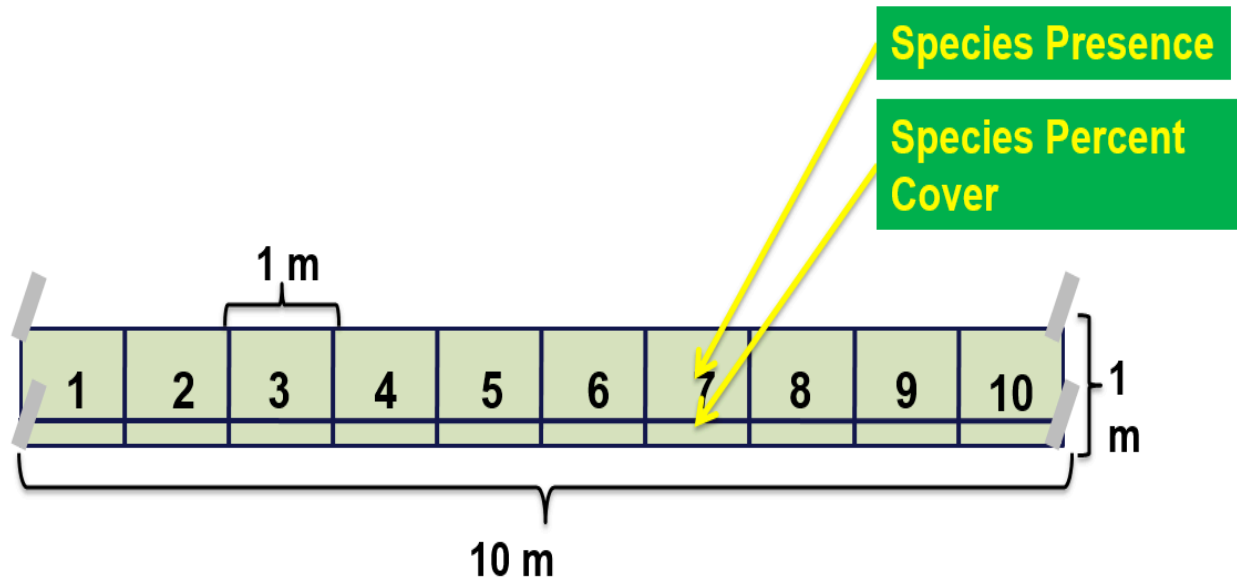


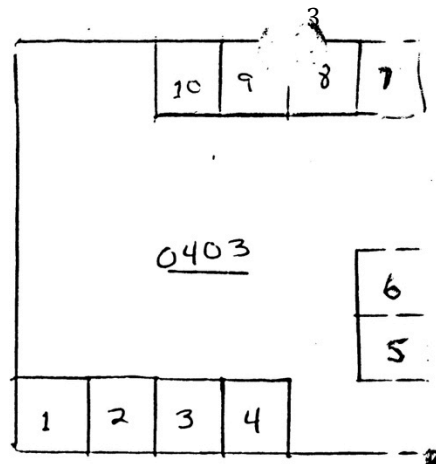
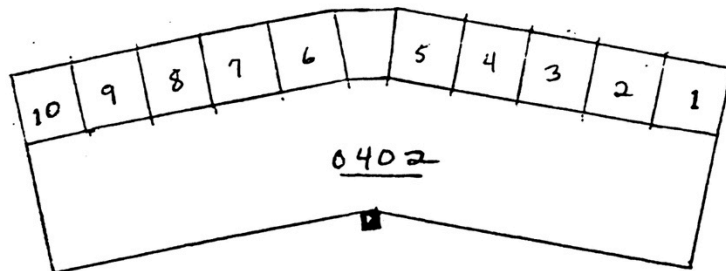
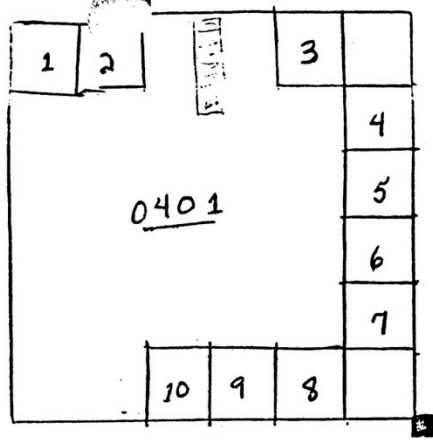
**Barrow – IBP Tundra Biome Vegetation Data**  
**Vegetation plot photos**  
(Webber 1978; Villarreal et al. 2012)

\*The following 3 pages show how 1 x 1 m subplots are oriented within larger 1 x 10 m plots. Some of these plots are irregular and are shown in the drawings on pages 3 & 4 shared by Patrick Webber.

\*\*Not all plots were photographed in all years. Sampling was accomplished in 1972, 1999, 2008 and 2010, while photographs were taken in 1972, 2000 and 2010.

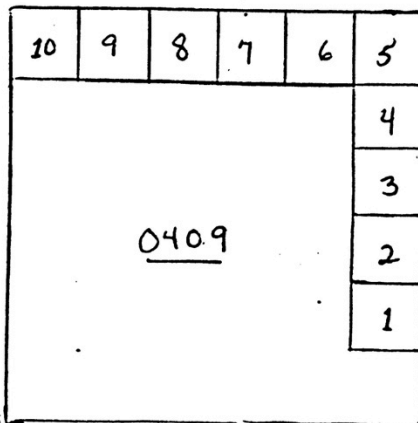
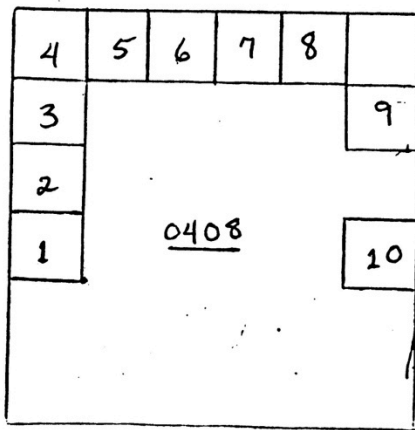
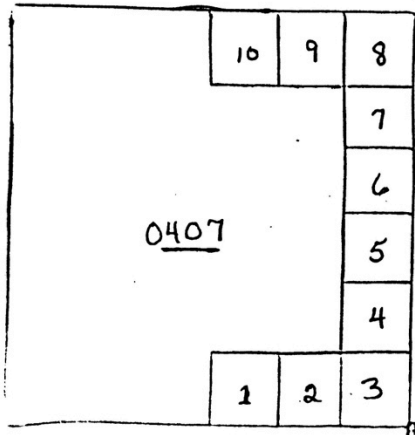
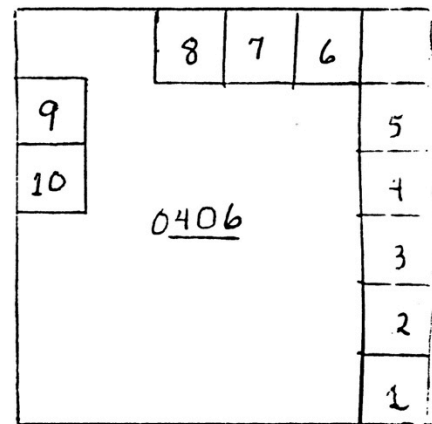
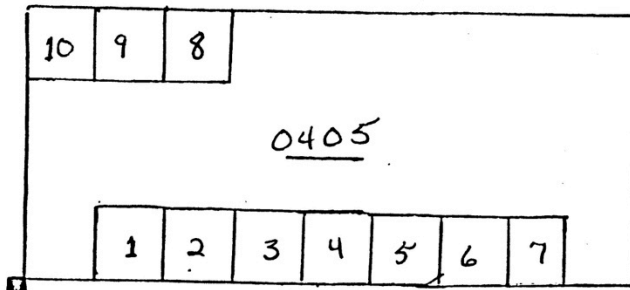
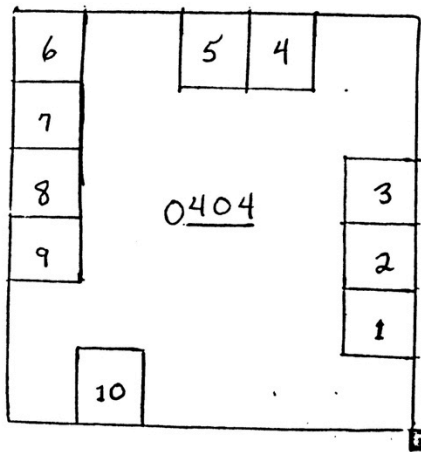
Each plot is divided into 10 subplots in which species percent cover is visually estimated in the 1 m x 10 cm strip, and species presence in the larger 1 m x 90 cm strip. Drawings of irregular plots are shown in the next two pages.





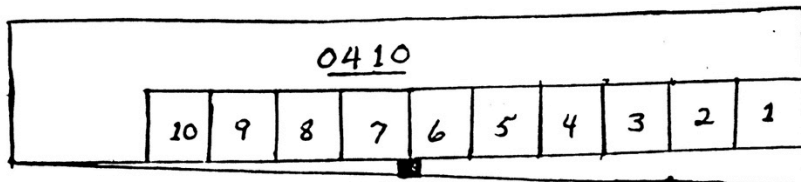
ORDINATION  
PLOTS ON SITE 4

1972



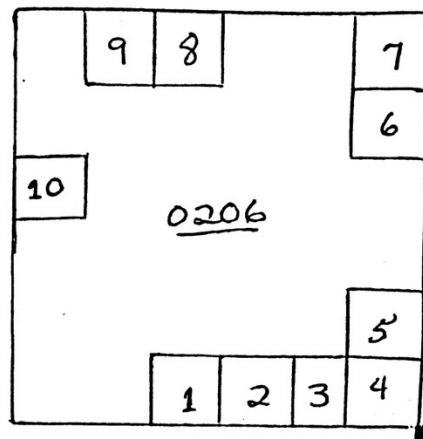
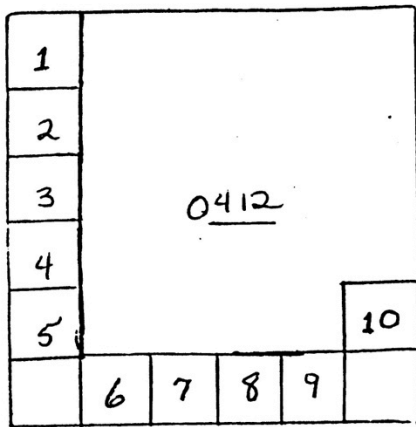
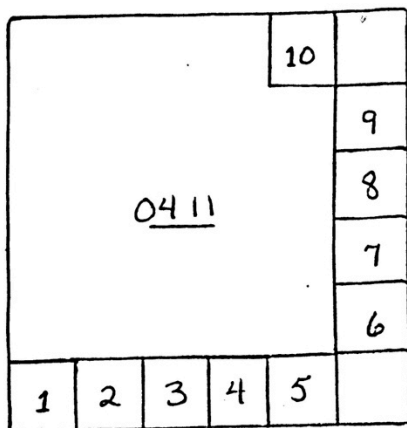
SCALE:  
1 CENTIMETER = 1 METRE

□ = wood stake  
in North corner  
of plot.



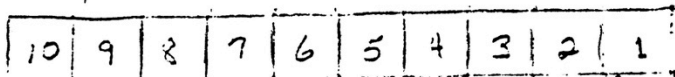
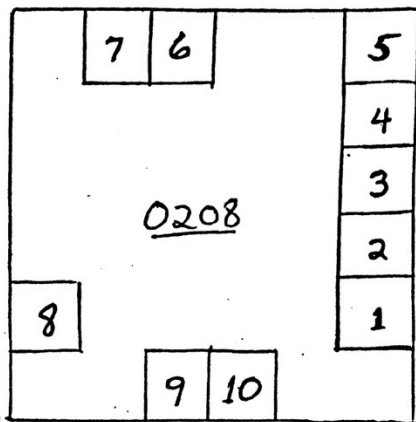
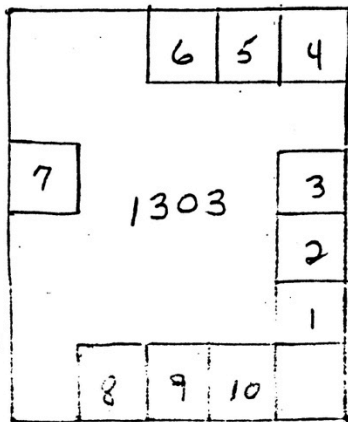
ORDINATION  
PLOTS ON SITE 2

1972



ELSEWHERE  
ORDINATION PLOTS (standard)

ON SITE 1 (1301), SITE 2 (1304),  
SITE 3 (0315, 0316, 1302, 1305),  
FOOT PRINT CREEK (1326), SITE 4  
(1324, 1325, <sup>0431</sup>1313), SITE 12 (1314, 1315, 1316,  
1317, 1318, 1319), VOTH CREEK (1320, 1321,  
1322, 1323), GASLINE RIDGE (1306, 1307,  
1308, 1309) + MEADOW (1310, 1311, 1312, 1313)



Plot 43 in Webster  
numbering is 0413 aka 0431.



