.	0	0	30	10
Dicranum polysetum	1	3	0	1
Lichens				
Lichen sp.	0	0	4	1
Cladonia borealis	0	0	2	1
Cladina rangiferina	pr	0	0	pr
Cladina mitis	0	pr	0	pr

[a] na = not applicable. [b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m. [c] pr = present. [d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK JMM-5 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/27	94/05/28	94/05/28	na [a]
1.5 to 2.5 m height layer				
No vegetation present in this height class.				
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Pinus banksiana	10	0	0	3
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	1	1	20	7
Herbs				
Aster sp.	1	0	0	pr [b]
Forb sp.	1	0	0	pr
Grass sp.	0	0	1	pr
Mosses				
Pleurozium schreberi	0	5	0	2
Polytrichum strictum	1	0	0	pr
Ptilium crista-castrensis	0	1	0	pr
Dicranum sp.	0	0	1	pr
Dicranum polysetum	0	pr	0	pr
Lichens				
Cladina sp.	0	40	45	28
Cladina mitis	76	0	0	25
Cladina rangiferina	1	40	0	14
Cladina stellaris	5	10	0	5
Lichen sp.	0	pr	2	1
Cladonia cornuta	1	pr	0	pr
Peltigera aphthosa	0	pr	1	pr
Cladonia cenotea	1	0	0	pr
Peltigera malacea	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK JMM-6 (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/09/02	93/09/02	93/09/02	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Alnus crispa	4	pr [b,c]	20	8
Prunus pensylvanica	2	0	0	1
0.05 to 1.0 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	10	0	10	7
Rosa acicularis	4	pr	0	1
Amelanchier alnifolia	pr	0	3	1
Potentilla tridentata	pr	0	2	1
Alnus crispa	0	0	2	1
Rubus idaeus	1	0	0	pr
Herbs				
Grass sp.	1	10	5	5
Aralia nudicaulis	5	0	4	3
Lycopodium complanatum	3	0	0	1
Maianthemum canadense	2	0	0	1
Galium boreale	pr	pr	0	pr
Geocaulon lividum	pr	0	0	pr
Anemone patens	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	5x5	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	2	15	40	19
Vaccinium vitis-idaea	8	15	10	11
Linnaea borealis	1	2	0	1
Herbs				
Antennaria sp.	0	5	0	2
Maianthemum canadense	0	1	1	1
Senecio sp.	0	pr	pr	pr
Goodyera repens	pr	0	0	pr
Viola sp.	pr	0	0	pr
Aster laevis	0	pr	0	pr
Mosses				
Pleurozium schreberi	70	15	1	29
Dicranum polysetum	5	2	1	3
Hylocomium splendens	0	1	0	pr
Polytrichum commune	pr	0	0	pr
Lichens				
Cladina mitis	0	10	15	8
Cladina rangiferina	0	10	0	3
Peltigera aphthosa	0	5	0	2
Cladina stellaris	0	pr	0	pr

[a] na = not applicable.

[b] pr = present.

[c] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: SASK JMM-8a (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/15	93/07/15	93/07/15	na [a]
1.0 to 2.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	0	0	25	8
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	2	2	pr [b]	1
Rosa acicularis	0	0	2	1
Linnaea borealis	0	0	pr	pr
Viburnum edule	0	0	pr	pr
Herbs				
Grass sp.	pr	10	0	3
Maianthemum canadense	pr	0	5	2
Anemone patens	0	5	0	2
Apocynum androsaemifolium	0	2	0	1
Anemone multifida	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	45	40	0	28
Vaccinium vitis-idaea	1	0	2	1
Linnaea borealis	pr	0	0	pr
Mosses				
Pleurozium schreberi	0	0	75	25
Dicranum sp.	0	pr	pr	pr
Lichens				
Cladina mitis	35	0	0	12
Cladina sp.	0	35	0	12
Peltigera aphthosa	2	pr	0	1
Cladina rangiferina	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK JMM-8b (2) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	93/07/16	93/07/16	93/07/16	na [a]
1.0 to 2.0 m height layer				
No vegetation present in this height class.				
0.05 to 1.0 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos sp.	0	0	5	2
Amelanchier alnifolia	0	2	2	1
Vaccinium myrtilloides	0	2	0	1
Herbs				
Grass sp.	0	7	5	4
Anemone multifida	0	1	1	1
Maianthemum canadense	0	1	0	pr [b]
Senecio sp.	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	15	15	15	15
Arctostaphylos sp.	30	0	5	12
Arctostaphylos uva-ursi	0	20	0	7
Linnaea borealis	1	0	0	pr
Herbs				
Anemone multifida	5	0	0	2
Senecio sp.	5	0	0	2
Mosses				
Pleurozium schreberi	1	40	65	35
Dicranum sp.	2	5	10	6
Lichens				
Cladina mitis	20	15	15	17
Cladonia crispata	10	15	15	13
Peltigera aphthosa	0	15	5	7