South



North



2010

South



2010

North

2010



Subplot 1



Subplot 2



Subplot 3



Subplot 4



Subplot 5



Subplot 6



Subplot 7



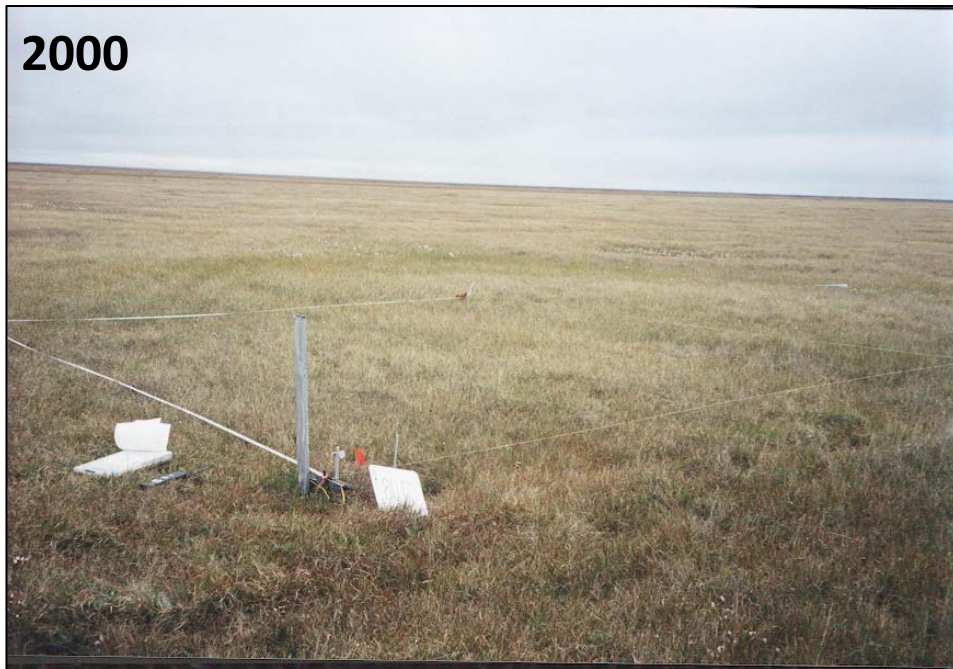
Subplot 8



Subplot 9



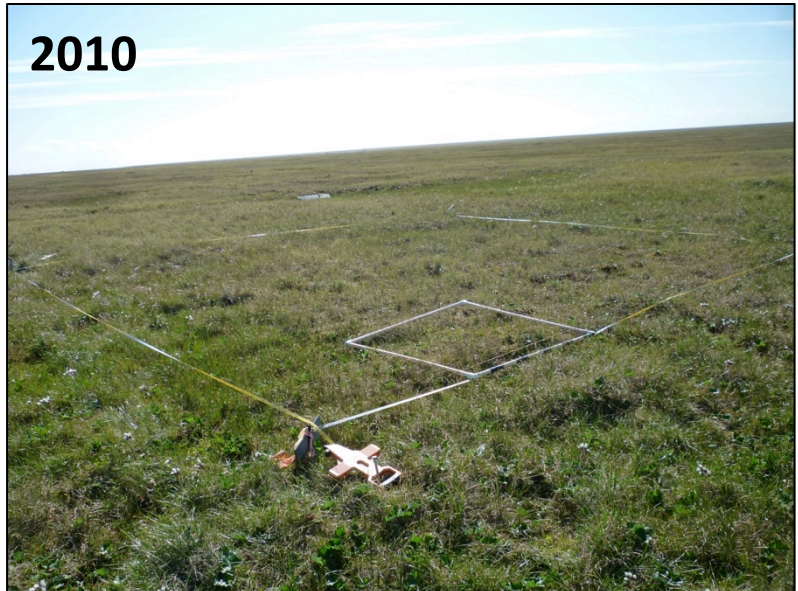
Subplot 10



South



North



South

North

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

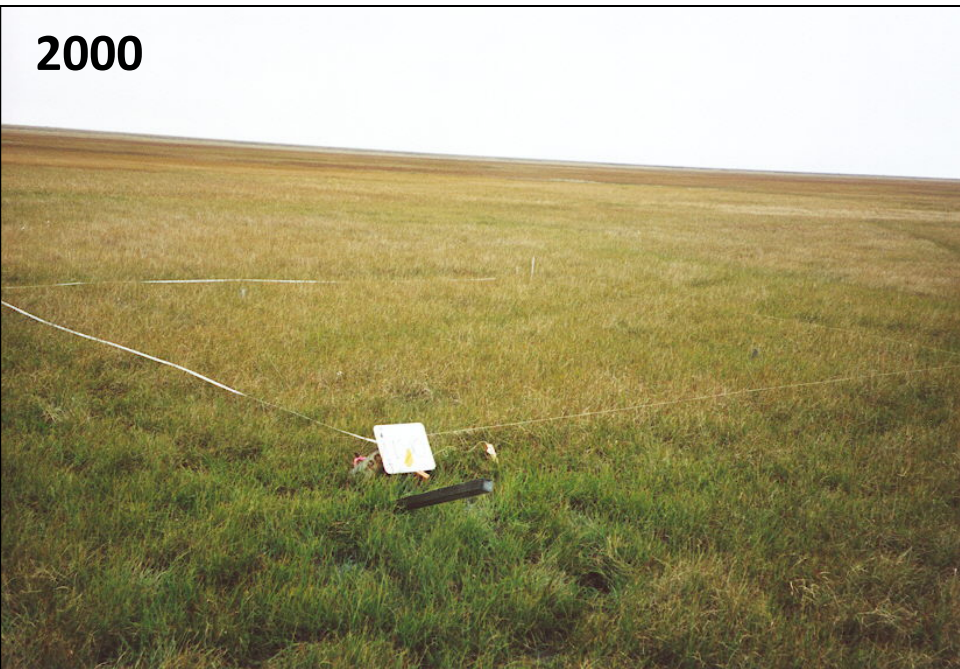
Subplot 7

Subplot 8

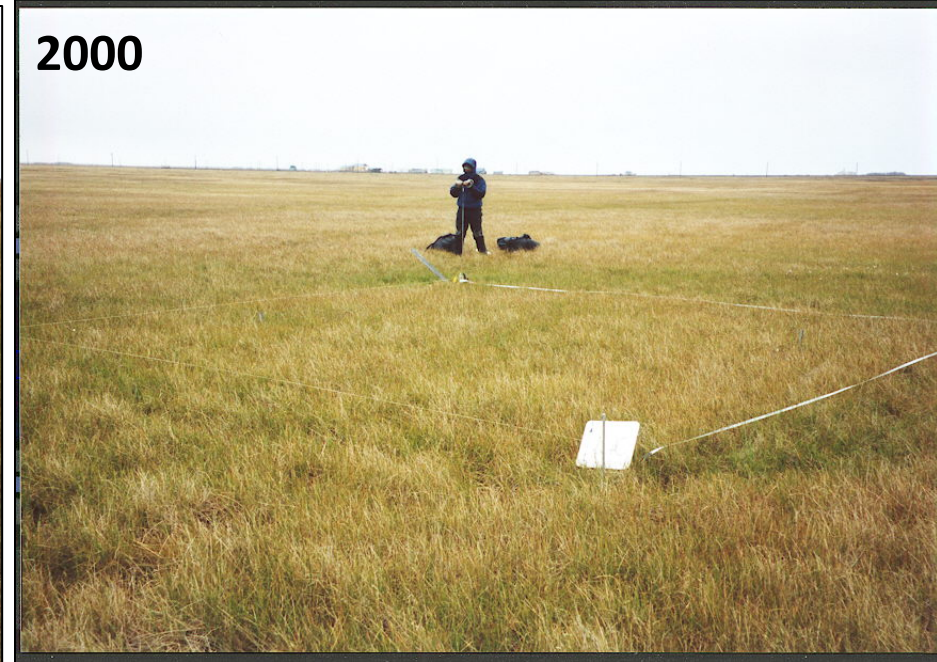
Subplot 9

Subplot 10



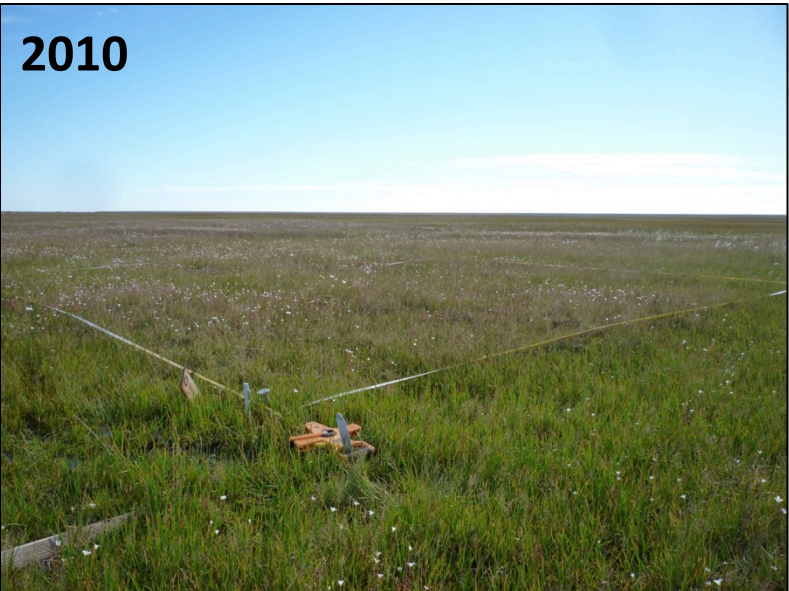


South

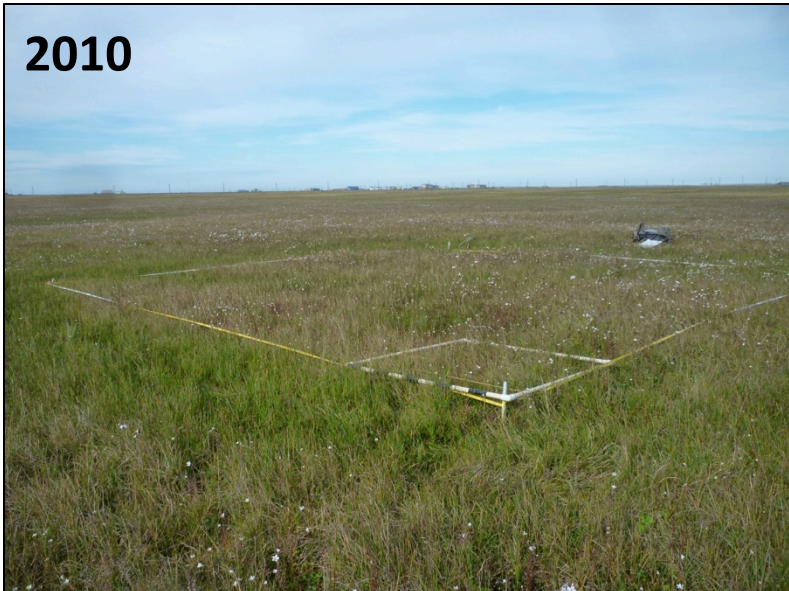


North

Subplots irregular within a 6 x 6 meter plot



South



North

2010



Subplot 1



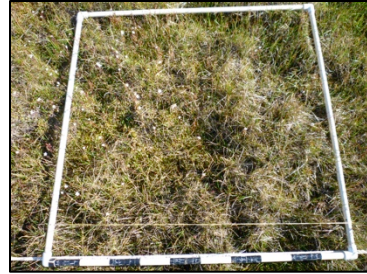
Subplot 2



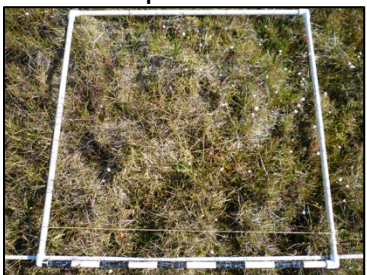
Subplot 3



Subplot 4



Subplot 5



Subplot 6



Subplot 7



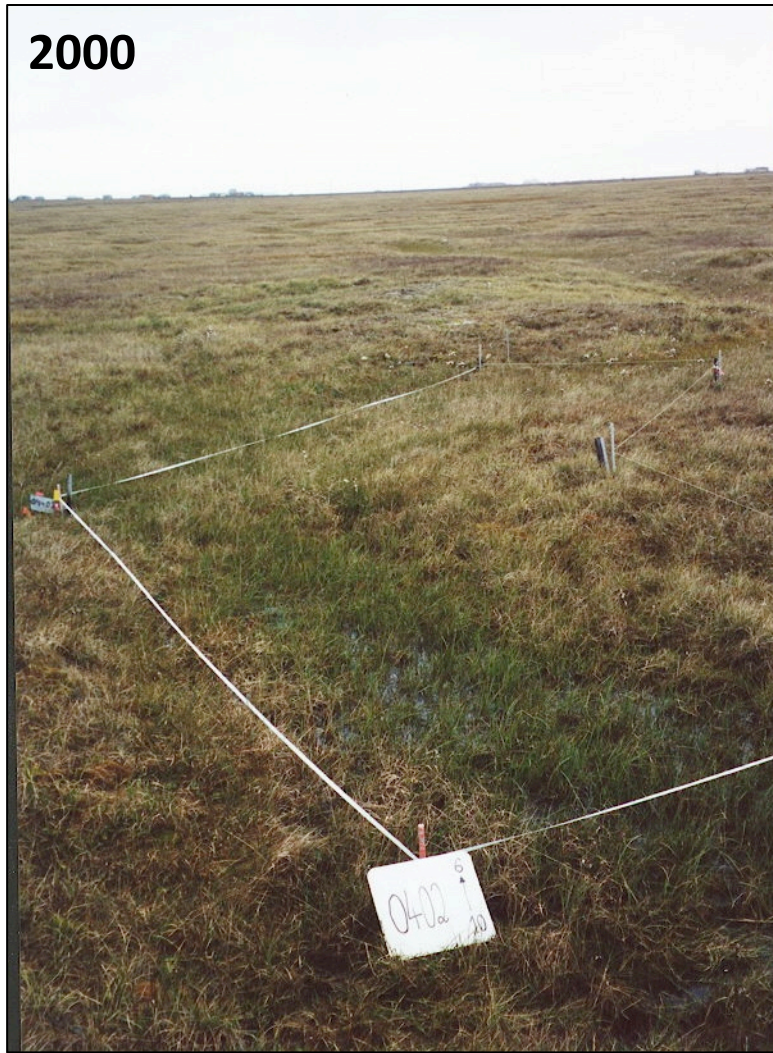
Subplot 8



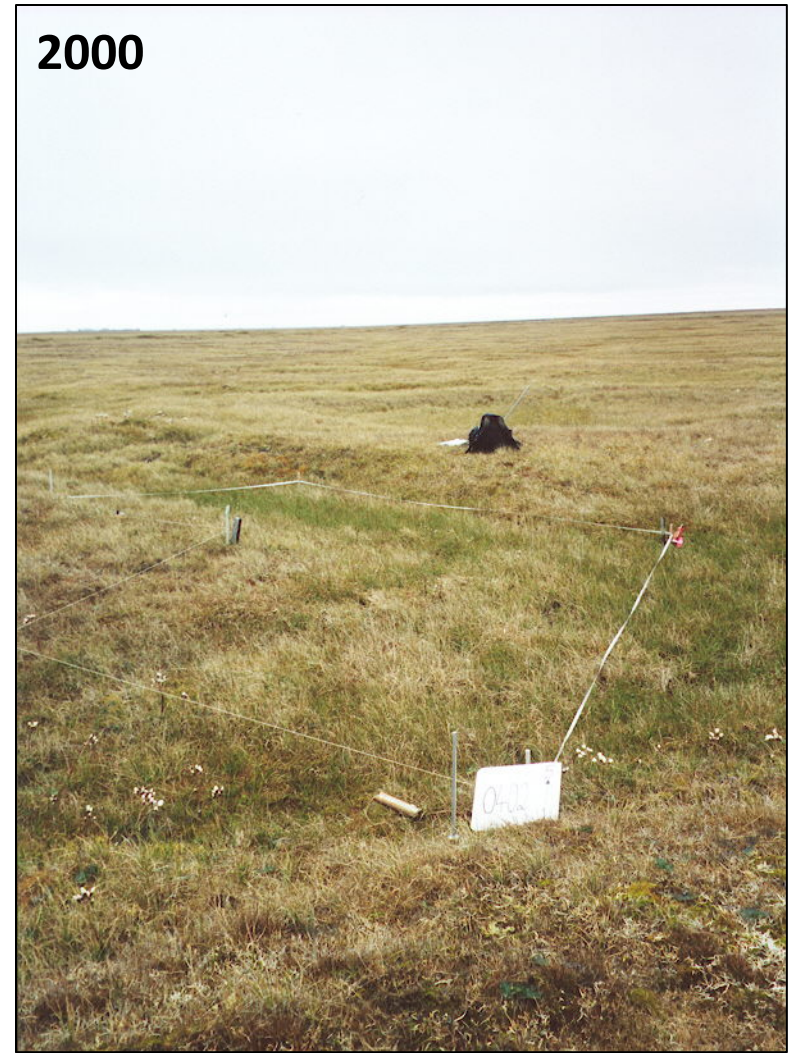
Subplot 9



Subplot 10



South



North



2010

South



2010

North

2010



Subplot 1



Subplot 2



Subplot 3



Subplot 4



Subplot 5



Subplot 6



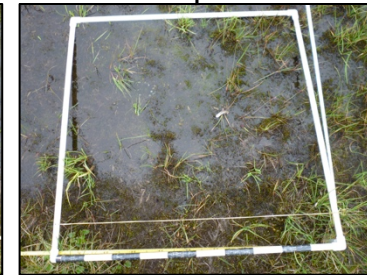
Subplot 7



Subplot 8



Subplot 9



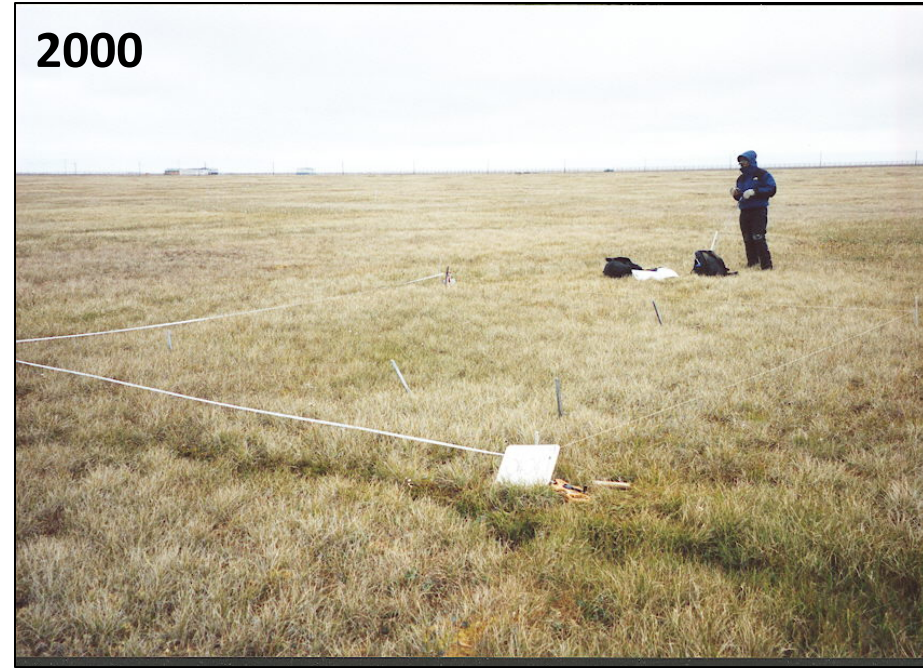
Subplot 10

2000



South

2000

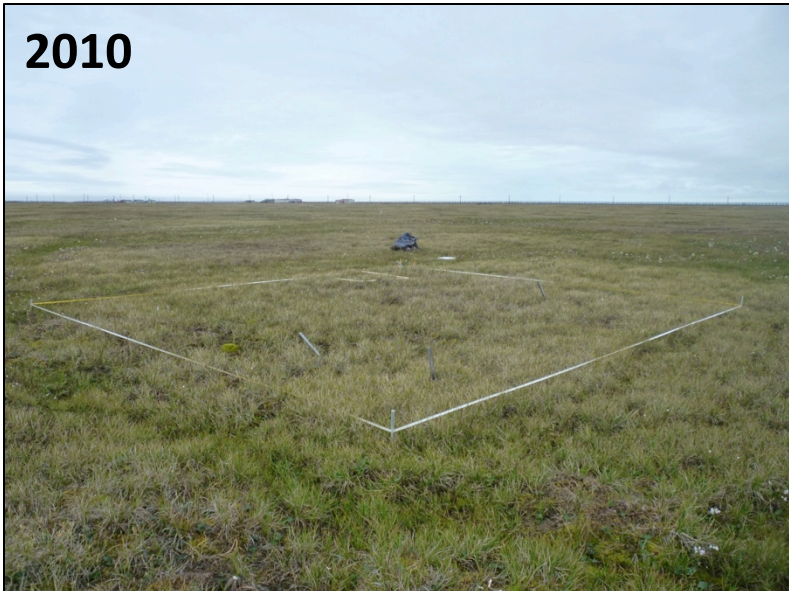


North



2010

South



2010

North

2010



Subplot 1



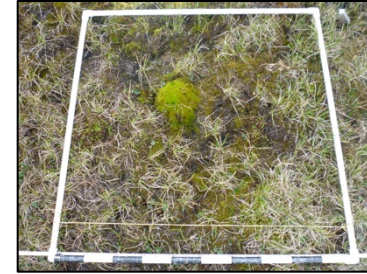
Subplot 2



Subplot 3



Subplot 4



Subplot 5



Subplot 6



Subplot 7



Subplot 8



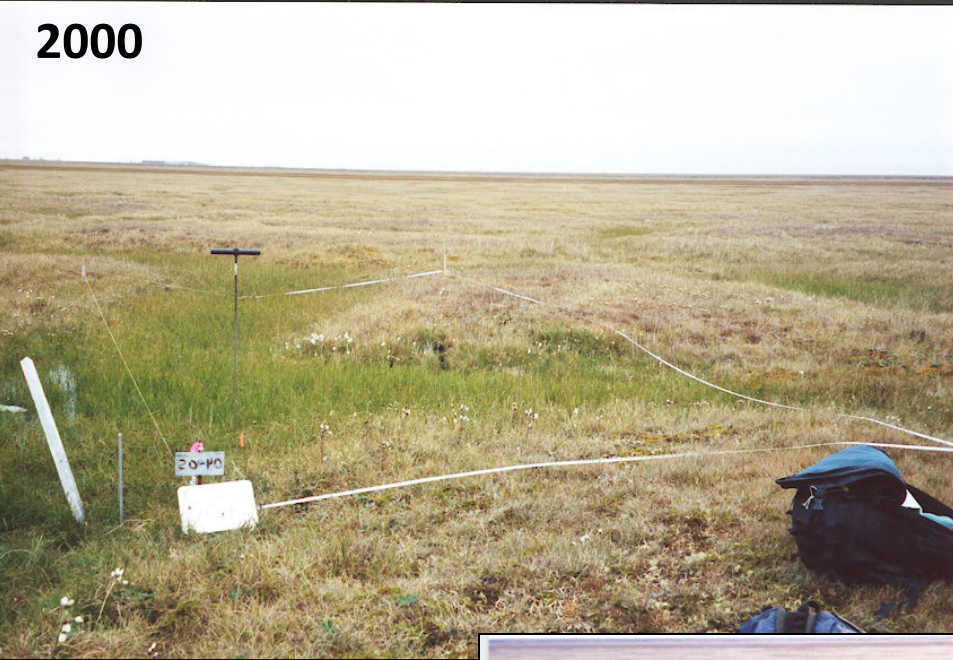
Subplot 9



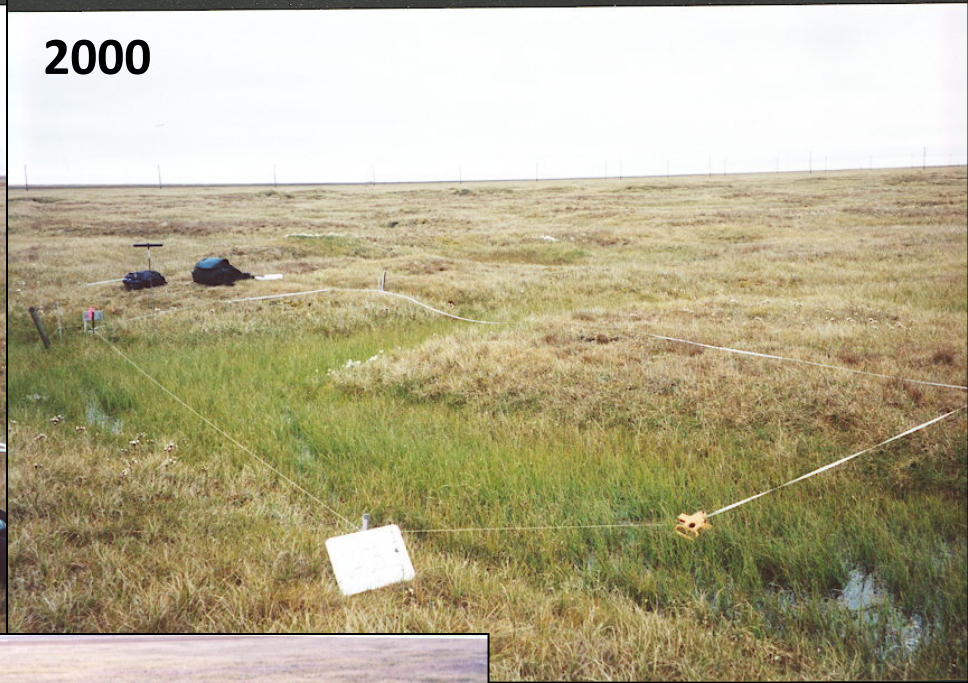
Subplot 10



2000



2000



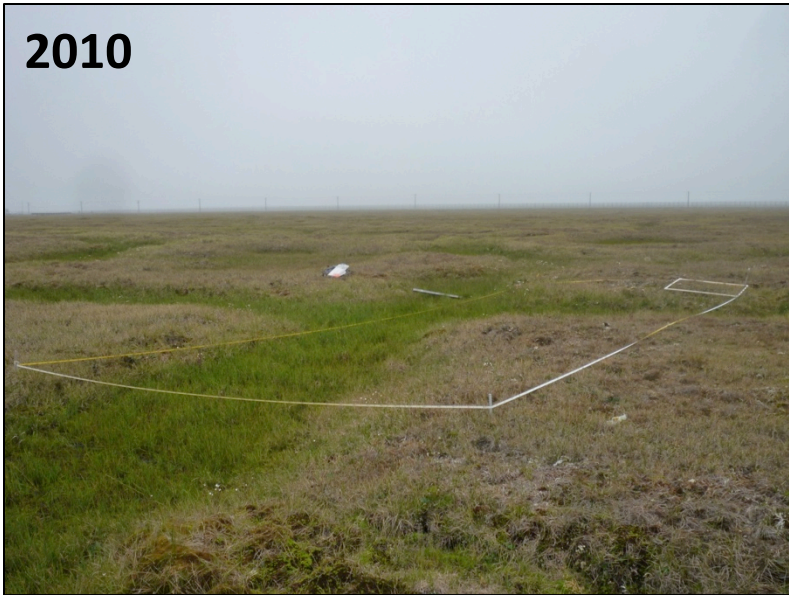
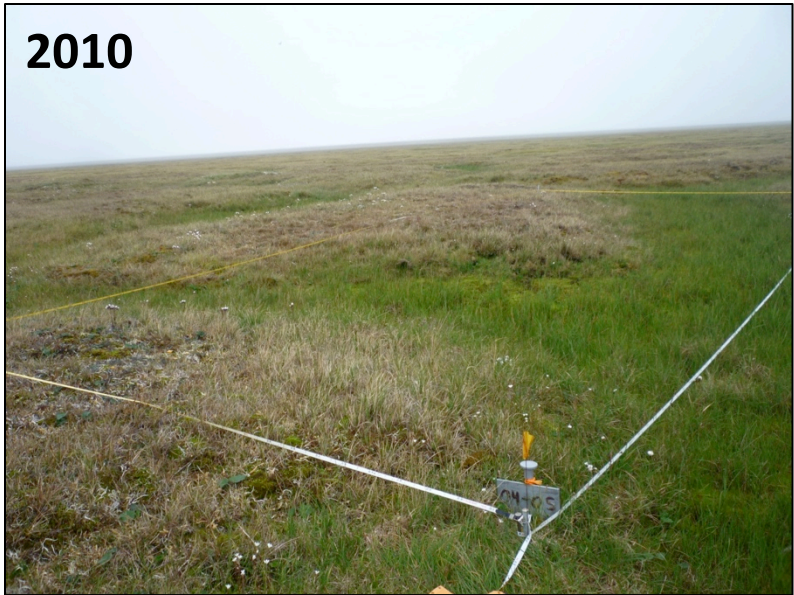
South