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK MW-1a (1) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 4	Plot 5	Average
Date of measurements (y/m/d)	93/07/21	94/06/09	94/06/09	na [a]
1.5 to 2.5 m height layer [b]				
No vegetation present in this height class.				
0.05 to 1.5 m height layer [b]				
Sample plot size (m)	4(4	2x2	2x2	na
Shrubs				
Corylus cornuta	0	5	0	2
Rubus pubescens	0	5	0	2
Abies balsamea	0	0	2	1
Populus tremuloides	0	1	0	pr [c]
Vaccinium vitis-idaea	0	1	0	pr
Herbs				
Calamagrostis canadensis	0	10	0	3
Disporum trachycarpum	0	3	0	1
Lathyrus ochroleucus	0	3	0	1
Fragaria virginiana	0	2	0	1
Petasites palmatus	0	2	0	1
Pyrola asarifolia	0	2	0	1
Cornus canadensis	0	1	0	pr
Mertensia paniculata	0	1	0	pr
Maianthemum canadense	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	4(4	2x2	2x2	na
Shrubs				
Viburnum edule	pr	10	0	3
Rosa acicularis	0	10	0	3
Linnaea borealis	pr	7	1	3
Herbs				
Mitella nuda	pr	5	0	2
Aralia nudicaulis	0	2	1	1
Mosses				
Hylocomium splendens	5	5	90	33
Pleurozium schreberi	5	5	1	4
Mnium sp.	10	0	0	3
Brachythecium sp.	5	0	0	2
Moss sp.	0	1	0	pr
Ptilium crista-castrensis	1	0	0	pr
Dicranum sp.	pr	0	0	pr
Lichens				
Cladina mitis	0	pr	0	pr
Lichen sp.	0	pr	0	pr

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1994. For 1993, upper and middle height layers are 1.0 to 2.0 m and 0.05 to 1.0 m.

[c] pr = present.

SITE CODE: SASK MW-1b (2) Southern Aux. Site

Understory vegetation, percentage cover

Parameter	Plot 2	Plot 3	Plot 6	Average
Date of measurements (y/m/d)	93/07/21	93/07/21	94/06/09	na [a]
1.0 to 2.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	5x5	na
Shrubs				
Abies balsamea	0	pr [c,d]	10	3
Picea glauca	pr	pr	0	pr
Populus tremuloides	pr	0	0	pr
0.05 to 1.0 m height layer [b]				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	0	5	0	2
Abies balsamea	2	1	0	1
Populus tremuloides	2	0	0	1
Rosa acicularis	0	0	2	1
Arctostaphylos uva-ursi	0	0	1	pr
Herbs				
Trientalis borealis	0	1	5	2
Lycopodium complanatum	0	5	0	2
Cornus canadensis	0	0	5	2
Listera cordata	0	0	2	1
Geocaulon lividum	0	1	0	pr
Maianthemum canadense	0	0	1	pr
Mitella nuda	0	0	1	pr
Pyrola secunda	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	0	1	0	pr
Picea sp.	0	pr	0	pr
Herbs				
Maianthemum canadense	pr	1	0	pr
Cornus canadensis	pr	0	0	pr
Pyrola virens	0	pr	0	pr
Mosses				
Pleurozium schreberi	75	80	50	68
Hylocomium splendens	15	20	20	18
Ptilium crista-castrensis	2	2	0	1
Lichens				
Peltigera aphthosa	0	0	2	1

[a] na = not applicable.

[b] Heights for layer apply to plots measured in 1993. For 1994, upper and middle height layers are 1.5 to 2.5 m and 0.05 to 1.5 m.

[c] pr = present.

[d] Species not recorded in fixed-area plot. Percentage based on line intersect measurement using two 10-m lines.

SITE CODE: MAN G-BI-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/12	94/08/12	94/08/12	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	pr [b]	0	pr	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	7	5	0	4
Vaccinium vitis-idaea	3	1	5	3
Ledum groenlandicum	5	1	1	2
Rosa acicularis	1	0	0	pr
Rosa sp.	0	0	1	pr
Herbs				
Cornus canadensis	0	1	1	1
Epilobium angustifolium	0	0	1	pr
Petasites sp.	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Aulacomnium palustre	60	5	0	22
Pleurozium schreberi	15	45	5	22
Hylocomium splendens	5	1	0	2
Dicranum polysetum	0	0	1	pr
Lichens				
Cladina mitis	1	5	35	14
Peltigera aphthosa	1	1	1	1