2000



North

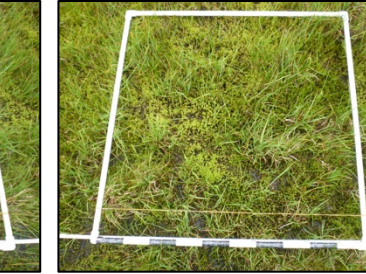




South

North

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

Subplot 7

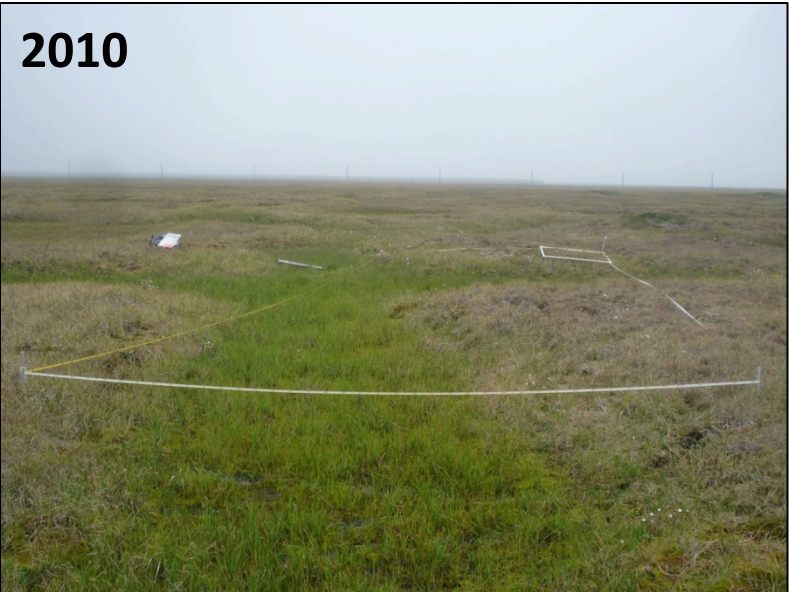
Subplot 8

Subplot 9

Subplot 10



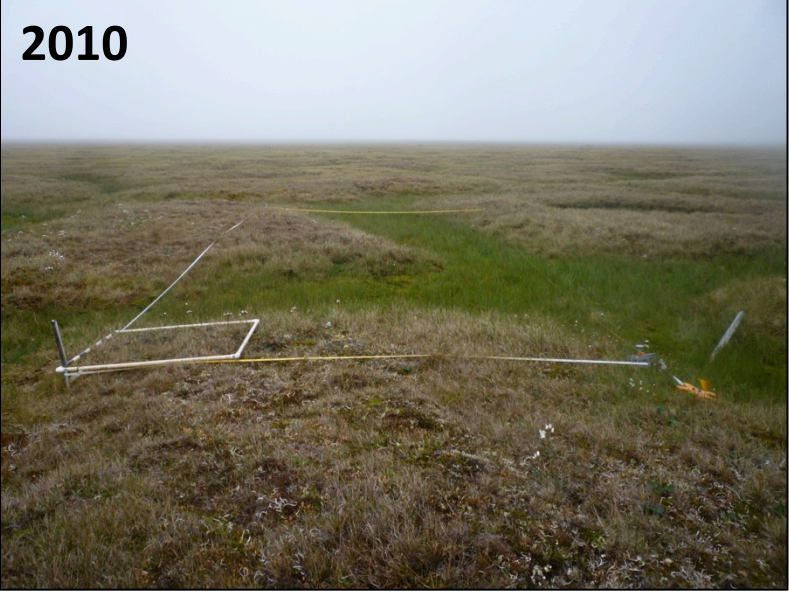
Repeat photo



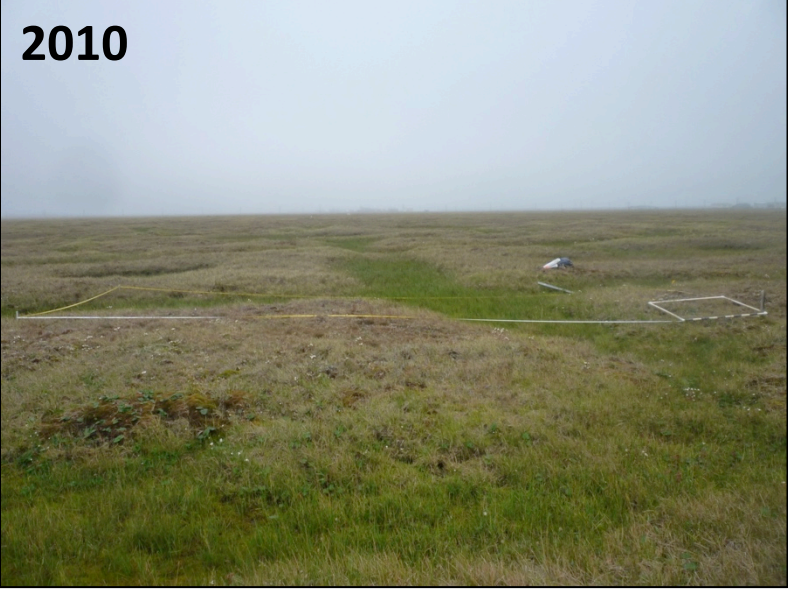
Side 1



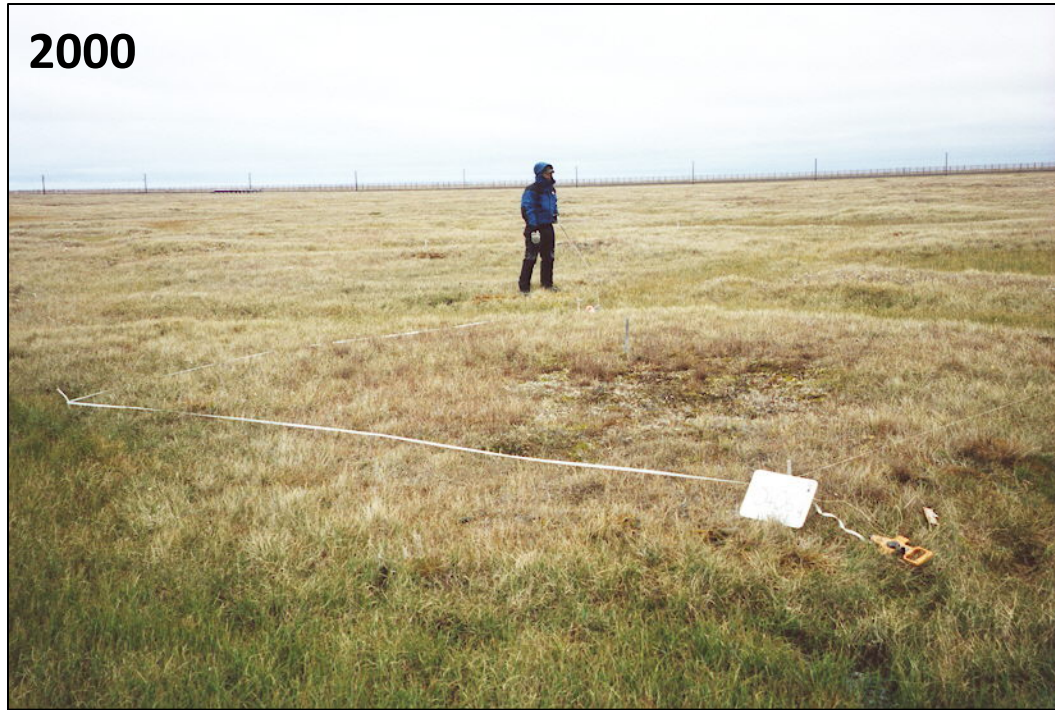
Side 2



Side 3



Slide 4

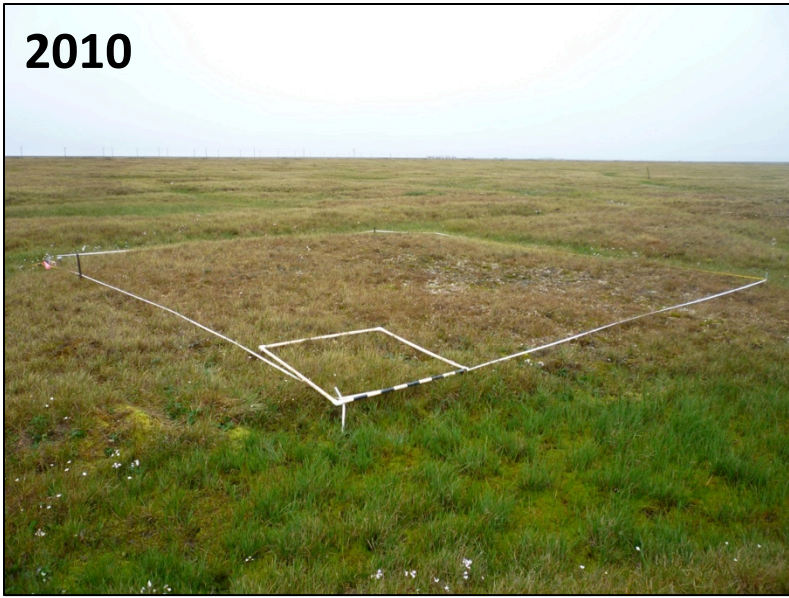


South



2010

South



2010

North

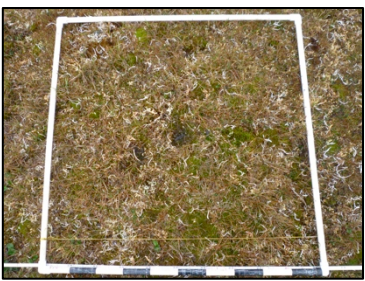
2010



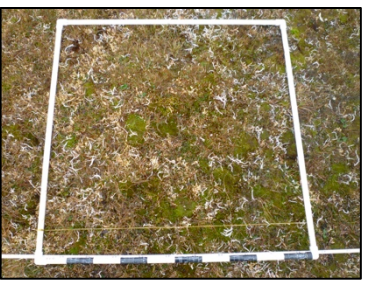
Subplot 1



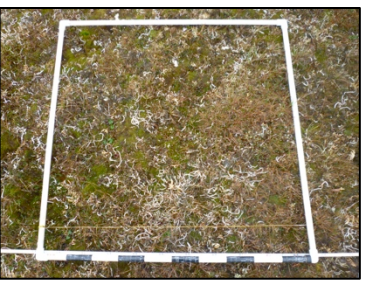
Subplot 2



Subplot 3



Subplot 4



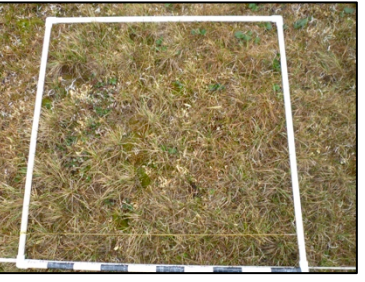
Subplot 5



Subplot 6



Subplot 7



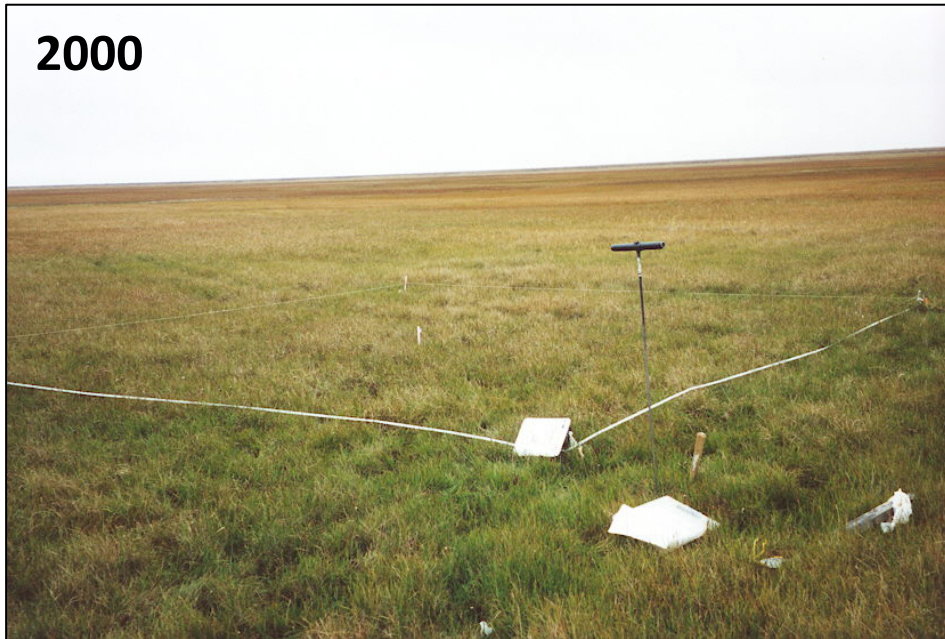
Subplot 8



Subplot 9



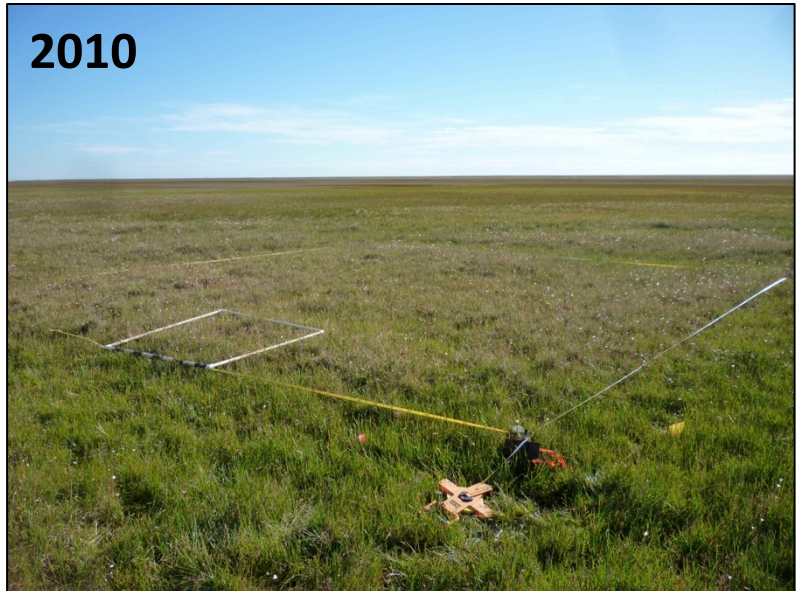
Subplot 10



South



North



South



North

2010



Subplot 1



Subplot 2



Subplot 3



Subplot 4



Subplot 5



Subplot 6



Subplot 7



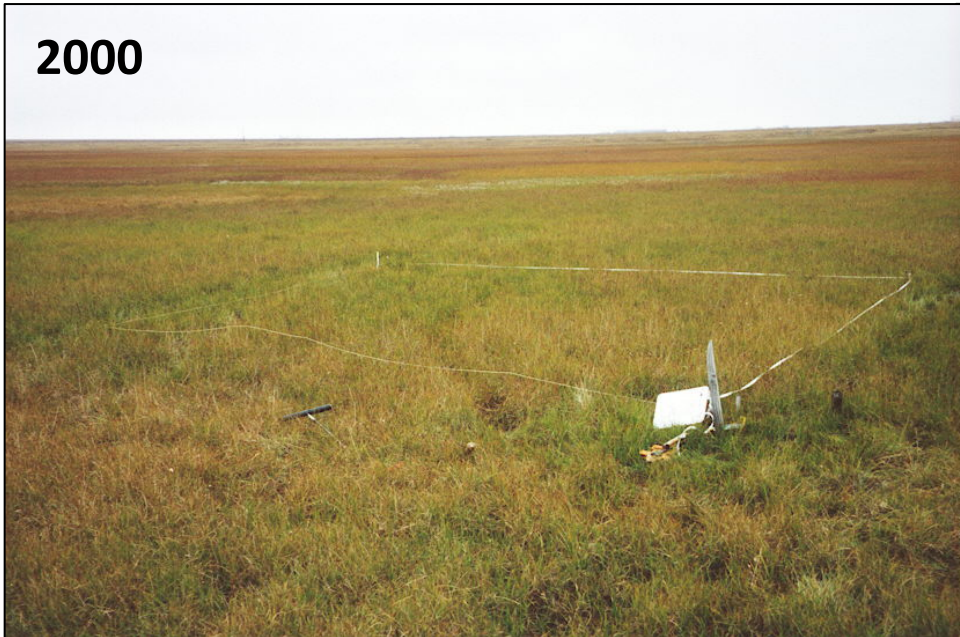
Subplot 8



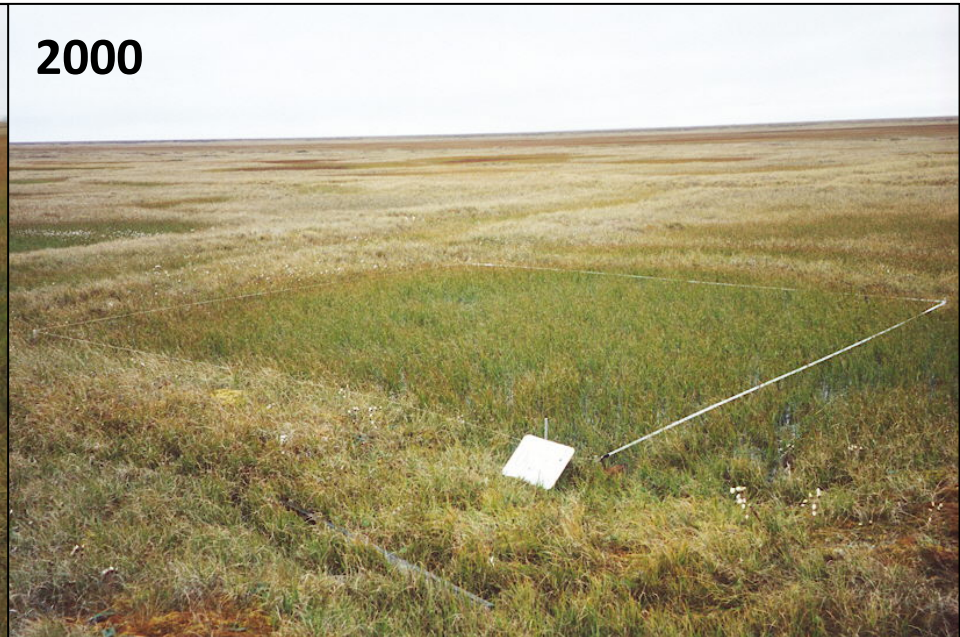
Subplot 9



Subplot 10



South

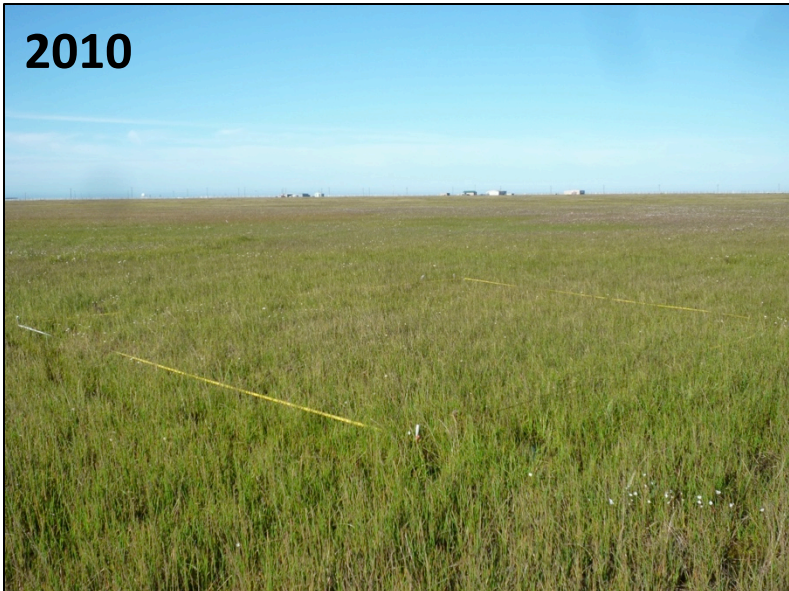


North



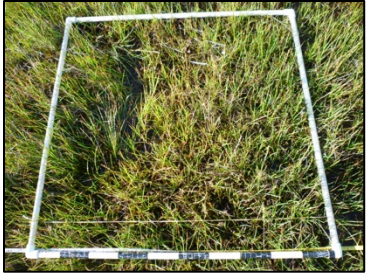


South



North

2010



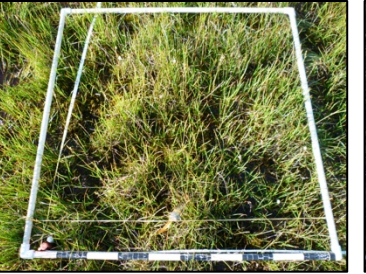
Subplot 1



Subplot 2



Subplot 3



Subplot 4



Subplot 5



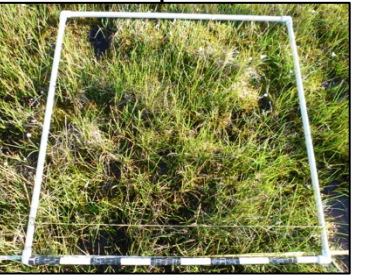
Subplot 6



Subplot 7



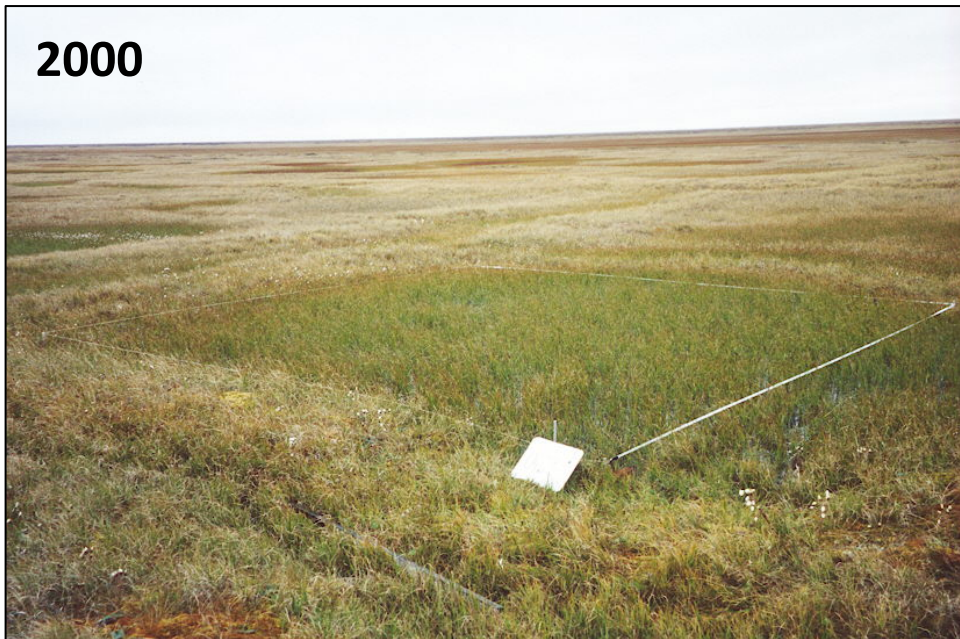
Subplot 8



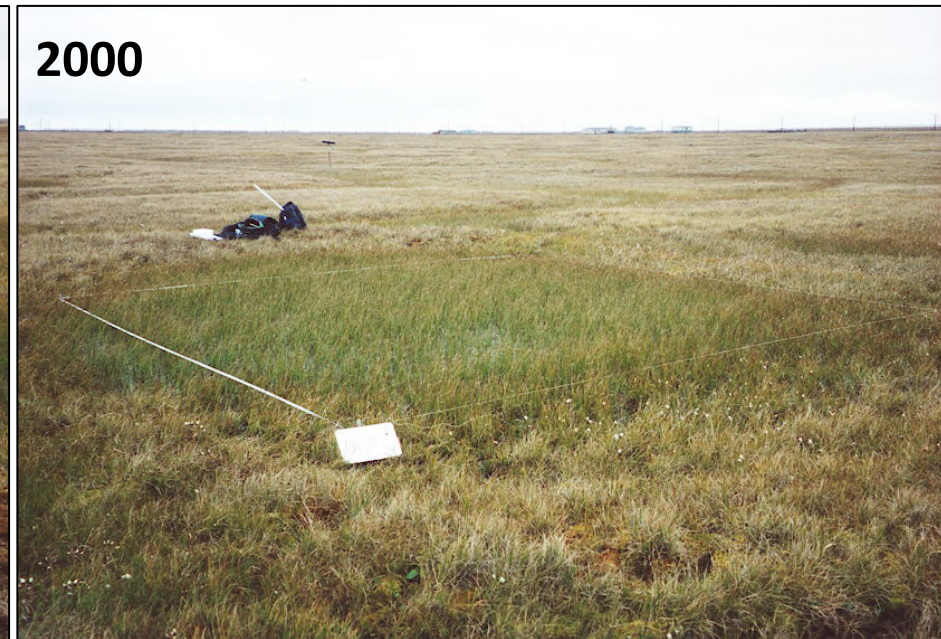
Subplot 9



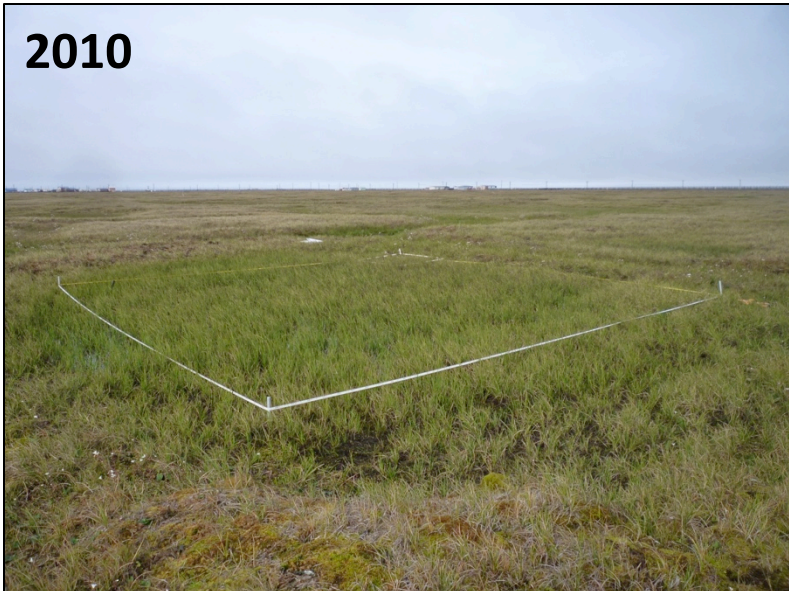
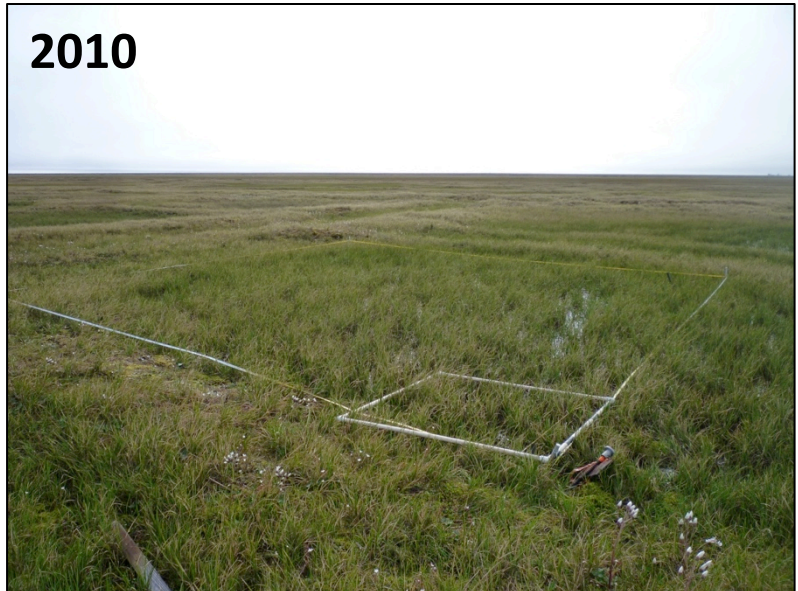
Subplot 10



South



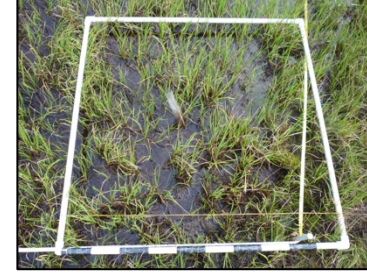
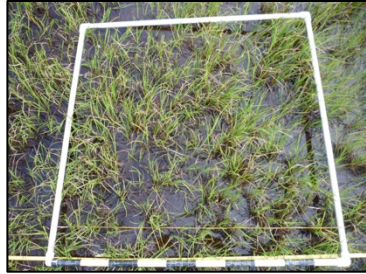
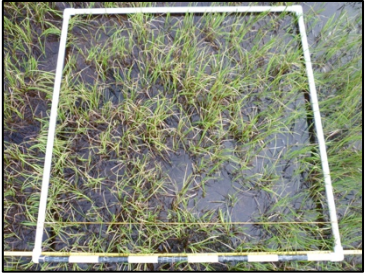
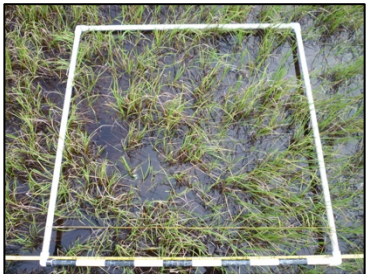
North