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN G-BI-2 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/13	94/08/13	94/08/13	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Salix sp.	pr [b]	0	0	pr
Picea mariana	0	pr	0	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	60	2	0	21
Picea mariana	0	1	20	7
Ledum groenlandicum	5	2	10	6
Vaccinium myrtilloides	5	5	0	3
Rosa sp.	1	0	0	pr
Rosa acicularis	0	1	0	pr
Herbs				
Cornus canadensis	0	1	0	pr
Equisetum sp.	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	0	0	5	2
Vaccinium myrtilloides	0	0	5	2
Mosses				
Pleurozium schreberi	10	7	15	11
Lichens				
Cladina mitis	75	15	60	50
Peltigera sp.	0	1	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: MAN N-JM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/27	94/06/27	94/06/27	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	pr [b]	pr	pr	pr
Pinus banksiana	pr	pr	pr	pr
Alnus crispa	pr	0	0	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	25	2	1	9
Vaccinium sp.	0	0	25	8
Ledum groenlandicum	0	0	15	5
Vaccinium vitis-idaea	0	0	5	2
Picea mariana	0	0	1	pr
Herbs				
Eriophorum sp.	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	10	0	0	3
Herbs				
Fragaria virginiana	0	1	0	pr
Mosses				
Sphagnum magellanicum	0	0	30	10
Pleurozium schreberi	0	5	10	5
Dicranum sp.	1	pr	1	1
Lichens				
Cladina mitis	30	40	50	40
Cladina rangiferina	50	0	5	18
Cladonia uncialis	10	5	1	5
Cladonia squamosa	5	0	1	2
Cladina stellaris	1	1	1	1
Cladonia cenotea	1	1	0	1
Cladonia crispata	0	2	0	1
Cladonia gracilis	1	0	0	pr
Cladonia cornuta	0	1	0	pr
Cladonia deformis	0	1	0	pr
Cladonia pyxidata	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN P-AM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/24	94/06/25	94/06/25	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	pr [b]	pr	pr	pr
Populus tremuloides	pr	pr	0	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Populus tremuloides	0	30	0	10
Alnus crispa	5	0	20	8
Ledum groenlandicum	0	20	0	7
Rosa acicularis	5	5	0	3
Rubus pubescens	2	0	2	1
Viburnum sp.	2	0	0	1
Rosa sp.	0	0	2	1
Populus sp.	0	0	1	pr
Herbs				
Aralia nudicaulis	5	10	0	5
Mertensia paniculata	10	0	0	3
Galium triflorum	1	0	5	2
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	0	5	0	2
Rubus pubescens	0	5	0	2
Viburnum sp.	0	0	5	2
Linnaea borealis	1	2	0	1
Herbs				
Cornus canadensis	50	1	15	22
Pyrola asarifolia	5	1	0	2
Maianthemum canadense	0	0	5	2
Mitella nuda	1	1	1	1
Equisetum sp.	0	1	1	1
Lathyrus ochroleucus	0	1	0	pr
Mosses				
Hylocomium splendens	10	3	0	4
Pleurozium schreberi	3	1	0	1
Ptilium crista-castrensis	1	3	0	1
Polytrichum commune	0	0	1	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: MAN P-JM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/25	94/06/26	94/06/26	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	pr [b]	pr	pr	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	30	40	5	25
Viburnum edule	10	1	5	5
Rubus pubescens	0	10	3	4
Populus tremuloides	0	2	5	2
Rubus sp.	1	5	0	2
Rosa acicularis	1	1	1	1
Herbs				
Aralia nudicaulis	50	10	25	28
Cornus canadensis	10	40	30	27
Mertensia paniculata	5	0	5	3
Maianthemum canadense	0	2	5	2
Lathyrus ochroleucus	1	0	0	pr
Epilobium angustifolium	0	0	1	pr
Equisetum sp.	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Rubus pubescens	5	5	2	4
Linnaea borealis	0	5	5	3
Viburnum edule	1	0	0	pr
Herbs				
Pyrola asarifolia	10	1	2	4
Mitella nuda	5	0	0	2
Cornus canadensis	1	0	0	pr
Maianthemum canadense	1	0	0	pr
Petasites palmatus	1	0	0	pr
Lycopodium sp.	0	1	0	pr
Viola sp.	0	1	0	pr
Mosses				
Pleurozium schreberi	1	1	5	2
Dicranum sp.	0	0	3	1
Ptilium crista-castrensis	0	0	3	1
Hylocomium splendens	1	0	1	1

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN S-AD-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Plot 4	Average
Date of measurements (y/m/d)	94/06/28	94/06/28	94/06/28	94/06/28	na [a]
1.5 to 2.5 m height layer					
Sample plot size (m)	5x5	5x5	5x5	5x5	na
Shrubs					
Pinus banksiana	0	pr [b]	0	pr	pr
Populus tremuloides	0	pr	pr	0	pr
Picea mariana	0	0	0	pr	pr
0.05 to 1.5 m height layer					
Sample plot size (m)	2x2	2x2	2x2	2x2	na
Shrubs					
Vaccinium sp.	60	0	0	0	15
Vaccinium myrtilloides	0	1	5	50	14
Pinus banksiana	0	0	30	10	10
Picea mariana	0	0	10	20	8
Rosa acicularis	1	5	10	5	5
Viburnum sp.	0	5	15	0	5
Vaccinium vitis-idaea	0	0	20	0	5
Populus tremuloides	0	0	5	0	1
Shepherdia canadensis	0	3	0	0	1
Salix sp.	1	0	0	0	pr
Rubus pubescens	0	1	0	0	pr
Herbs					
Epilobium angustifolium	0	1	1	10	3
Grass sp.	5	1	1	1	2
Cornus canadensis	0	1	5	0	2
Lathyrus sp.	0	1	1	0	1
Equisetum sp.	1	0	0	0	pr
Mitella nuda	1	0	0	0	pr
Petasites palmatus	1	0	0	0	pr
Anemone multifida	0	1	0	0	pr
Mertensia paniculata	0	0	1	0	pr
0 to 0.05 m height layer					
Sample plot size (m)	2x2	2x2	2x2	2x2	na
Shrubs					
Vaccinium vitis-idaea	0	40	0	0	10
Linnaea borealis	0	10	20	1	8
Arctostaphylos uva-ursi	0	0	0	10	3
Rosa acicularis	0	0	0	1	pr
Herbs					
Cornus canadensis	15	0	0	5	5
Mitella nuda	0	1	0	0	pr
Pyrola sp.	0	0	1	0	pr
Equisetum arvense	0	0	0	1	pr
Mosses					
Hylocomium splendens	0	0	1	1	1
Pleurozium schreberi	0	0	1	0	pr
Lichens					
Peltigera aphthosa	1	3	15	2	5
Cladina mitis	0	5	1	0	2
Cladonia sp.	1	0	1	0	1
Cladonia gracilis	0	2	0	0	1
Cladonia pyxidata	0	1	1	0	1
Cladonia cenotea	0	1	0	0	pr
Cladonia deformis	0	1	0	0	pr
Cladonia uncialis	0	0	1	0	pr

[a] na = not applicable. [b] pr = present.