South

North

2010



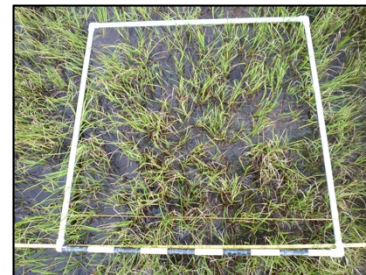
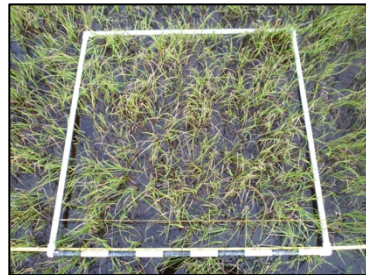
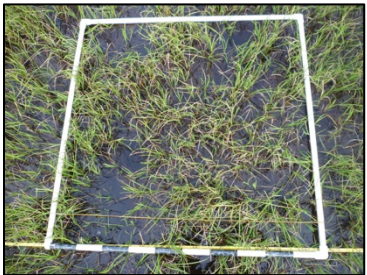
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



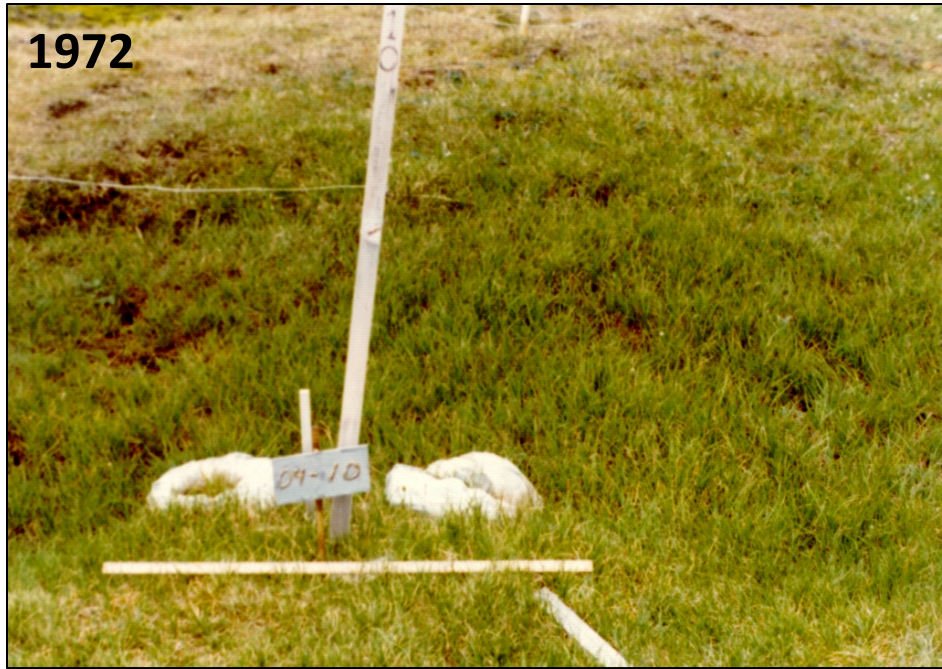
Subplot 6

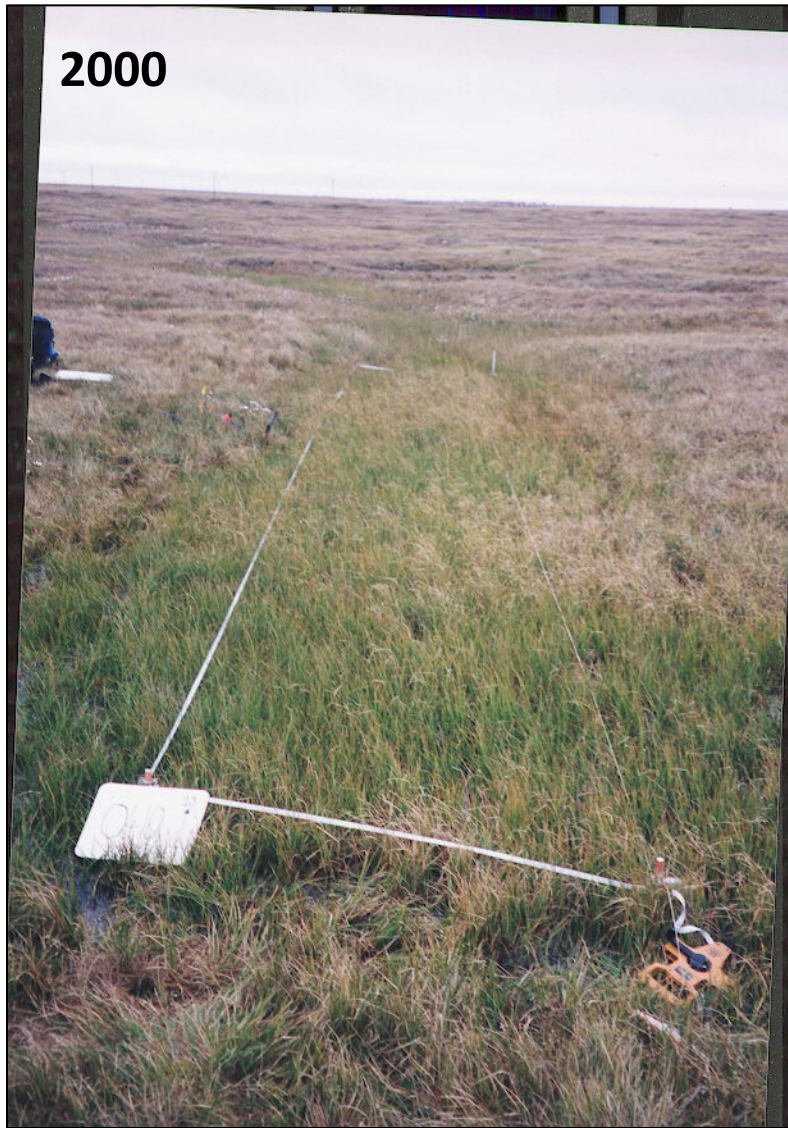
Subplot 7

Subplot 8

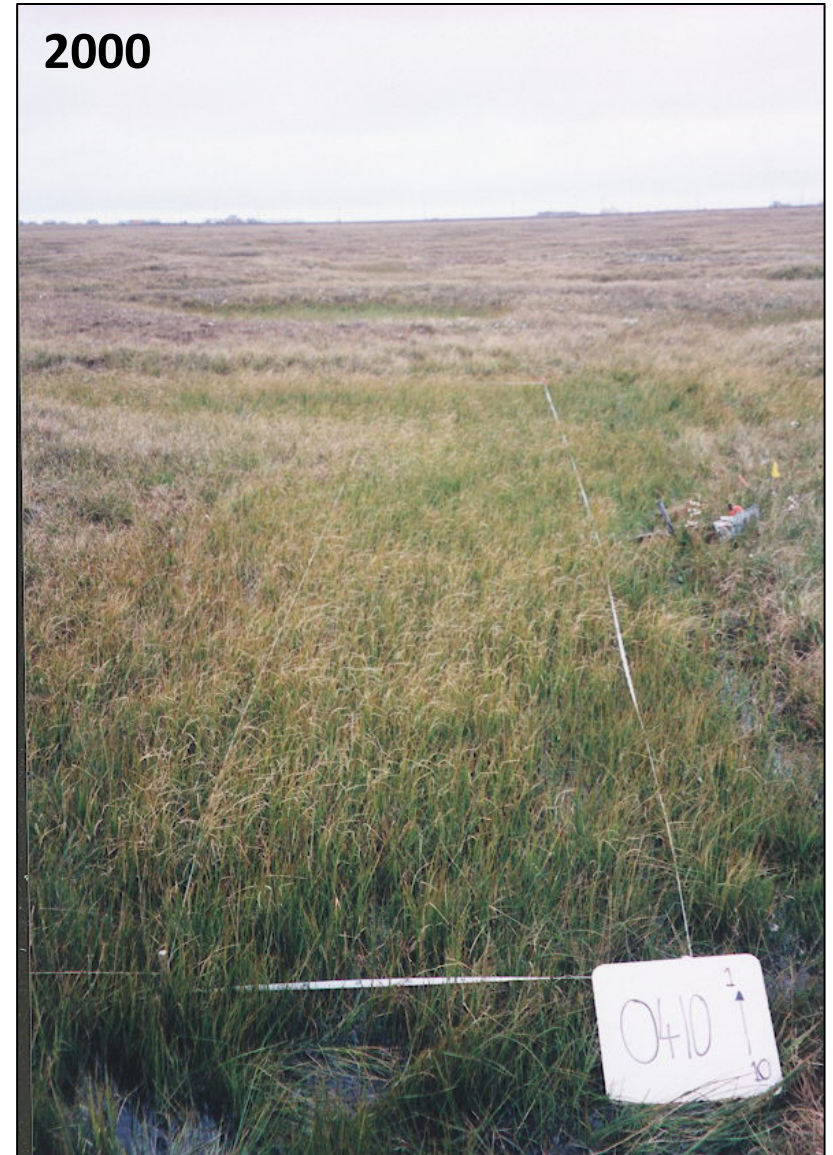
Subplot 9

Subplot 10



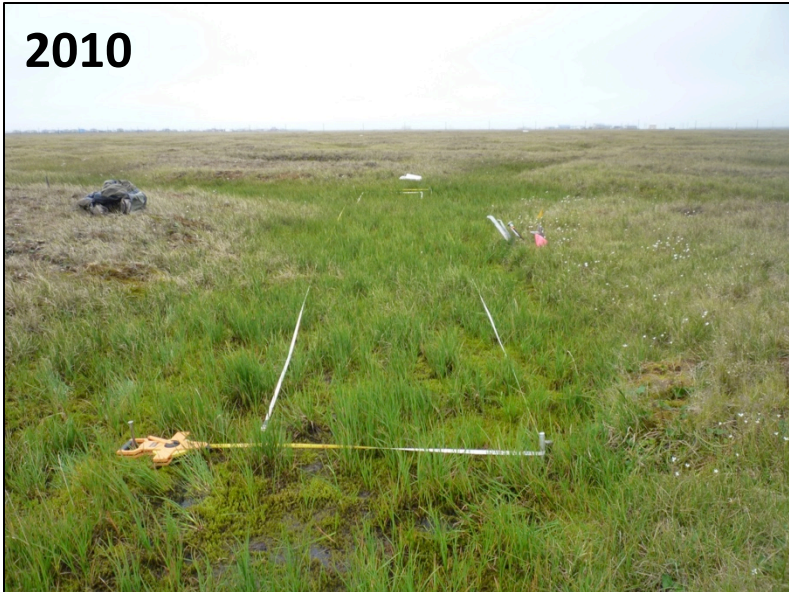
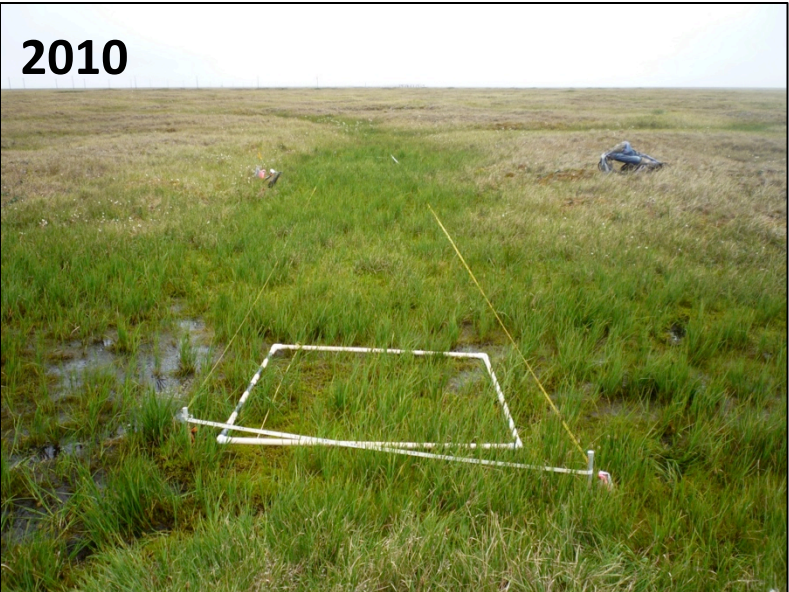


Subplots 1 → 10



Subplots 10 → 1





Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1



Subplot 2



Subplot 3



Subplot 4



Subplot 5



Subplot 6



Subplot 7



Subplot 8



Subplot 9



Subplot 10



2010

Repeat #1

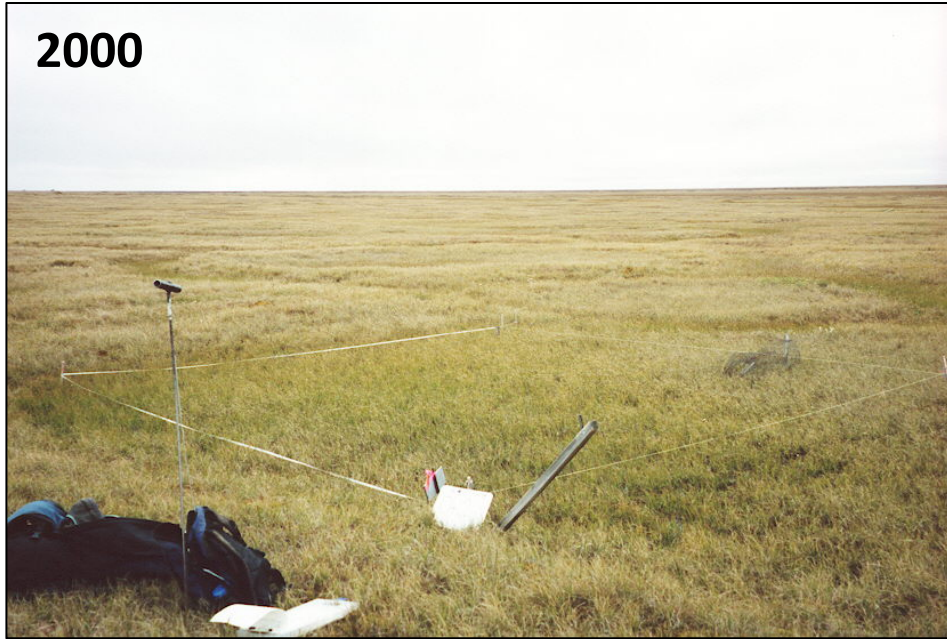
Repeat #2



2010

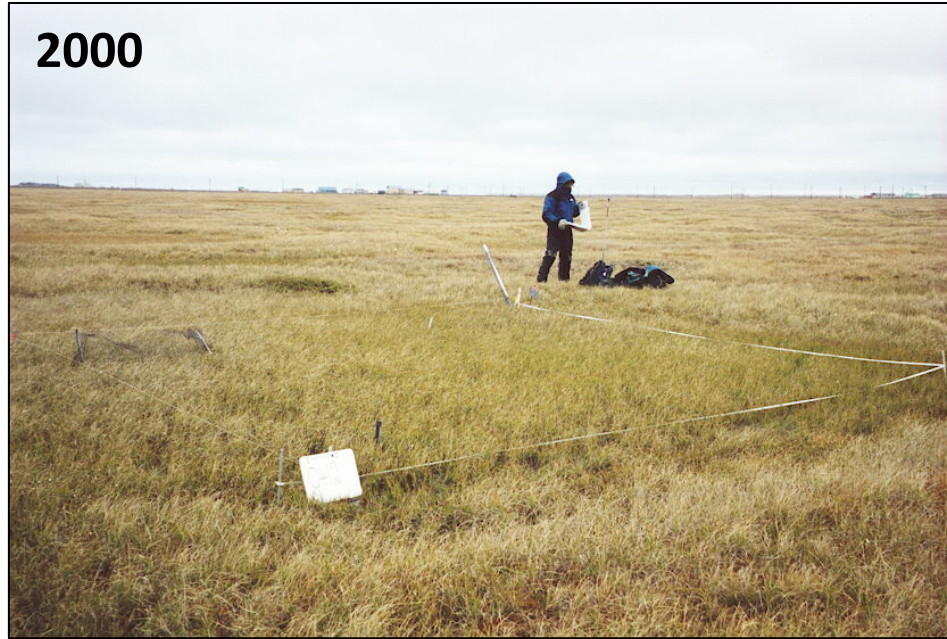


2000



South

2000



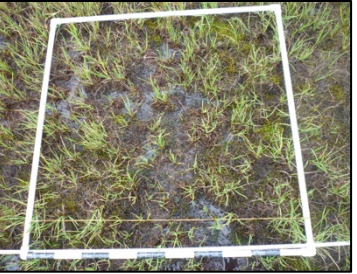
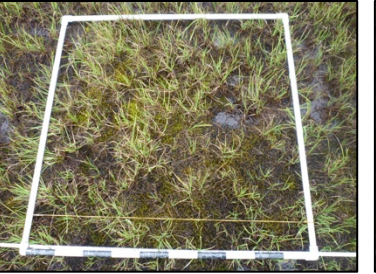
North



South

North

2010



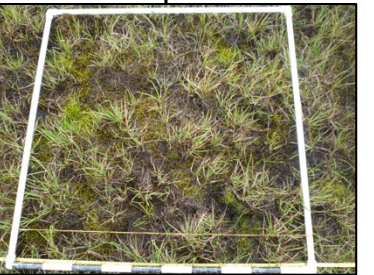
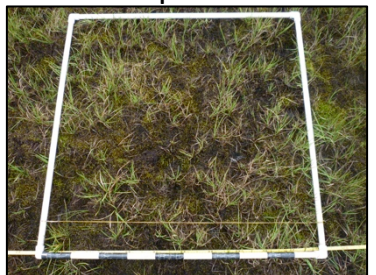
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



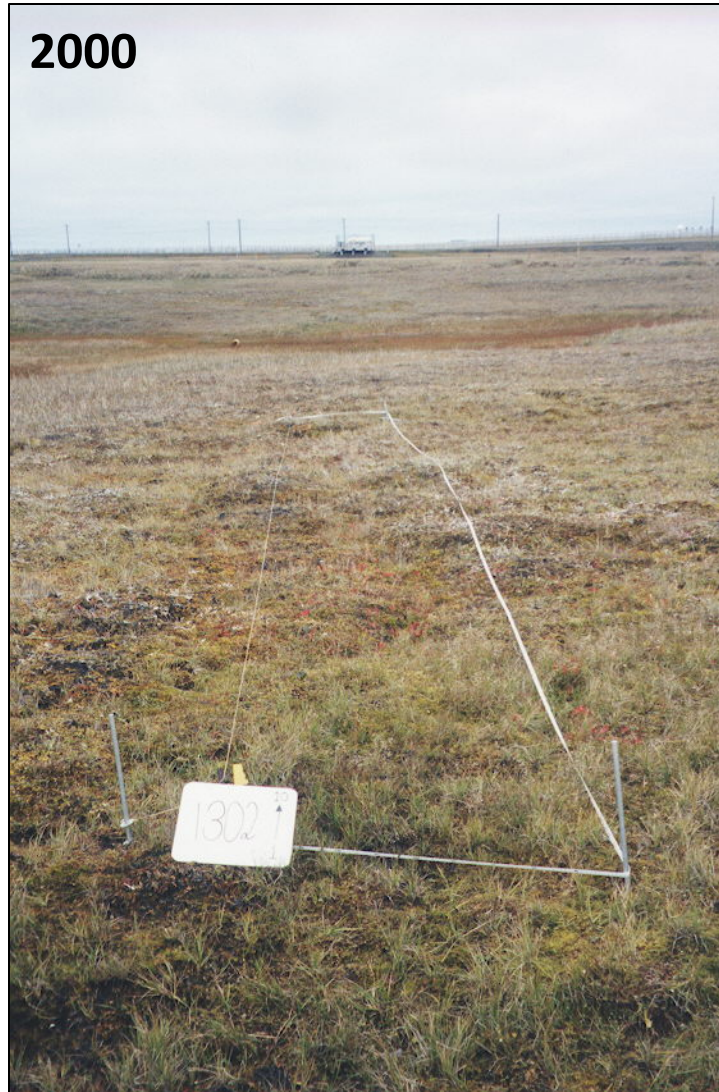
Subplot 6

Subplot 7

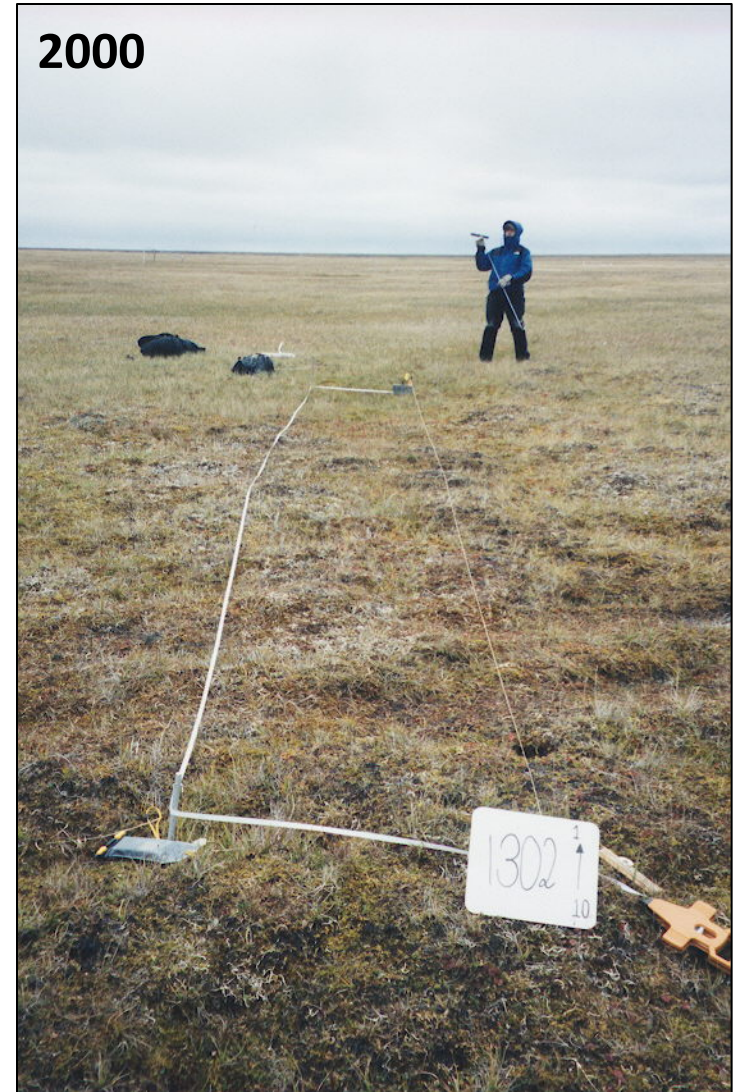
Subplot 8

Subplot 9

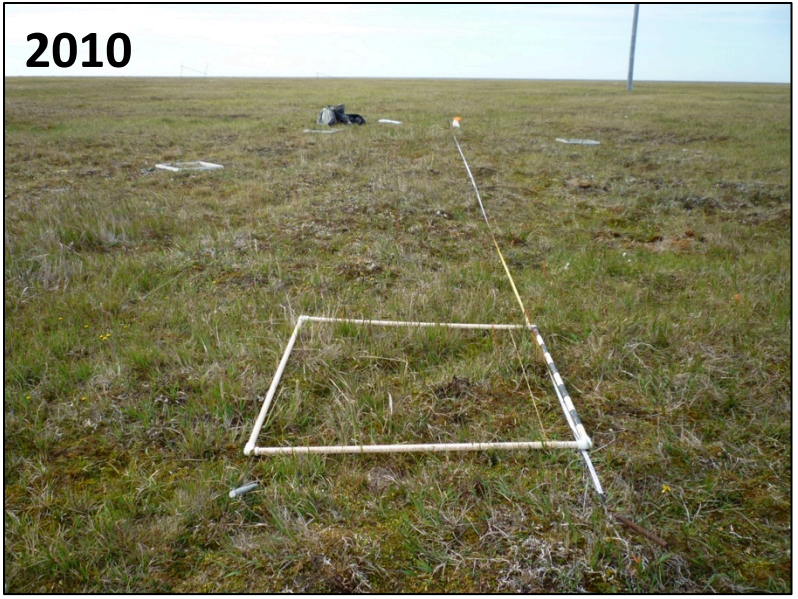
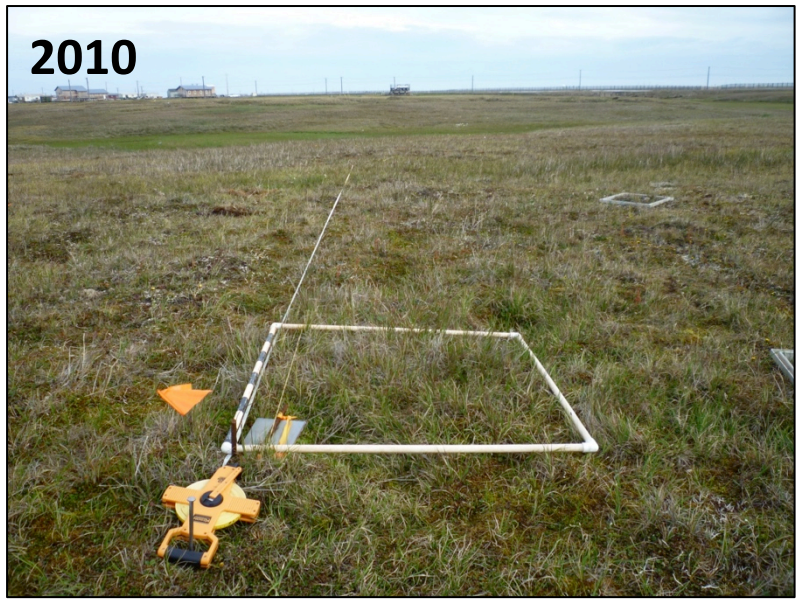
Subplot 10