SITE CODE: MAN SO-M-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/26	94/06/29	94/06/29	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	pr [b]	0	pr	pr
Alnus crispa	0	0	pr	pr
Salix sp.	0	0	pr	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	50	50	0	33
Ledum groenlandicum	1	2	2	2
Populus tremuloides	pr	2	0	1
Viburnum sp.	pr	0	2	1
Rosa acicularis	0	0	2	1
Herbs				
Pyrola asarifolia	0	0	10	3
Forb sp.	0	0	2	1
Cornus canadensis	0	0	1	pr
Epilobium angustifolium	0	0	1	pr
Grass sp.	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	1	0	0	pr
Populus balsamifera	1	0	0	pr
Vaccinium sp.	1	0	0	pr
Ledum groenlandicum	0	1	0	pr
Herbs				
Equisetum sp.	1	0	0	pr
Mosses				
Pleurozium schreberi	50	10	75	45
Hylocomium splendens	20	10	25	18
Moss sp.	0	5	0	2
Polytrichum commune	0	2	0	1
Dicranum sp.	1	0	0	pr
Polytrichum sp.	1	0	0	pr
Ptilium crista-castrensis	1	0	0	pr
Lichens				
Peltigera aphthosa	1	0	2	1
Cladonia sp.	1	1	0	1
Cladina mitis	0	2	0	1
Lichen sp.	0	0	2	1

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN T-AM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/23	94/06/23	94/06/23	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	0	pr [b]	0	pr
Alnus crispa	0	0	pr	pr
Picea mariana	0	0	pr	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	40	30	10	27
Picea mariana	10	0	0	3
Linnaea borealis	0	0	10	3
Rosa sp.	0	2	1	1
Viburnum sp.	0	1	0	pr
Populus tremuloides	0	0	1	pr
Viburnum edule	0	0	1	pr
Herbs				
Cornus canadensis	0	0	70	23
Pyrola sp.	0	0	15	5
Mitella nuda	0	0	5	2
Epilobium angustifolium	0	0	1	pr
Fragaria virginiana	0	0	1	pr
Maianthemum canadense	0	0	1	pr
Petasites palmatus	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	50	5	0	18
Rubus pubescens	5	0	0	2
Rosa acicularis	1	0	0	pr
Herbs				
Cornus canadensis	1	10	0	4
Mitella nuda	10	1	0	4
Maianthemum canadense	10	0	0	3
Pyrola sp.	0	2	0	1
Forb sp.	pr	1	0	pr
Mertensia paniculata	1	0	0	pr
Grass sp.	pr	0	0	pr
Mosses				
Hylocomium splendens	1	1	1	1
Polytrichum commune	1	0	1	1
Dicranum sp.	0	1	0	pr
Dicranum polysetum	0	0	1	pr
Pleurozium schreberi	0	0	1	pr
Lichens				
Cladina mitis	1	0	0	pr
Cladonia sp.	0	0	1	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: MAN T-BI-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/09	94/08/09	94/08/09	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	0	pr [b]	10	3
Alnus crispa	0	0	pr	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	1	10	5	5
Rosa acicularis	1	5	3	3
Ledum groenlandicum	1	2	2	2
Vaccinium vitis-idaea	0	0	2	1
Alnus crispa	0	0	1	pr
Herbs				
Cornus canadensis	1	0	3	1
Equisetum sp.	0	0	1	pr
Petasites palmatus	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	2	0	1
Linnaea borealis	0	0	2	1
Arctostaphylos rubra	0	1	0	pr
Herbs				
Pyrola sp.	0	2	0	1
Cornus canadensis	0	1	0	pr
Mosses				
Pleurozium schreberi	90	90	70	83
Hylocomium splendens	0	0	20	7
Dicranum sp.	0	0	5	2
Lichens				
Cladina mitis	0	2	1	1
Peltigera aphthosa	1	0	1	1

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK B-AM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/02	94/06/02	94/06/02	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Amelanchier alnifolia	20	50	60	43
Populus tremuloides	15	0	10	8
Prunus virginiana	0	0	5	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Prunus virginiana	0	50	0	17
Symphoricarpos occidentalis	0	10	0	3
Elaeagnus commutata	0	5	0	2
Rosa sp.	0	0	5	2
Rosa acicularis	1	1	0	1
Symphoricarpos sp.	1	0	0	pr [b]
Lonicera dioica	0	1	0	pr
Amelanchier alnifolia	0	0	1	pr
Herbs				
Lathyrus ochroleucus	15	10	5	10
Koeleria cristata	0	0	30	10
Carex sp.	0	15	5	7
Galium boreale	10	0	5	5
Grass sp.	10	0	5	5
Achillea millefolium	5	5	1	4
Thermopsis rhombifolia	1	5	5	4
Thalictrum venulosum	10	0	0	3
Aralia nudicaulis	5	1	0	2
Cerastium sp.	0	5	1	2
Lathyrus venosus	5	0	0	2
Allium sp.	0	5	0	2
Apocynum androsaemifolium	0	0	5	2
Aster sp.	1	0	0	pr
Comandra sp.	1	0	0	pr
Taraxacum officinale	0	1	0	pr
Artemisia campestris	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	50	0	0	17
Arctostaphylos sp.	0	0	1	pr
Herbs				
Maianthemum canadense	15	0	0	5
Fragaria sp.	5	0	0	2
Lichens				
Lichen sp.	0	2	0	1
Cladina mitis	0	0	1	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-AM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/27	94/08/27	94/08/27	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	10	20	30	20
Salix sp.	15	0	0	5
Picea mariana	0	0	2	1
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus sp.	15	50	45	37
Picea mariana	0	0	10	3
Populus tremuloides	5	0	2	2
Rosa acicularis	0	5	1	2
Lonicera sp.	5	0	0	2
Salix sp.	2	0	0	1
Viburnum edule	2	0	0	1
Vaccinium vitis-idaea	0	0	2	1
Linnaea borealis	0	1	0	pr [b]
Herbs				
Aralia nudicaulis	5	5	5	5
Epilobium angustifolium	5	2	0	2
Cornus canadensis	0	5	2	2
Maianthemum canadense	2	2	0	1
Trientalis borealis	2	1	1	1
Fragaria vesca	1	2	0	1
Achillea millefolium	2	0	0	1
Aster sp.	2	0	0	1
Forb sp.	2	0	0	1
Grass sp.	2	0	0	1
Lathyrus ochroleucus	0	2	0	1
Pyrola sp.	0	0	2	1
Mitella nuda	0	1	0	pr
Viola sp.	0	1	0	pr
Pyrola asarifolia	0	0	1	pr
Mosses				
Ptilium crista-castrensis	2	0	0	1
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	5	0	1	2
Arctostaphylos uva-ursi	1	2	0	1
Rubus pubescens	2	0	0	1
Herbs				
Pyrola asarifolia	5	0	0	2
Mitella nuda	2	0	0	1
Mosses				
Moss sp.	2	2	2	2
Pleurozium schreberi	0	1	1	1
Dicranum sp.	0	0	1	pr
Hylocomium splendens	0	0	1	pr
Lichens				
Peltigera sp.	1	0	1	1
Lichen sp.	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-BD-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/14	94/06/14	94/06/14	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	50	50	50	50
Betula papyrifera	0	10	0	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	5	0	2
Linnaea borealis	0	2	0	1
Rubus idaeus	0	2	0	1
Arctostaphylos uva-ursi	0	1	0	pr [b]
Herbs				
Epilobium angustifolium	0	2	0	1
Gymnocarpium dryopteris	0	2	0	1
Maianthemum canadense	0	2	0	1
Carex sp.	1	0	0	pr
Equisetum sylvaticum	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Pleurozium schreberi	100	5	50	52
Sphagnum sp.	0	60	10	23
Hylocomium splendens	15	10	25	17
Polytrichum commune	0	20	5	8
Dicranum sp.	5	0	5	3
Lichens				
Cladina mitis	15	0	0	5
Peltigera aphthosa	10	0	2	4
Cladina stellaris	0	0	2	1