Subplots 1 → 10



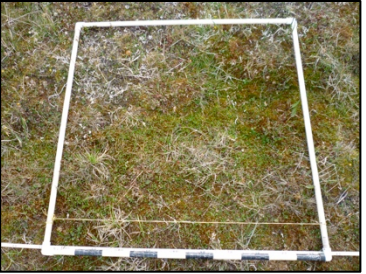
Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5

Subplot 6

Subplot 7

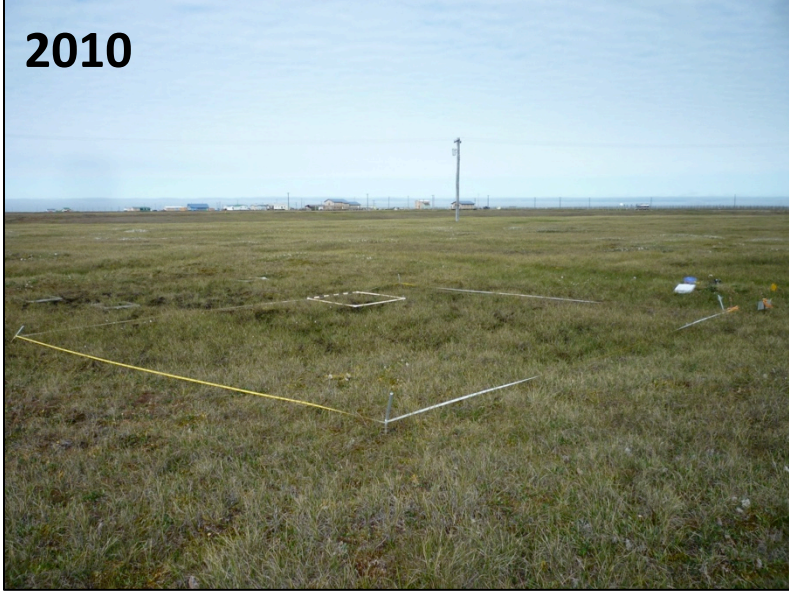
Subplot 8

Subplot 9

Subplot 10



Subplots 1 → 10



South

North

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



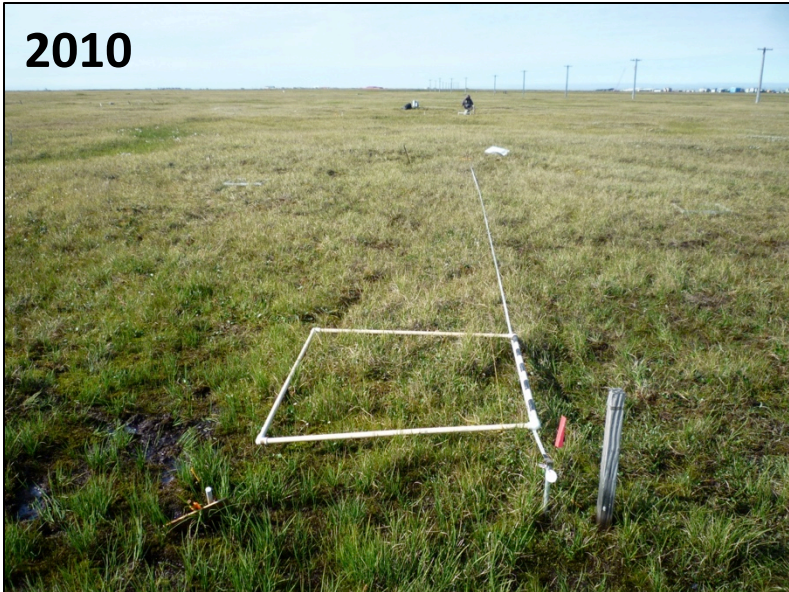
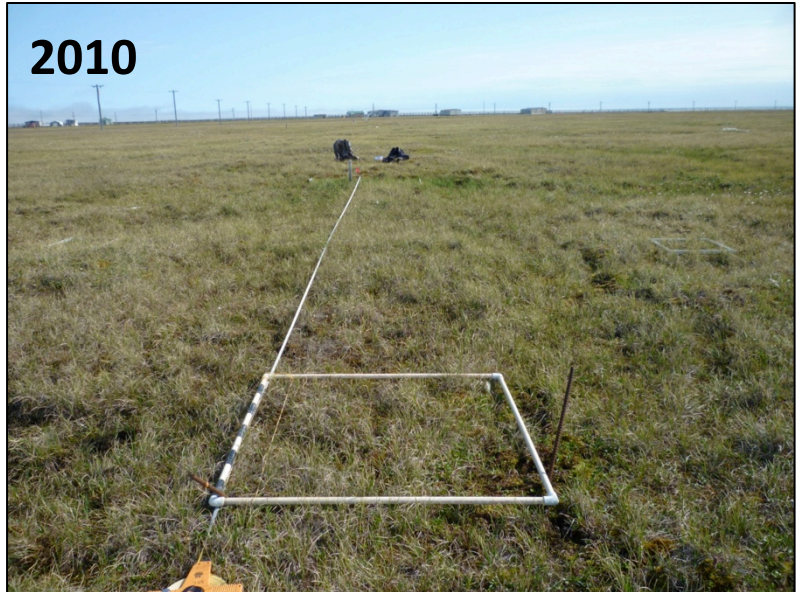
Subplot 6

Subplot 7

Subplot 8

Subplot 9

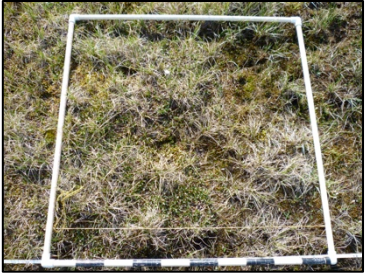
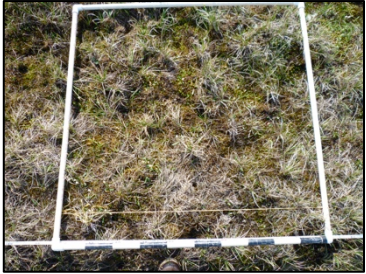
Subplot 10



Subplots 1 → 10

Subplots 10 → 1

2010



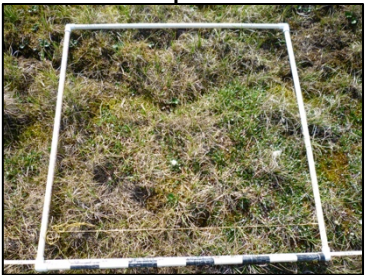
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

Subplot 7

Subplot 8

Subplot 9

Subplot 10

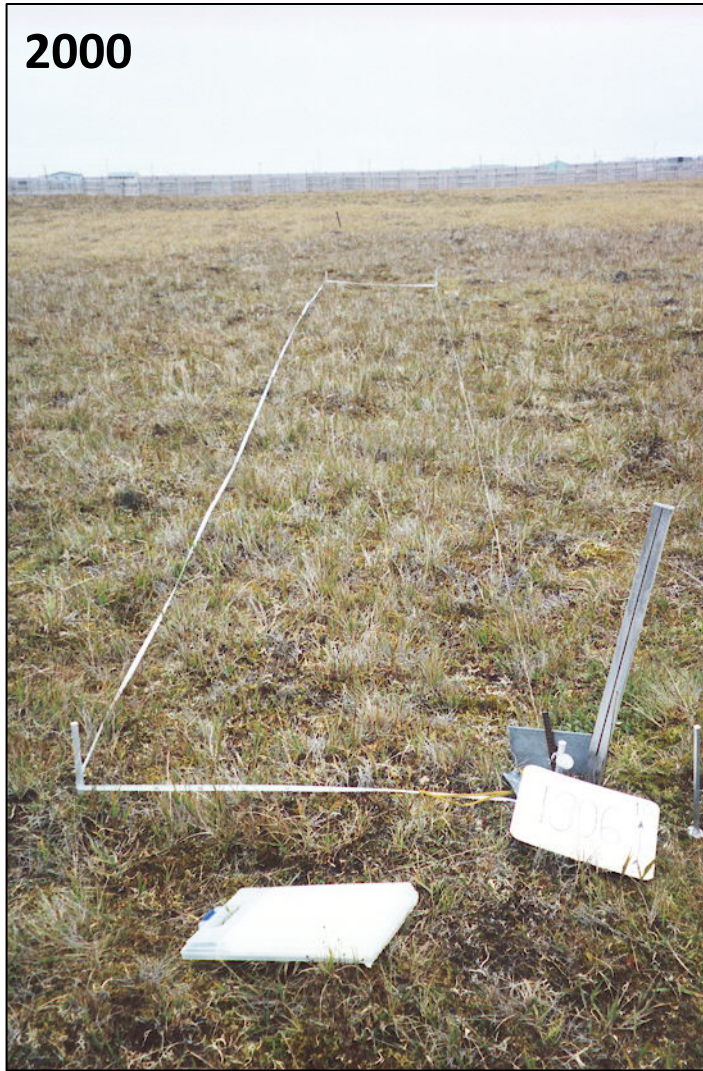
1972



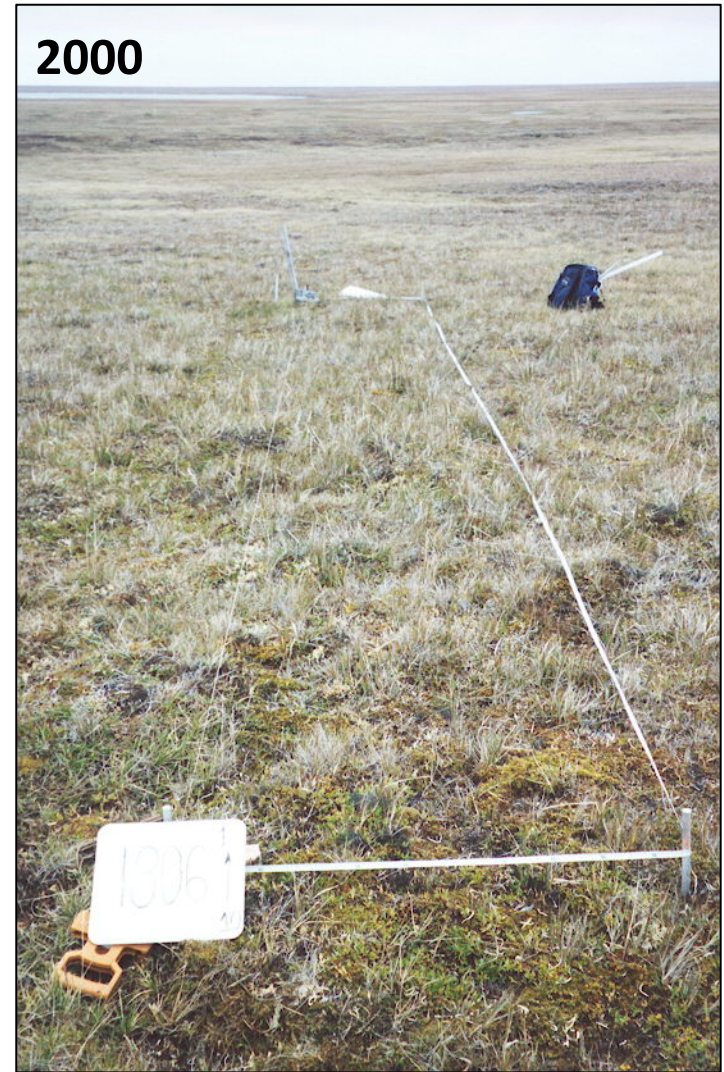
1972







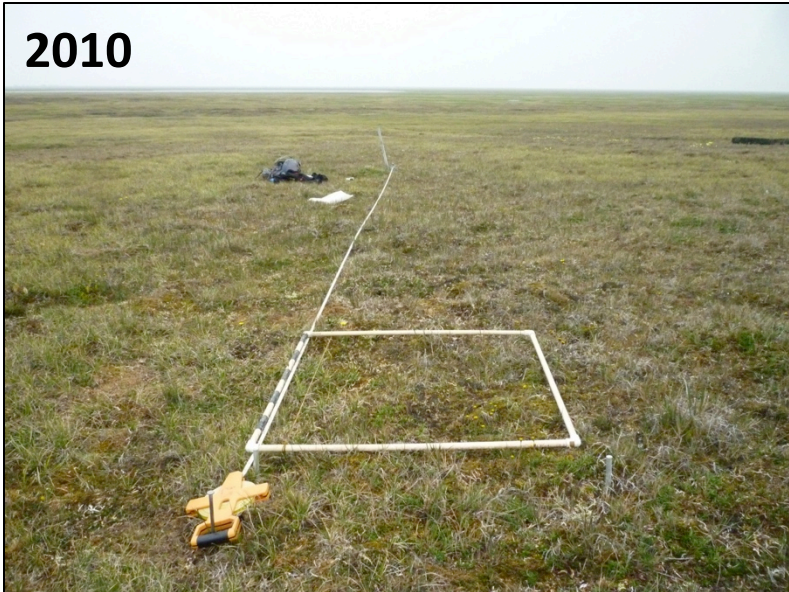
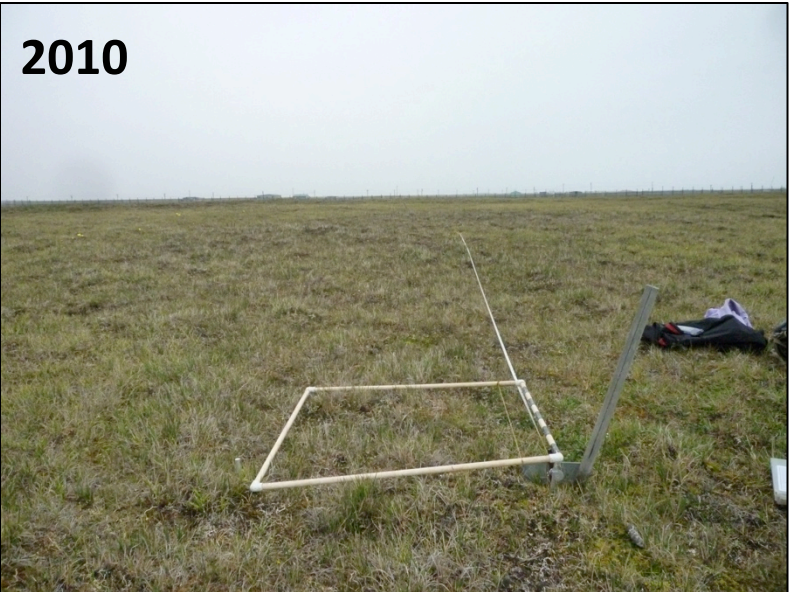
Subplots 1 → 10



Subplots 10 → 1

2000

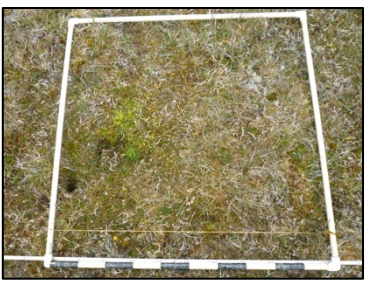
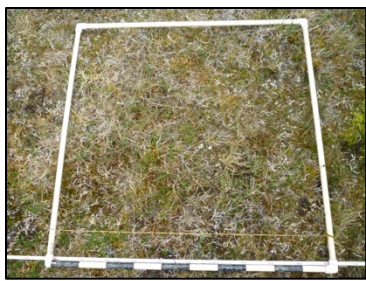
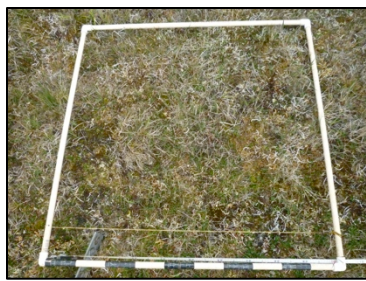




Subplots 1 → 10

Subplots 10 → 1

2010



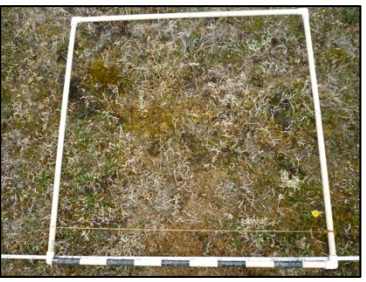
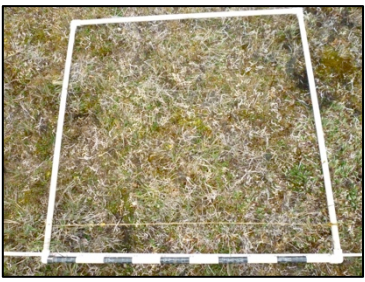
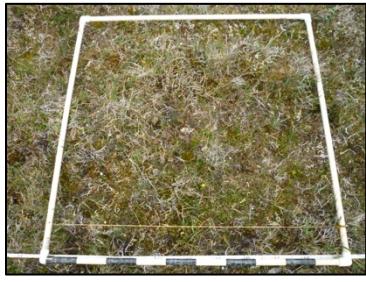
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



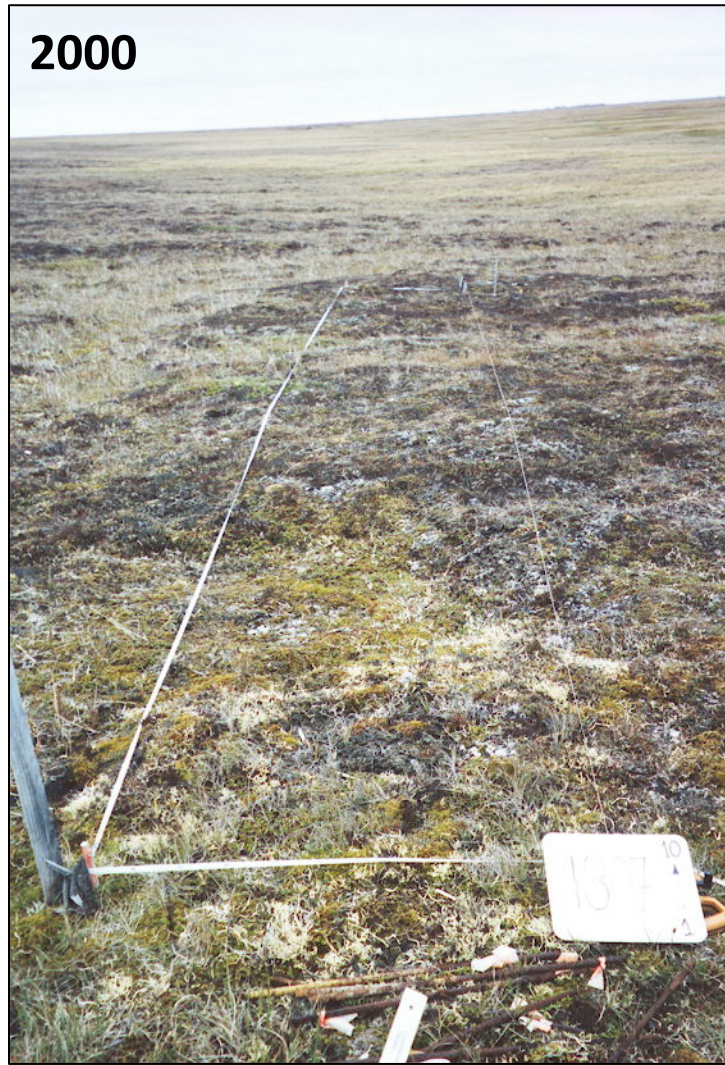
Subplot 6

Subplot 7

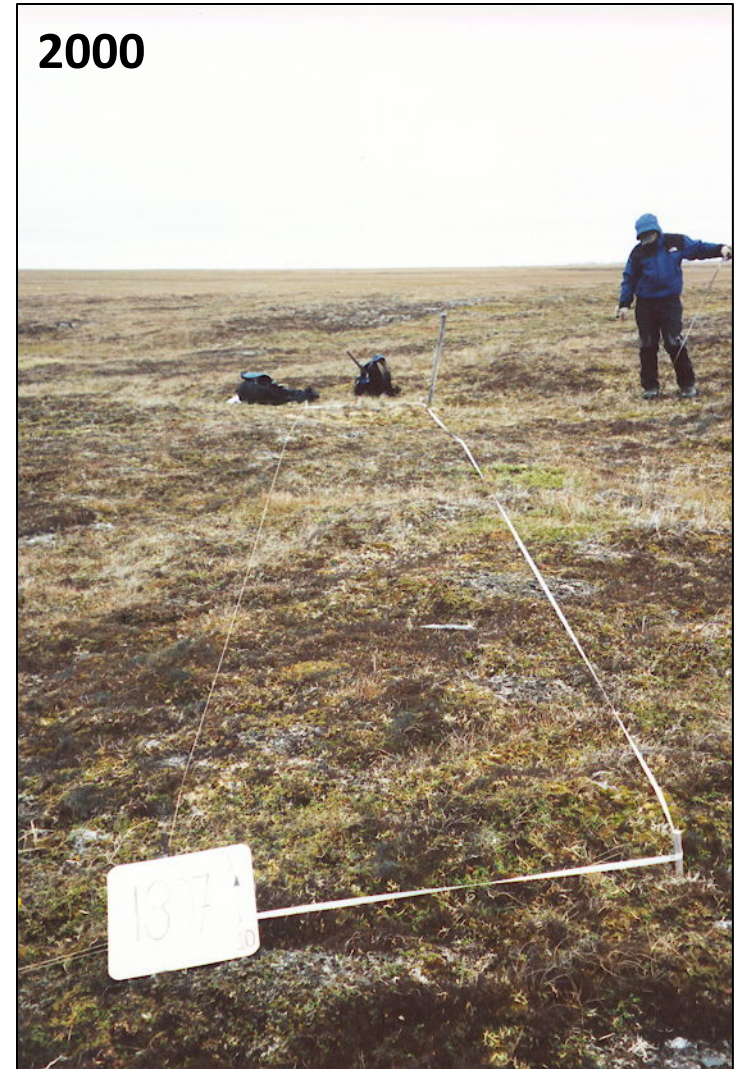
Subplot 8

Subplot 9

Subplot 10



Subplots 1 → 10



Subplots 10 → 1

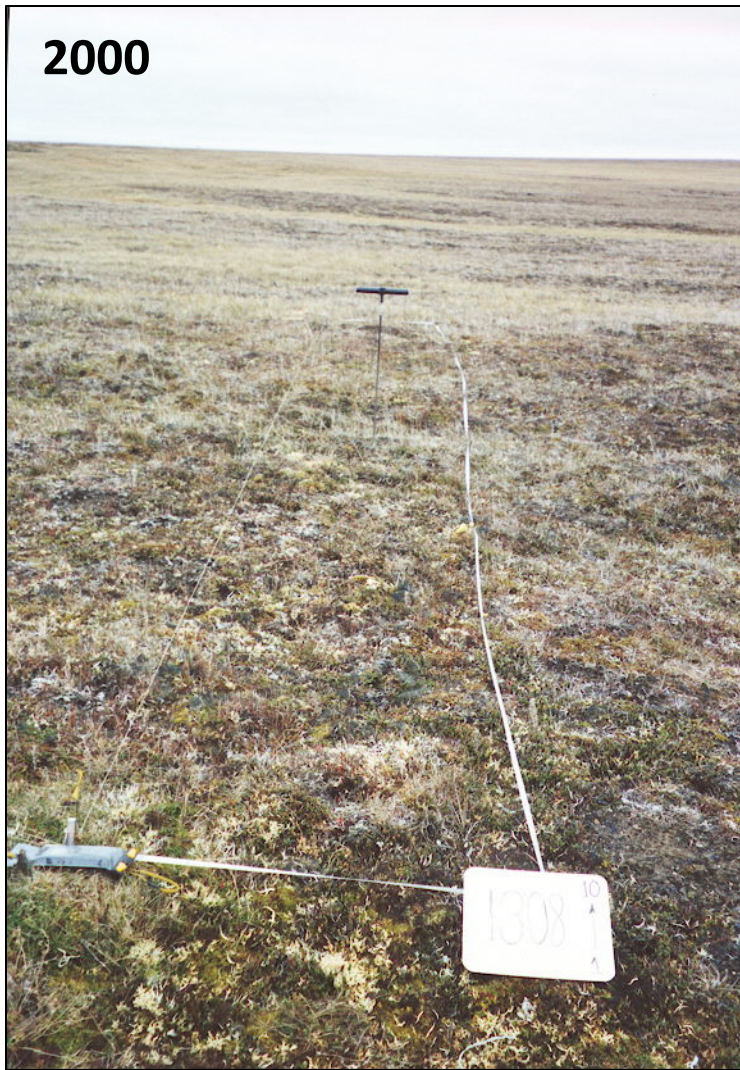
This plot was relocated in 2000, but most of the pegs were lost so it was not repeat sampled.