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK F-BI-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/25	94/08/25	94/08/25	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	2	2	5	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	pr [b]	pr	40	13
Picea mariana	1	0	5	2
Alnus sp.	0	2	0	1
Vaccinium myrtilloides	1	pr	0	pr
Rosa acicularis	1	0	0	pr
Herbs				
Cornus canadensis	0	pr	2	1
Forb sp.	pr	pr	0	pr
Epilobium angustifolium	0	pr	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium vitis-idaea	0	0	2	1
Mosses				
Pleurozium schreberi	80	80	40	67
Sphagnum sp.	0	0	30	10
Dicranum sp.	pr	pr	10	3
Hylocomium splendens	5	5	0	3
Ptilium crista-castrensis	0	pr	0	pr
Lichens				
Lichen sp.	pr	0	1	pr
Peltigera sp.	pr	pr	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-BM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/12	94/06/13	94/06/13	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	10	5	25	13
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	0	25	30	18
Ledum groenlandicum	50	0	0	17
Arctostaphylos uva-ursi	5	0	10	5
Vaccinium vitis-idaea	5	0	0	2
Herbs				
Equisetum arvense	10	0	0	3
Carex concinna	0	0	2	1
Lycopodium complanatum	0	0	2	1
Cornus canadensis	1	0	0	pr [b]
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Pleurozium schreberi	100	60	50	70
Hylocomium splendens	0	20	30	17
Ptilium crista-castrensis	0	20	0	7
Dicranum polysetum	0	0	10	3
Lichens				
Peltigera aphthosa	0	0	2	1
Cladina mitis	pr	0	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-BM-2 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/13	94/06/13	94/06/13	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	2	2	25	10
Populus tremuloides	5	0	0	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	10	0	0	3
Vaccinium sp.	5	2	0	2
Arctostaphylos uva-ursi	5	0	0	2
Salix bebbiana	2	0	0	1
Herbs				
Disporum trachycarpum	2	0	0	1
Campanula rotundifolia	0	1	0	pr [b]
Elymus innovatus	0	1	0	pr
Gymnocarpium dryopteris	0	1	0	pr
Thalictrum venulosum	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Pleurozium schreberi	15	10	0	8
Dicranum polysetum	10	5	0	5
Brachythecium salebrosum	0	0	5	2
Dicranoweisia crispula	0	0	5	2
Polytrichum commune	0	1	0	pr
Lichens				
Cladina mitis	60	50	40	50
Cladina stellaris	0	5	20	8
Cladonia deformis	0	0	5	2
Peltigera didactyla	2	0	0	1
Peltigera malacea	2	0	0	1
Cladonia cervicornis	0	1	0	pr
Cladonia cornuta	0	1	0	pr
Cladonia borealis	0	0	1	pr
Stereocaulon sp.	0	0	1	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK F-BM-3 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/29	94/08/29	94/08/29	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	0	0	50	17
Picea mariana	2	5	0	2
Salix sp.	0	5	0	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	0	2	10	4
Vaccinium myrtilloides	0	10	1	4
Rosa acicularis	0	5	2	2
Alnus sp.	0	0	5	2
Vaccinium vitis-idaea	1	1	1	1
Larix laricina	0	1	0	pr [b]
Rubus pubescens	0	0	1	pr
Herbs				
Grass sp.	1	1	15	6
Epilobium angustifolium	0	2	5	2
Cornus canadensis	0	5	0	2
Equisetum sp.	1	1	0	1
Petasites palmatus	1	1	0	1
Maianthemum canadense	0	1	1	1
Achillea millefolium	0	1	0	pr
Forb sp.	0	1	0	pr
Fragaria vesca	0	1	0	pr
Galium boreale	0	1	0	pr
Heuchera richardsonii	0	1	0	pr
Lathyrus ochroleucus	0	1	0	pr
Mitella nuda	0	0	1	pr
Pyrola asarifolia	0	0	1	pr
Trientalis borealis	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Herbs				
Mitella nuda	1	0	0	pr
Mosses				
Pleurozium schreberi	30	75	30	45
Hylocomium splendens	35	10	5	17
Ptilium crista-castrensis	10	0	1	4
Dicranum sp.	2	2	2	2
Lichens				
Cladina sp.	1	2	0	1
Lichen sp.	1	0	0	pr
Peltigera sp.	1	0	0	pr
Peltigera aphthosa	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-JD-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/15	94/06/15	94/06/15	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	0	20	0	7
Picea mariana	1	0	10	4
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	55	15	25	32
Alnus crispa	0	30	0	10
Salix bebbiana	5	0	0	2
Betula papyrifera	2	0	0	1
Populus tremuloides	2	0	0	1
Herbs				
Lycopodium annotinum	0	25	0	8
Carex sp.	0	2	0	1
Vicia sp.	0	1	0	pr [b]
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Polytrichum commune	40	5	50	32
Moss sp.	2	5	0	2
Ptilium crista-castrensis	0	1	0	pr
Lichens				
Cladonia sp.	2	3	0	2
Lichen sp.	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-JM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/11	94/06/11	94/06/11	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	0	15	pr [b]	5
Picea glauca	2	0	0	1
Populus tremuloides	2	0	0	1
Betula papyrifera	0	0	pr	pr
Larix laricina	0	0	pr	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Rosa acicularis	20	0	0	7
Ledum groenlandicum	0	0	10	3
Viburnum edule	5	0	0	2
Picea mariana	0	0	5	2
Linnaea borealis	2	0	0	1
Herbs				
Fragaria virginiana	5	0	0	2
Mitella nuda	5	0	0	2
Carex concinna	2	0	0	1
Cornus canadensis	2	0	0	1
Disporum trachycarpum	2	0	0	1
Calamagrostis canadensis	1	0	0	pr
Epilobium angustifolium	1	0	0	pr
Equisetum arvense	1	0	0	pr
Equisetum sylvaticum	1	0	0	pr
Mertensia paniculata	1	0	0	pr
Petasites palmatus	1	0	0	pr
Pyrola asarifolia	1	0	0	pr
Trientalis borealis	1	0	0	pr
Forb sp.	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Pleurozium schreberi	10	75	80	55
Hylocomium splendens	5	0	10	5
Moss sp.	0	5	0	2
Ptilium crista-castrensis	0	5	0	2
Polytrichum commune	2	0	0	1
Lichens				
Cladina mitis	0	10	0	3
Cladina stellaris	0	5	0	2
Lichen sp.	0	2	0	1
Cladonia sp.	1	0	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-JM-2 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/12	94/06/12	94/06/12	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus crispa	0	0	30	10
Betula papyrifera	0	2	25	9
Picea mariana	0	2	0	1
Abies balsamea	pr [b]	0	0	pr
Salix glauca	pr	0	0	pr
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	40	0	0	13
Vaccinium sp.	0	40	0	13
Arctostaphylos uva-ursi	0	10	10	7
Vaccinium vitis-idaea	0	0	5	2
Linnaea borealis	1	0	2	1
Herbs				
Elymus sp.	0	0	5	2
Elymus innovatus	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Mosses				
Pleurozium schreberi	70	2	75	49
Dicranum polysetum	5	10	2	6
Lichens				
Cladina mitis	2	30	5	12
Cladina stellaris	0	10	5	5
Lichen sp.	4	0	0	1
Peltigera sp.	0	2	0	1
Cladina sp.	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK F-JM-4 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/28	94/08/28	94/08/28	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	0	5	0	2
Betula papyrifera	0	0	5	2
Pinus banksiana	1	1	0	1
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Vaccinium myrtilloides	10	1	2	4
Picea mariana	0	2	2	1
Herbs				
Grass sp.	1	0	0	pr [b]
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	5	0	1	2
Mosses				
Pleurozium schreberi	20	2	25	16
Dicranum sp.	10	17	1	9
Moss sp.	0	1	2	1
Lichens				
Cladina sp.	40	81	26	49
Lichen sp.	5	5	1	4
Peltigera sp.	1	1	1	1
Cladonia borealis	1	0	1	1