1972

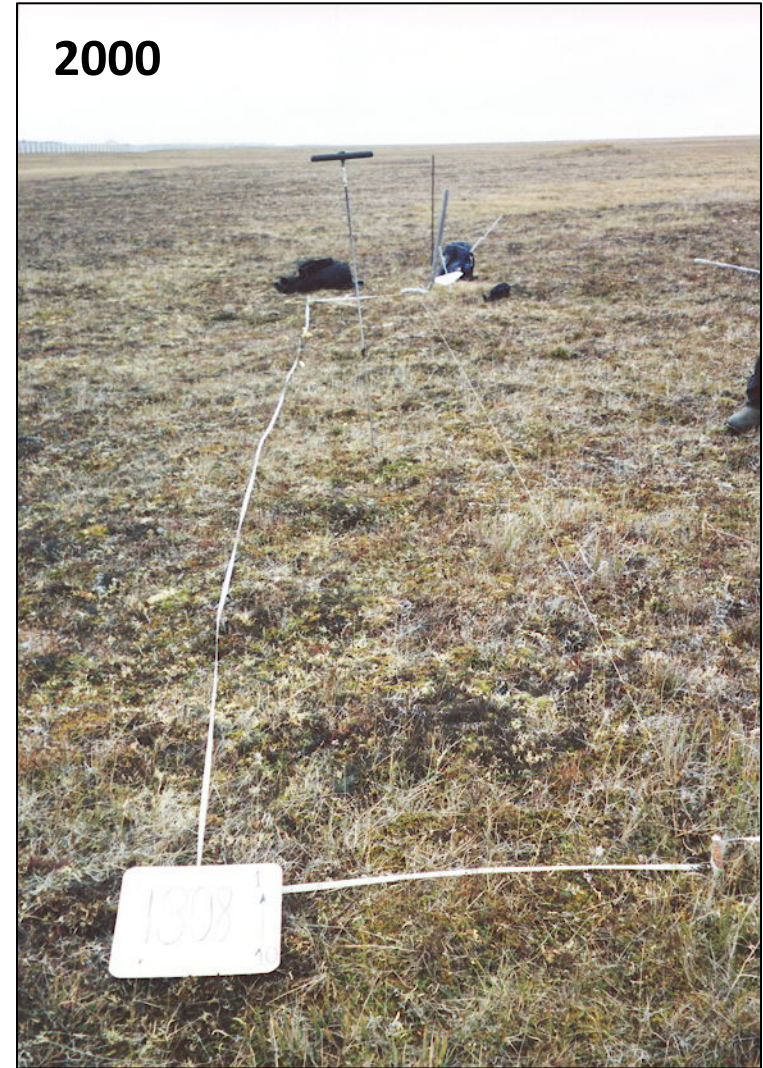


1972





Subplots 1 → 10

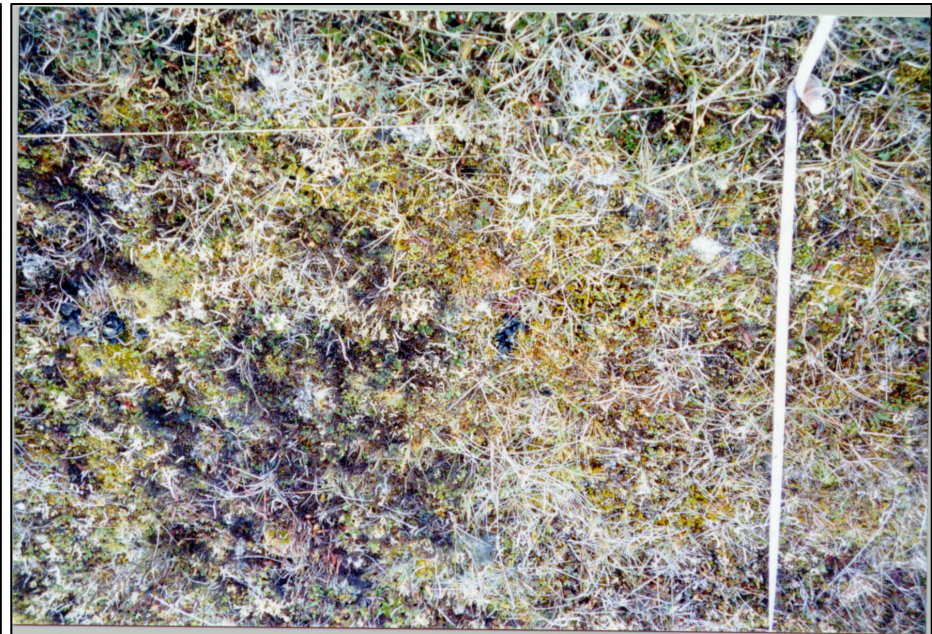


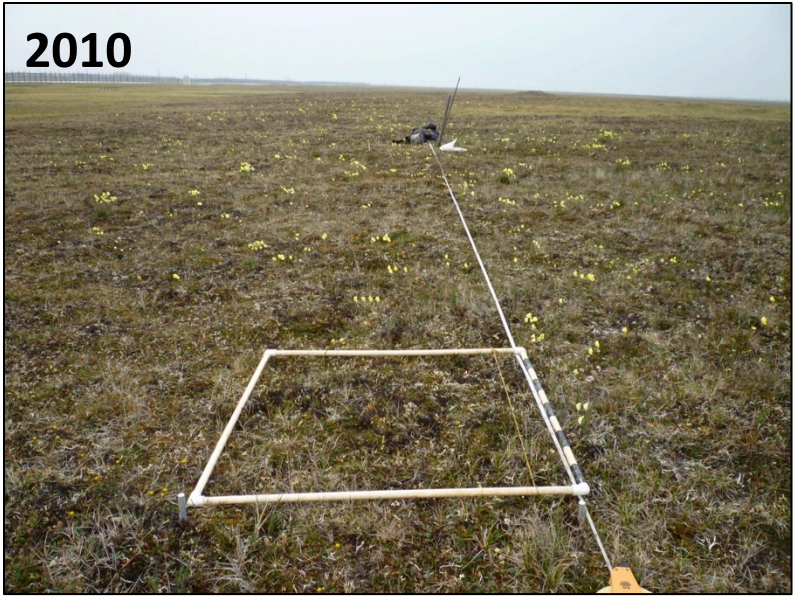
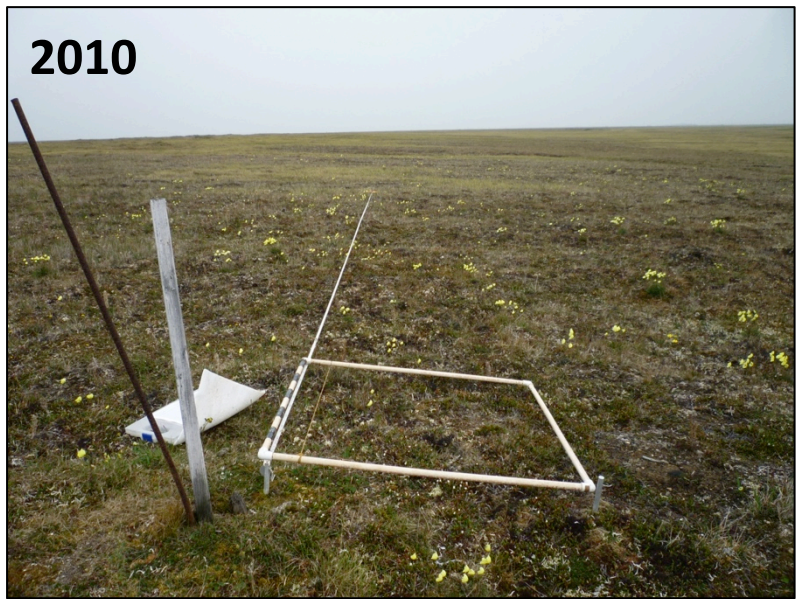
Subplots 10 → 1

2000



2000

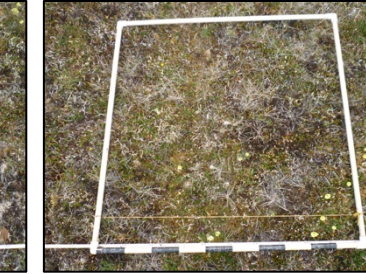
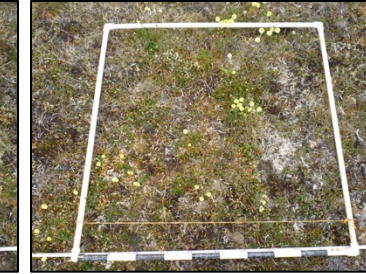
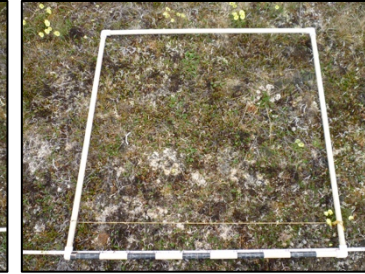
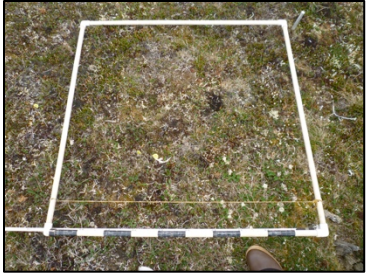




Subplots 1 → 10

Subplots 10 → 1

2010



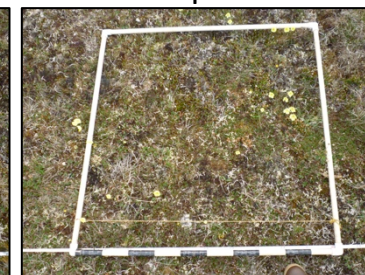
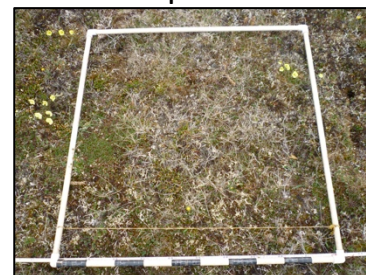
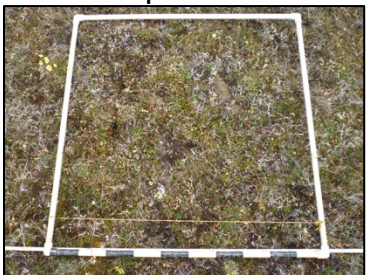
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

Subplot 7

Subplot 8

Subplot 9

Subplot 10

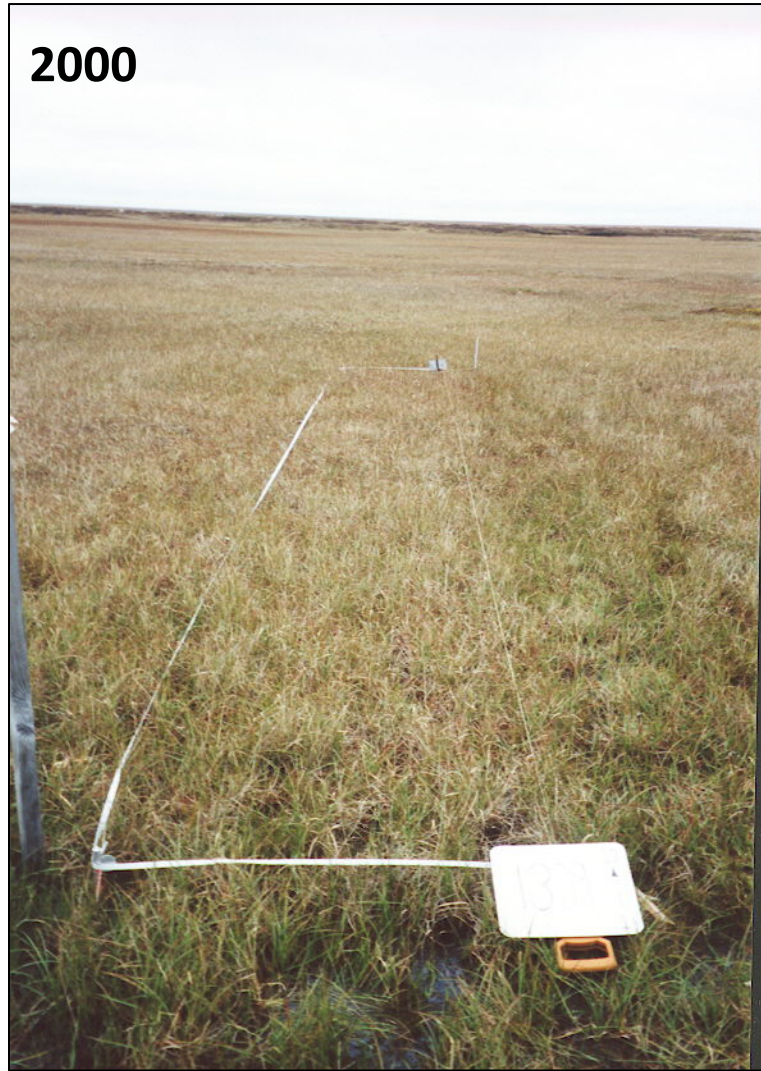


1972

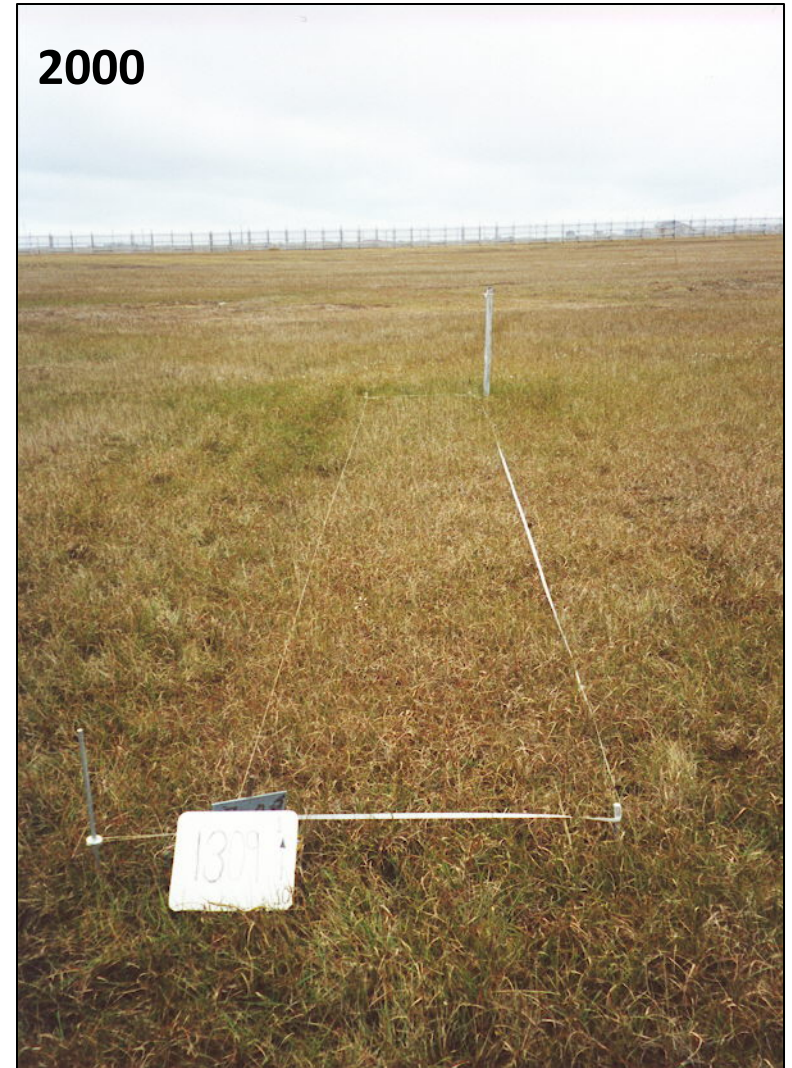


1972



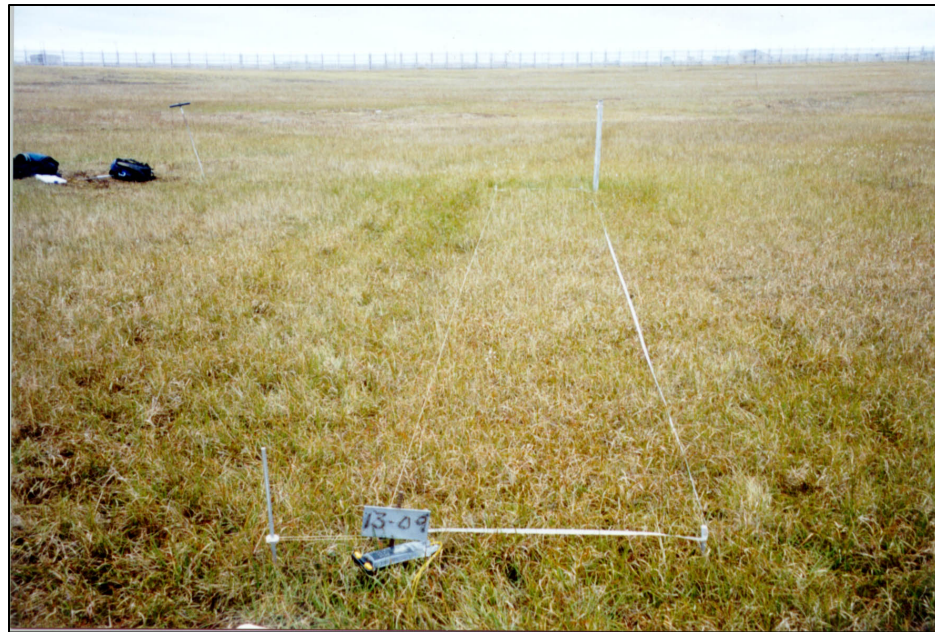


Subplots 1 → 10



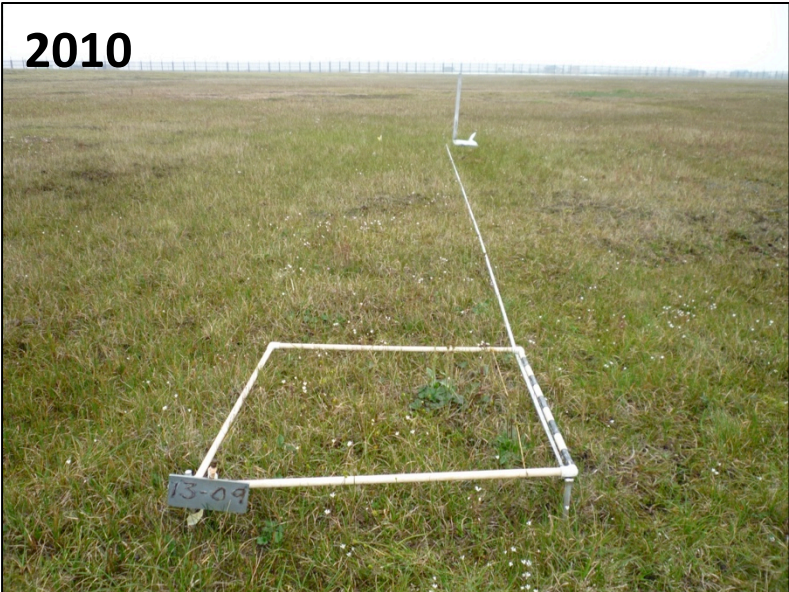
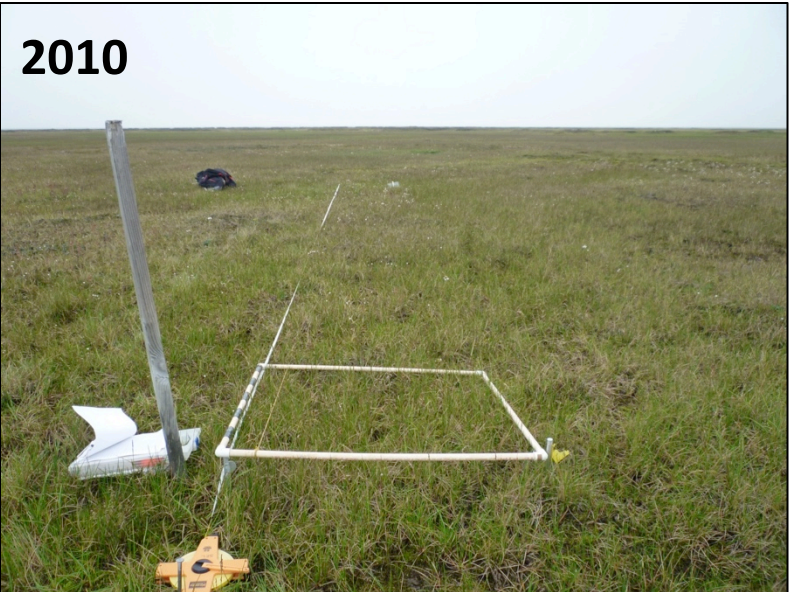
Subplots 10 → 1

2000



2000

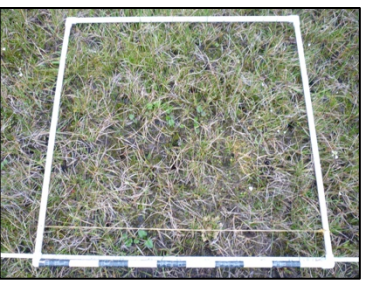




Subplots 1 → 10

Subplots 10 → 1

2010



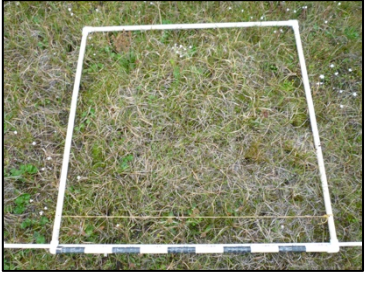
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



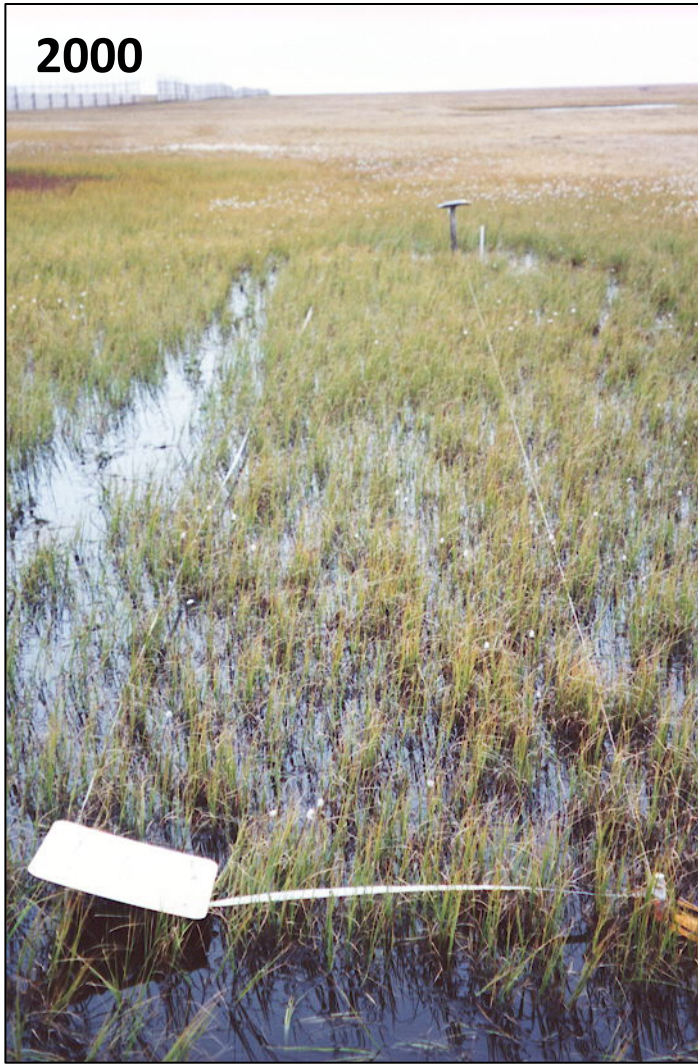
Subplot 6

Subplot 7

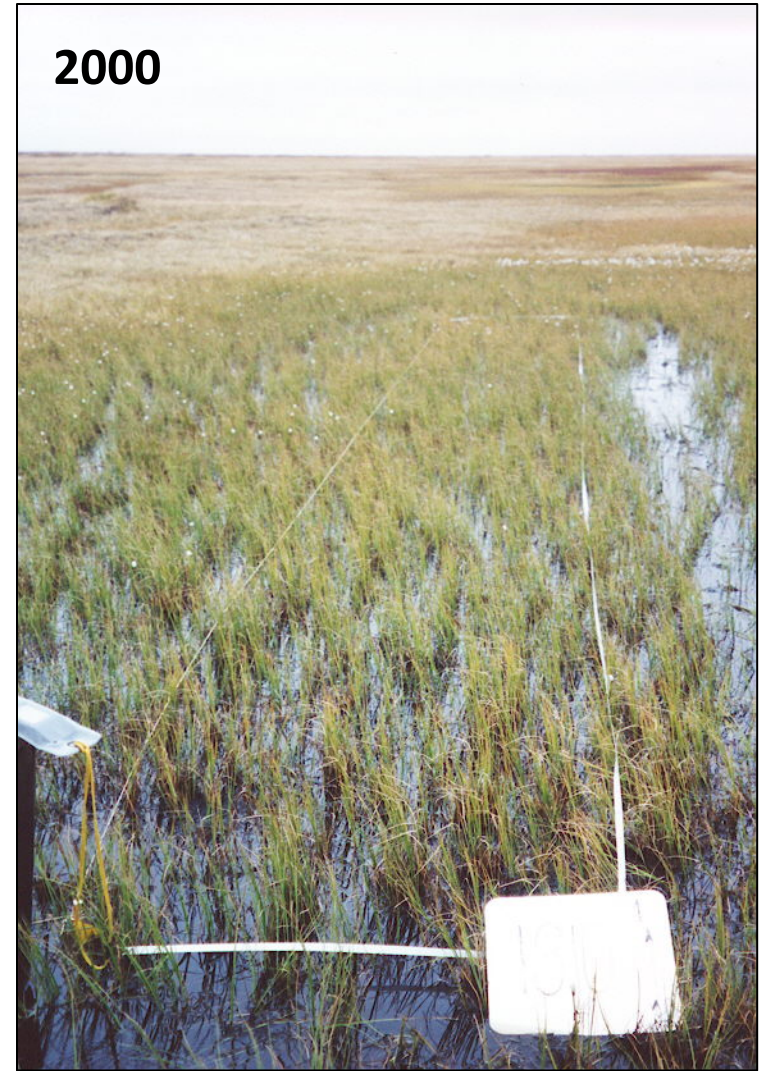
Subplot 8

Subplot 9

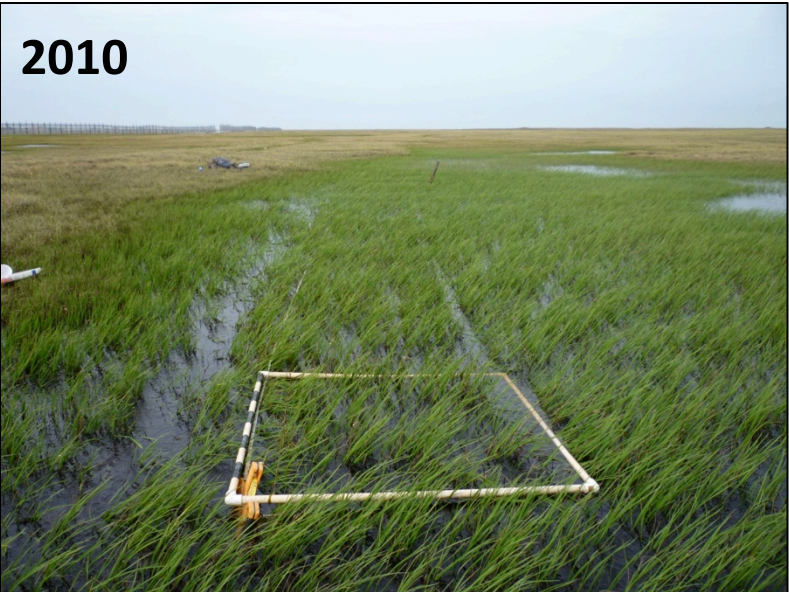
Subplot 10



Subplots 1 → 10



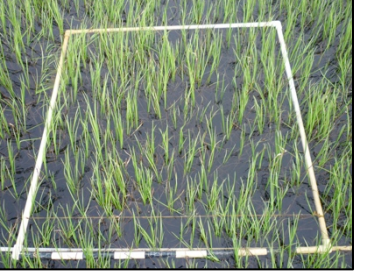
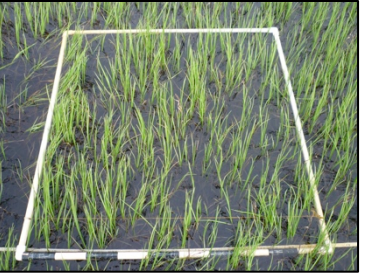
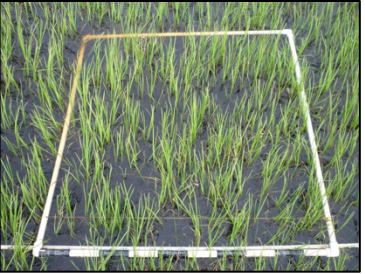
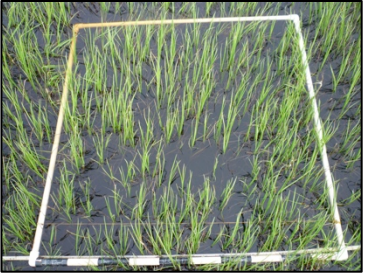
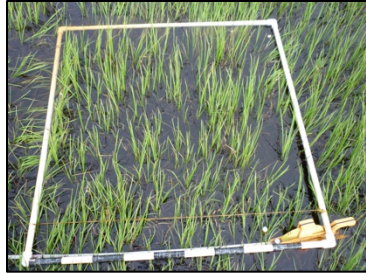
Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



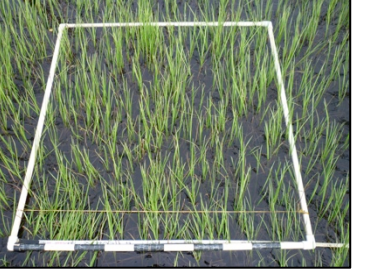
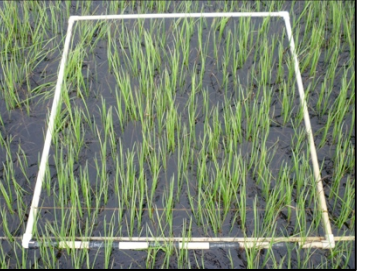
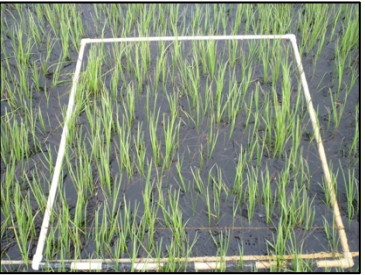
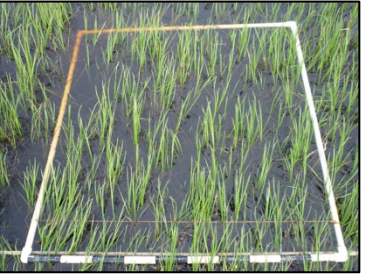
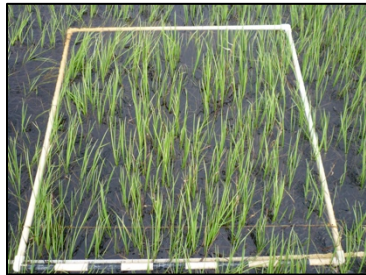
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



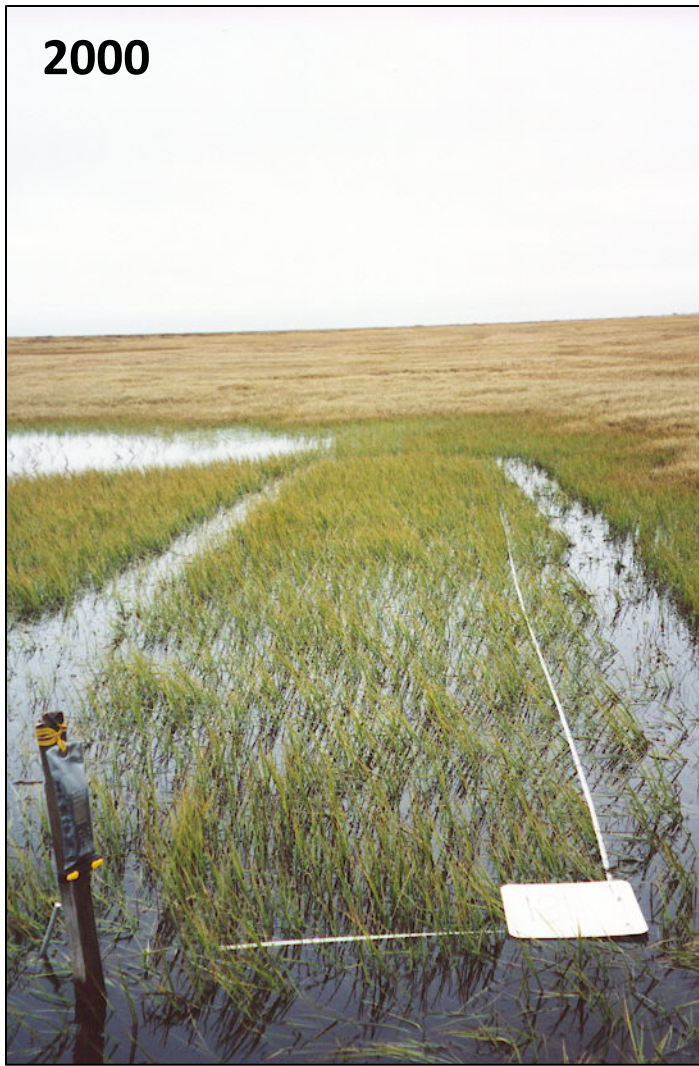
Subplot 6

Subplot 7

Subplot 8

Subplot 9

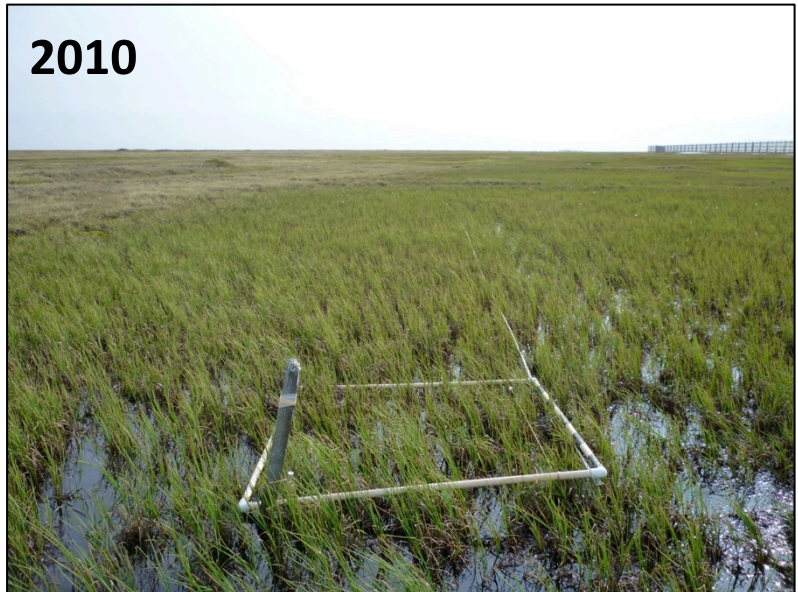
Subplot 10



Subplots 1 → 10



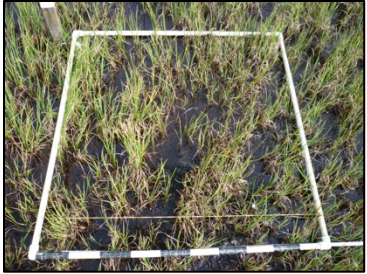
Subplots 10 → 1



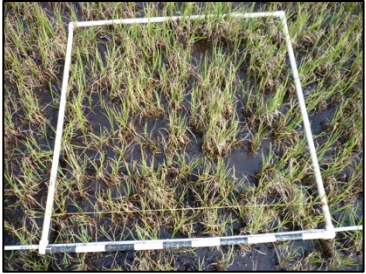
Subplots 1 → 10

Subplots 10 → 1

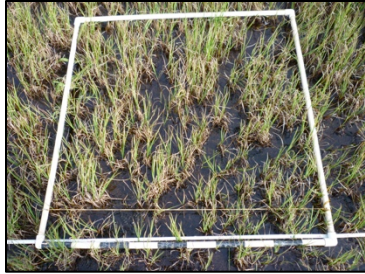
2010



Subplot 1



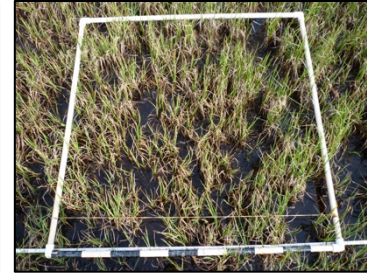
Subplot 2



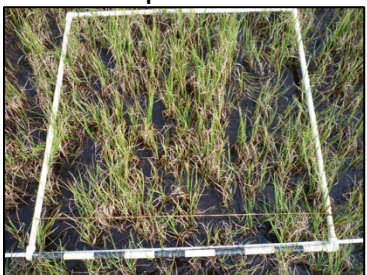
Subplot 3



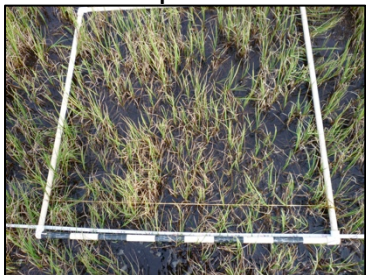
Subplot 4



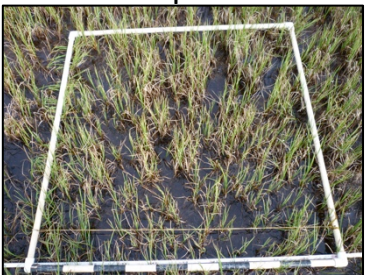
Subplot 5



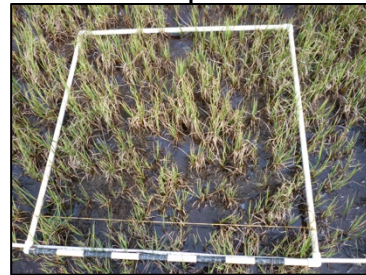
Subplot 6



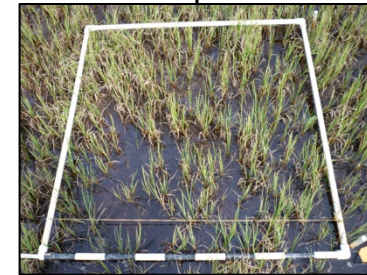
Subplot 7



Subplot 8

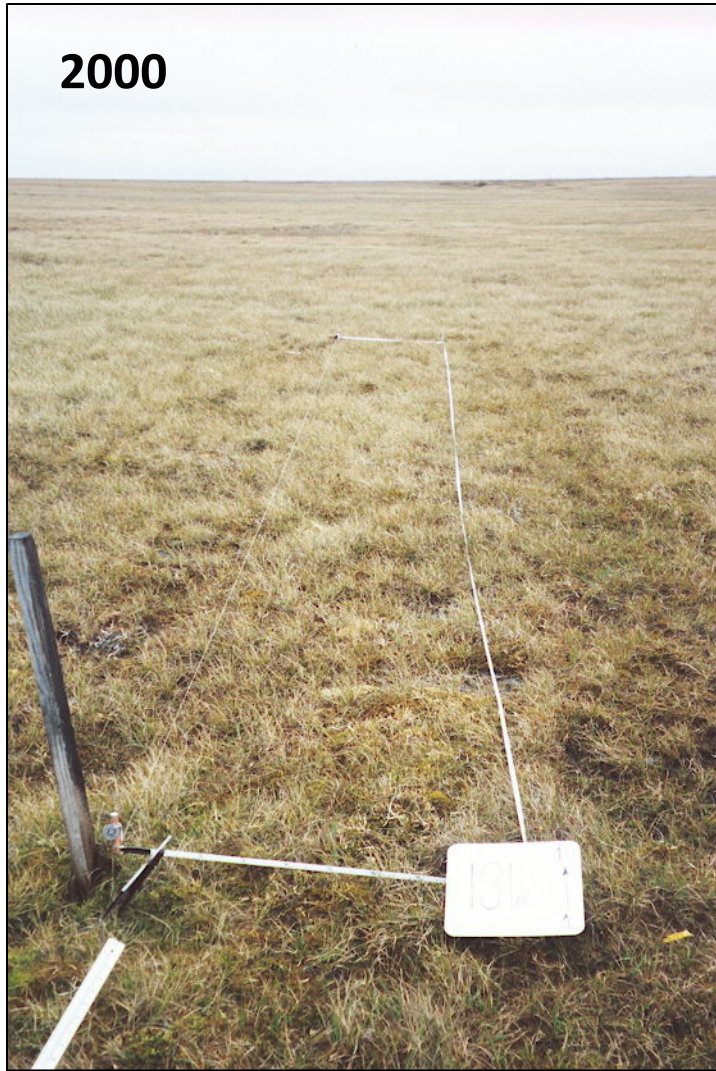


Subplot 9

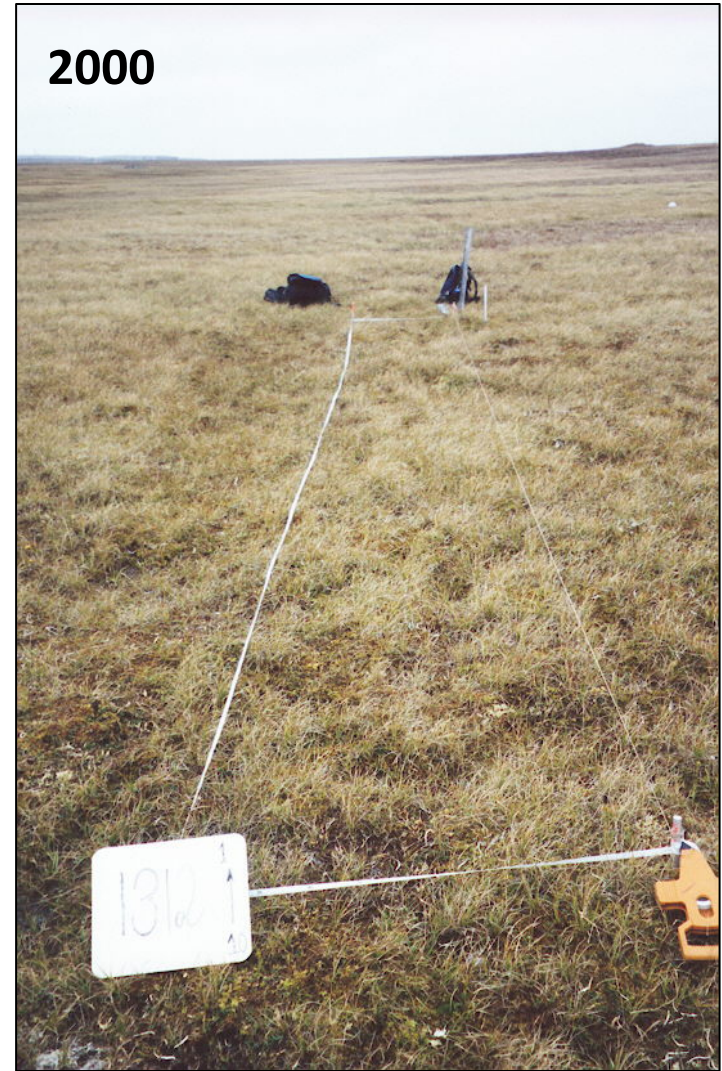


Subplot 10

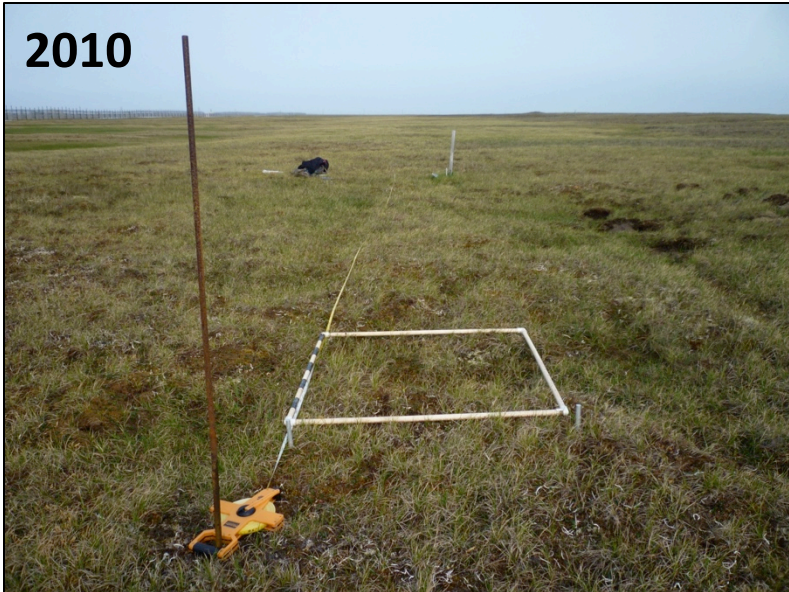
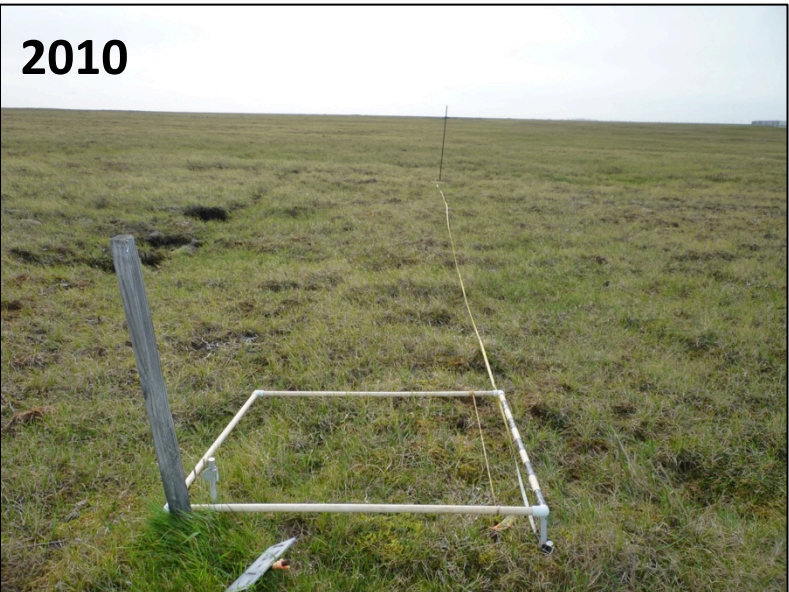