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-JM-5 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/30	94/08/30	94/08/30	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Salix sp.	15	2	0	6
Alnus sp.	5	0	0	2
Picea mariana	0	2	2	1
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	2	10	0	4
Vaccinium vitis-idaea	1	1	5	2
Vaccinium myrtilloides	5	0	1	2
Rosa acicularis	2	0	0	1
Linnaea borealis	0	1	1	1
Salix sp.	0	0	1	pr [b]
Herbs				
Grass sp.	10	2	5	6
Epilobium angustifolium	5	0	2	2
Equisetum sp.	1	0	2	1
Petasites palmatus	1	0	2	1
Forb sp.	1	0	1	1
Fragaria vesca	0	0	1	pr
Lathyrus sp.	0	0	1	pr
Solidago sp.	0	0	1	pr
Lichens				
Peltigera aphthosa	0	0	2	1
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Herbs				
Cornus canadensis	0	0	5	2
Maianthemum canadense	0	0	1	pr
Mosses				
Pleurozium schreberi	60	60	45	55
Hylocomium splendens	20	15	20	18
Dicranum sp.	5	1	5	4
Lichens				
Peltigera aphthosa	5	1	0	2
Peltigera sp.	1	0	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK F-M-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/08/26	94/08/26	94/08/26	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Alnus sp.	25	20	25	23
Picea mariana	2	5	2	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus sp.	40	15	40	32
Picea mariana	2	0	10	4
Ledum groenlandicum	0	5	0	2
Vaccinium vitis-idaea	0	0	5	2
Vaccinium myrtilloides	2	1	0	1
Populus tremuloides	2	0	0	1
Rubus pubescens	pr [b]	0	0	pr
Herbs				
Lycopodium sp.	0	0	80	27
Aralia nudicaulis	10	0	10	7
Equisetum sp.	0	0	5	2
Epilobium angustifolium	0	pr	2	1
Forb sp.	1	0	0	pr
Pyrola asarifolia	pr	0	0	pr
Pyrola sp.	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	2	0	0	1
Vaccinium vitis-idaea	0	2	0	1
Mosses				
Pleurozium schreberi	5	10	65	27
Dicranum sp.	pr	4	0	1
Hylocomium splendens	2	0	0	1
Ptilium crista-castrensis	0	0	2	1
Moss sp.	pr	0	0	pr
Lichens				
Lichen sp.	pr	pr	0	pr
Cladina sp.	pr	0	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK M-BD-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/31	94/07/10	94/07/10	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Picea mariana	0	25	40	22
Salix bebbiana	0	0	10	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Picea mariana	15	5	0	7
Ledum groenlandicum	5	0	0	2
Salix sp.	0	0	5	2
Lonicera sp.	1	0	0	pr [b]
Ribes triste	0	1	0	pr
Herbs				
Carex vaginata	0	10	5	5
Forb sp.	0	5	0	2
Petasites palmatus	0	2	2	1
Equisetum sp.	0	2	0	1
Maianthemum canadense	0	0	2	1
Calypso bulbosa	0	1	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	1	1	0	1
Vaccinium vitis-idaea	1	0	0	pr
Herbs				
Mitella nuda	1	2	0	1
Carex sp.	1	0	0	pr
Cornus canadensis	1	0	0	pr
Equisetum scirpoides	1	0	0	pr
Fragaria vesca	1	0	0	pr
Fragaria virginiana	0	0	1	pr
Mosses				
Hylocomium splendens	20	50	20	30
Sphagnum sp.	1	30	30	20
Moss sp.	55	0	0	18
Polytrichum sp.	5	0	25	10
Aulacomnium palustre	0	10	20	10
Pleurozium schreberi	10	5	0	5
Lichens				
Peltigera aphthosa	1	0	2	1
Cladina sp.	1	0	0	pr
Cladonia sp.	1	0	0	pr
Peltigera sp.	1	0	0	pr

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK NI-J-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/06/26	94/06/26	94/06/26	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Pinus banksiana	0	0	5	2
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Herbs				
Thermopsis rhombifolia	15	7	2	8
Aster sp.	1	pr [b]	1	1
Solidago sp.	1	0	1	1
Carex sp.	0	0	2	1
Apocynum androsaemifolium	0	0	1	pr
Equisetum sp.	0	0	1	pr
Festuca sp.	0	0	1	pr
Forb sp.	0	0	1	pr
Galium boreale	0	0	1	pr
Gentiana sp.	0	0	1	pr
Grass sp.	0	0	1	pr
Maianthemum canadense	0	0	1	pr
Smilacina stellata	0	0	1	pr
Viola sp.	0	0	1	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	20	60	25	35
Herbs				
Maianthemum canadense	0	15	0	5
Apocynum androsaemifolium	7	pr	0	2
Galium boreale	5	pr	0	2
Grass sp.	5	0	0	2
Ranunculus sp.	3	0	0	1
Equisetum sp.	0	pr	0	pr
Mosses				
Pleurozium schreberi	0	3	0	1
Dicranum sp.	1	0	0	pr
Dicranum polysetum	0	pr	0	pr
Lichens				
Cladina mitis	30	30	0	20
Cladina sp.	0	0	50	17

[a] na = not applicable.

[b] pr = present.

SITE CODE: SASK PA-BM-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/30	94/05/31	94/05/31	na [a]
1.5 to 2.5 m height layer				
No vegetation present in this height class.				
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Ledum groenlandicum	pr [b]	0	0	pr
Picea mariana	pr	0	0	pr
Rosa acicularis	pr	0	0	pr
Betula papyrifera	0	0	pr	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	2	0	0	1
Mosses				
Hylocomium splendens	40	30	30	33
Pleurozium schreberi	30	30	30	30
Ptilium crista-castrensis	20	30	30	27
Dicranum polysetum	0	20	5	8
Polytrichum sp.	5	0	0	2
Moss sp.	pr	0	0	pr
Lichens				
Peltigera aphthosa	0	5	0	2
Cladina mitis	pr	0	0	pr
Lichen sp.	pr	0	0	pr
Peltigera sp.	pr	0	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK PA-M-1 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/29	94/05/30	94/05/30	na [a]
1.5 to 2.5 m height layer				
Sample plot size (m)	5x5	5x5	5x5	na
Shrubs				
Corylus cornuta	0	35	0	12
Abies balsamea	0	10	0	3
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	0	0	80	27
Corylus cornuta	20	20	0	13
Abies balsamea	0	0	10	3
Rosa acicularis	1	0	0	pr [b]
Viburnum edule	1	0	0	pr
Rubus sp.	0	1	0	pr
Herbs				
Mertensia paniculata	0	5	0	2
Forb sp.	pr	0	0	pr
Smilacina stellata	pr	0	0	pr
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Arctostaphylos uva-ursi	0	5	0	2
Linnaea borealis	pr	0	1	pr
Ribes triste	0	0	1	pr
Viburnum edule	0	0	1	pr
Rubus sp.	pr	0	0	pr
Herbs				
Lycopodium sp.	0	5	20	8
Maianthemum canadense	0	5	pr	2
Cornus canadensis	pr	1	1	1
Forb sp.	1	0	0	pr
Petasites sp.	1	0	0	pr
Pyrola asarifolia	0	1	0	pr
Galium triflorum	0	0	pr	pr
Mitella nuda	0	0	pr	pr
Mosses				
Pleurozium schreberi	1	5	2	3
Moss sp.	pr	3	4	2
Hylocomium splendens	5	0	2	2
Lichens				
Lichen sp.	0	5	pr	2
Peltigera sp.	0	1	0	pr

[a] na = not applicable.
[b] pr = present.

SITE CODE: SASK PA-M-2 (1) Transect Site

Understory vegetation, percentage cover

Parameter	Plot 1	Plot 2	Plot 3	Average
Date of measurements (y/m/d)	94/05/29	94/05/29	94/05/29	na [a]
1.5 to 2.5 m height layer				
No vegetation present in this height class.				
0.05 to 1.5 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Alnus crispa	85	0	35	40
Viburnum edule	5	5	10	7
Rosa acicularis	5	5	7	6
Ribes sp.	0	0	10	3
Lonicera dioica	0	5	0	2
Vaccinium sp.	0	5	0	2
Betula papyrifera	0	0	2	1
Corylus cornuta	0	0	2	1
Populus tremuloides	1	0	0	pr [b]
Herbs				
Pyrola asarifolia	0	5	0	2
Aster sp.	0	0	2	1
0 to 0.05 m height layer				
Sample plot size (m)	2x2	2x2	2x2	na
Shrubs				
Linnaea borealis	15	15	0	10
Herbs				
Cornus canadensis	10	1	3	5
Pyrola asarifolia	3	0	5	3
Petasites palmatus	0	0	2	1
Maianthemum canadense	1	0	0	pr
Smilacina stellata	0	1	0	pr
Epilobium angustifolium	0	0	1	pr
Unidentified	pr	0	0	pr
Mosses				
Moss sp.	pr	2	pr	1
Dicranum sp.	0	1	0	pr
Hylocomium splendens	0	1	0	pr
Polytrichum sp.	0	0	pr	pr
Lichens				
Lichen sp.	pr	2	0	1
Peltigera aphthosa	0	0	2	1
Cladonia sp.	0	0	pr	pr
Peltigera sp.	0	0	pr	pr

[a] na = not applicable.

[b] pr = present.