Subplots 1 → 10



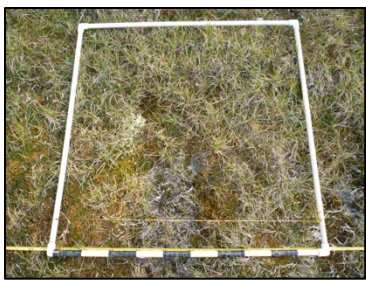
Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



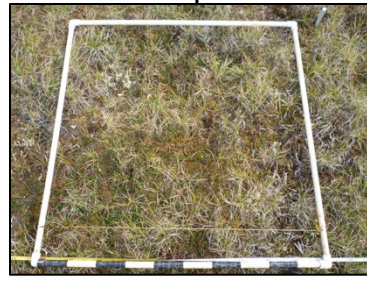
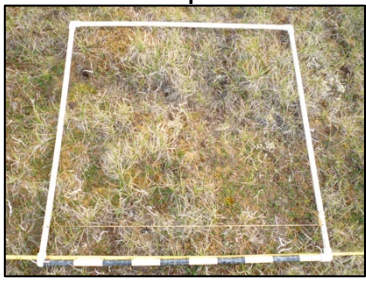
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



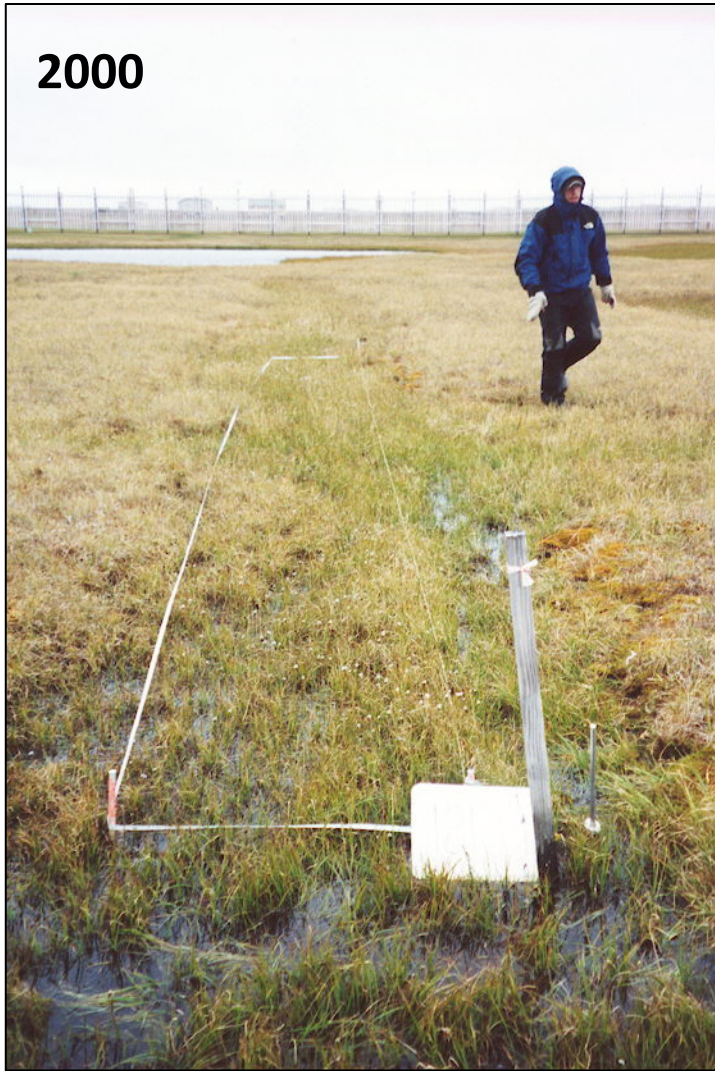
Subplot 6

Subplot 7

Subplot 8

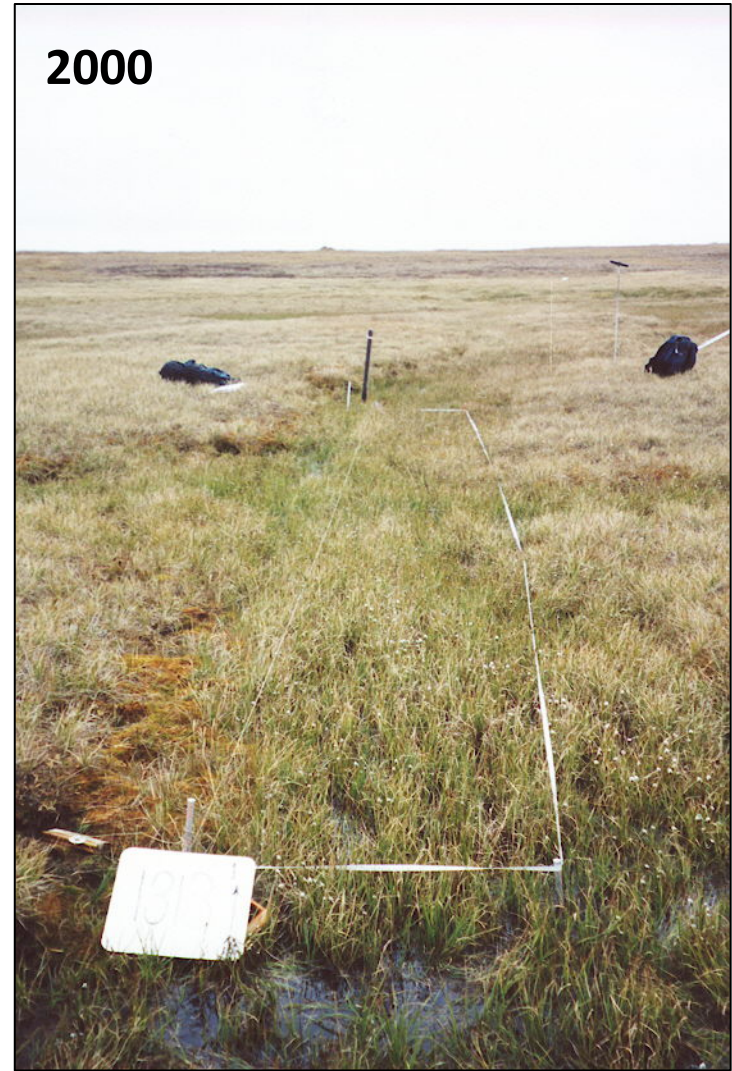
Subplot 9

Subplot 10



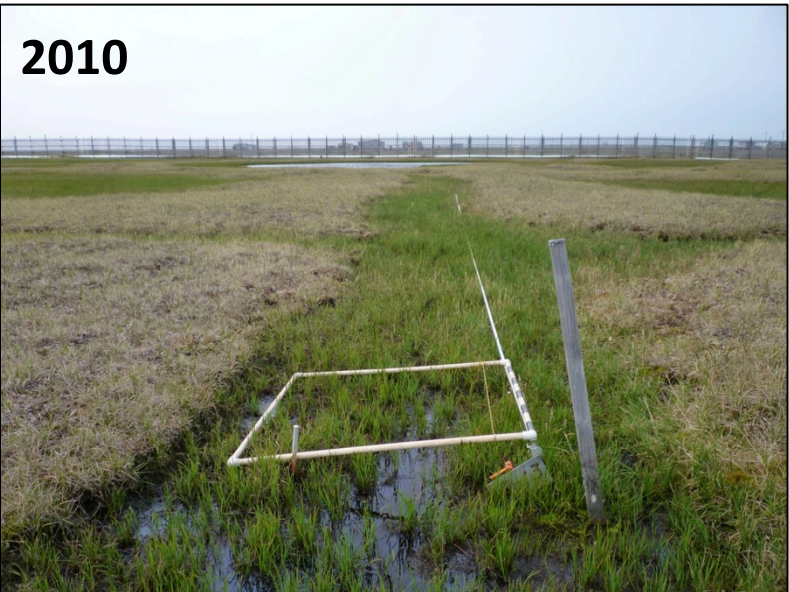
2000

Subplots 1 → 10



2000

Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

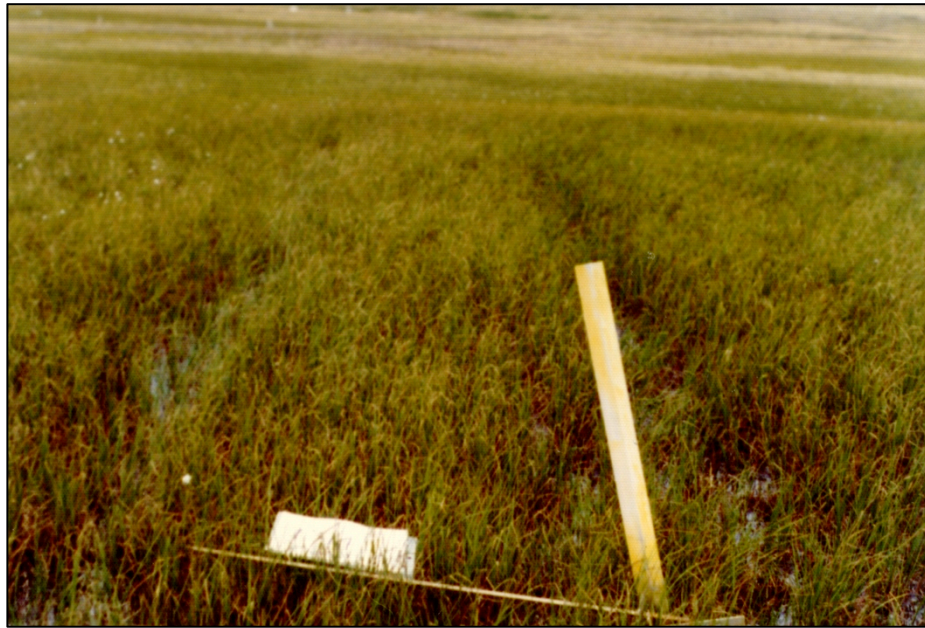
Subplot 7

Subplot 8

Subplot 9

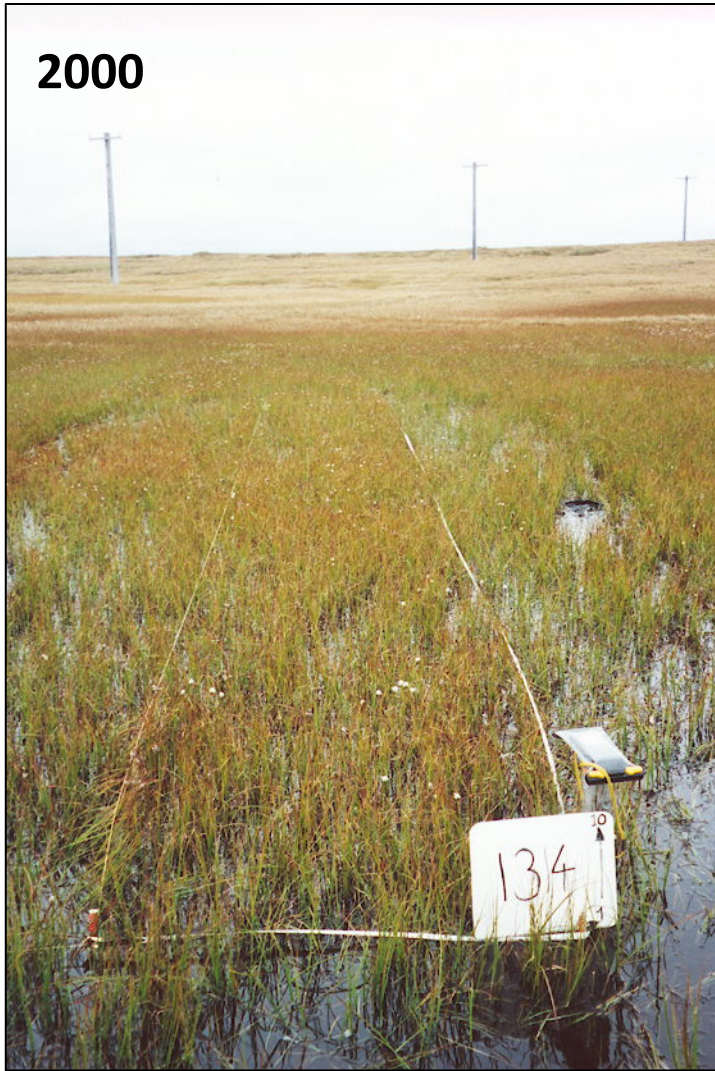
Subplot 10

1972

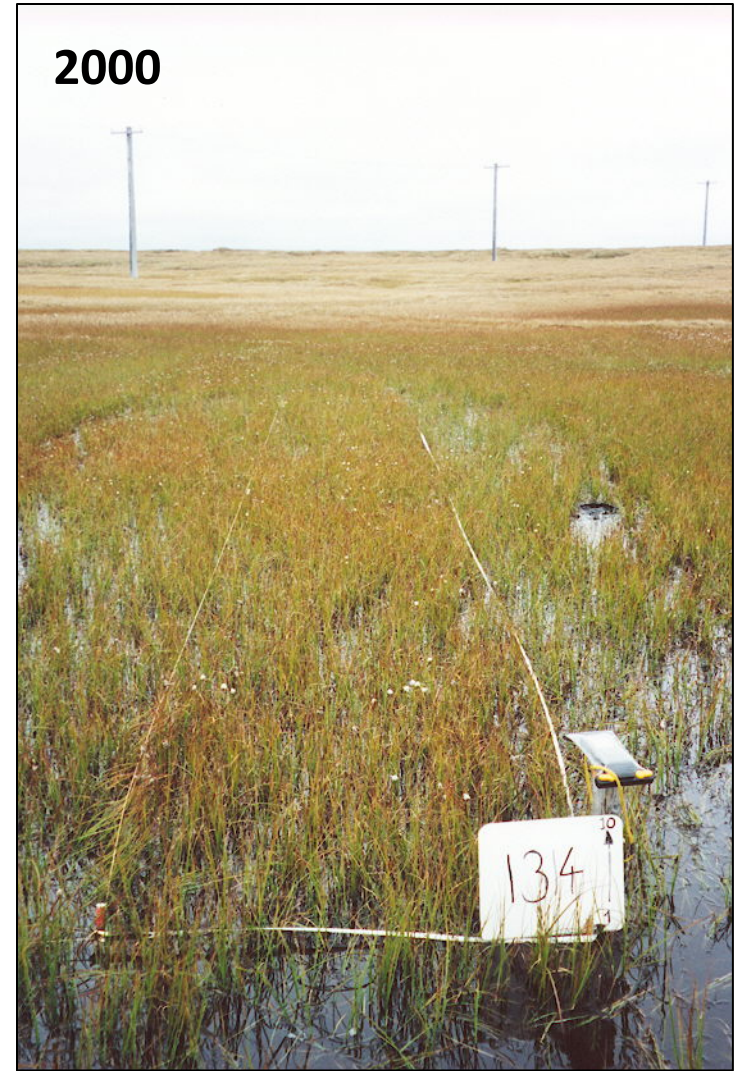


1972



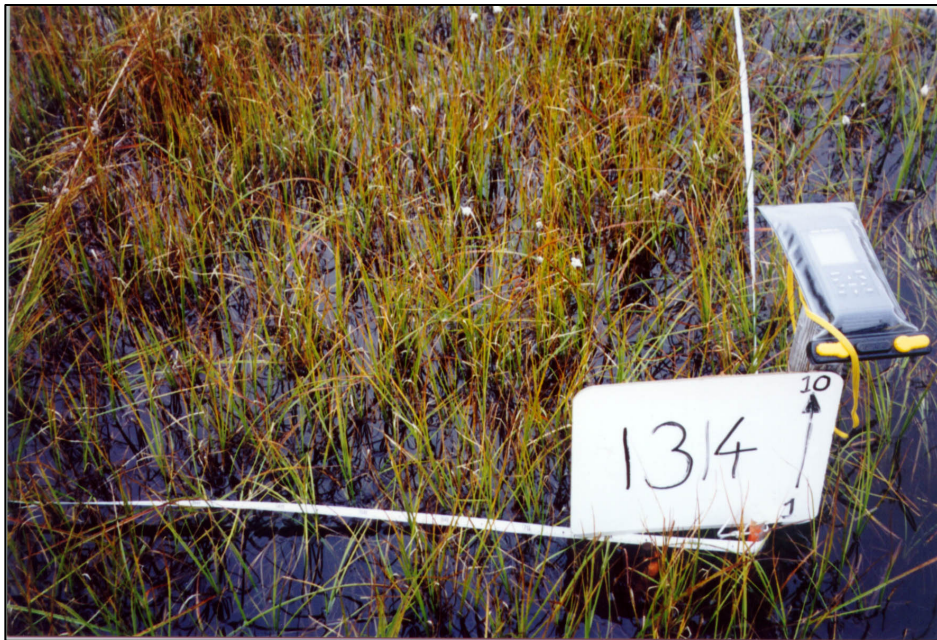


Subplots 1 → 10



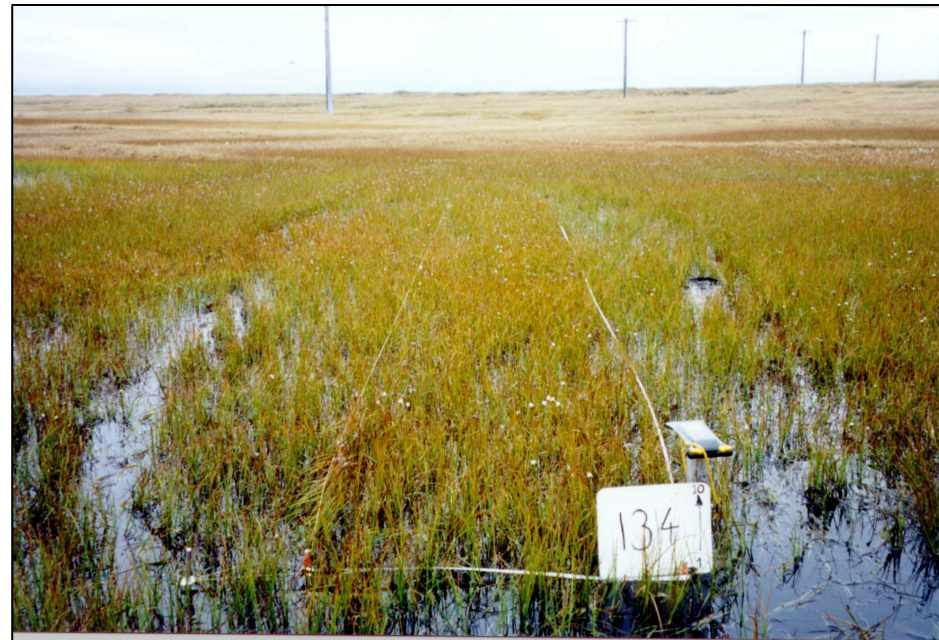
Subplots 10 → 1

2000

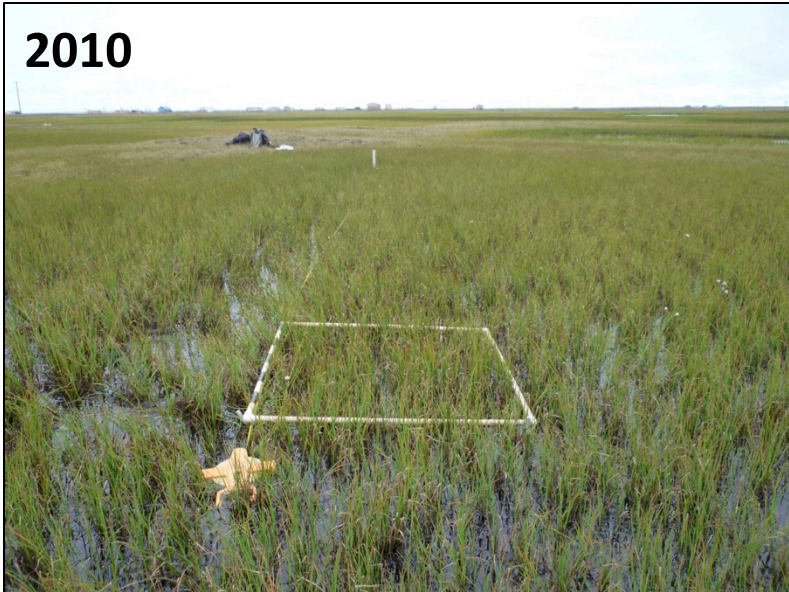
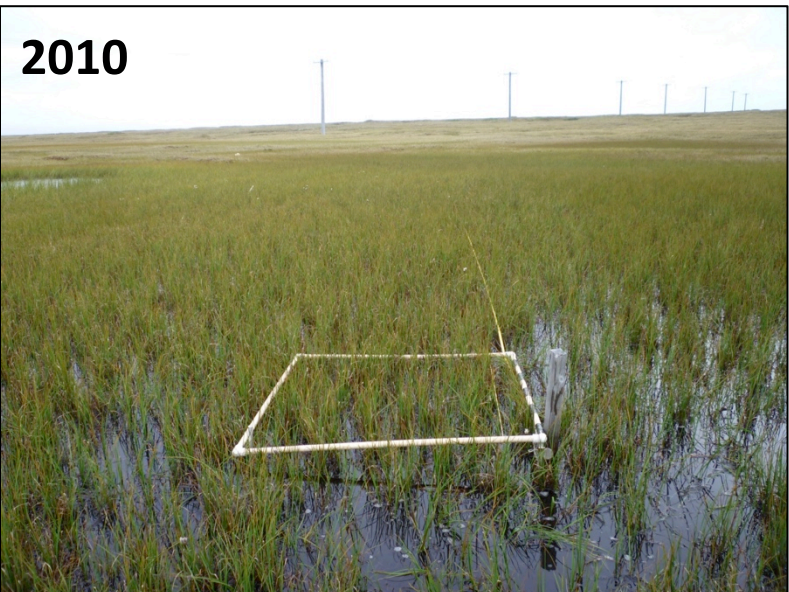


Subplots 1 → 10

2000



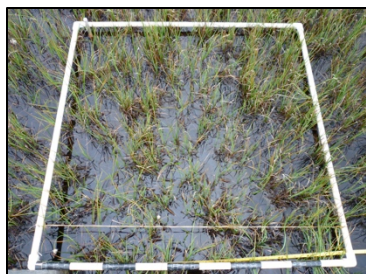
Subplots 10 → 1



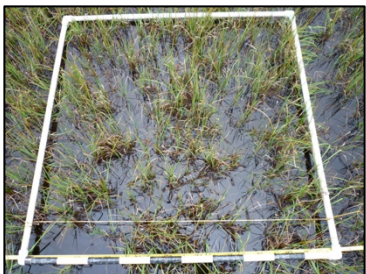
Subplots 1 → 10

Subplots 10 → 1

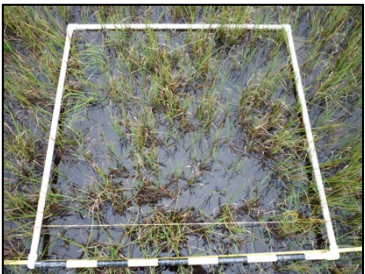
2010



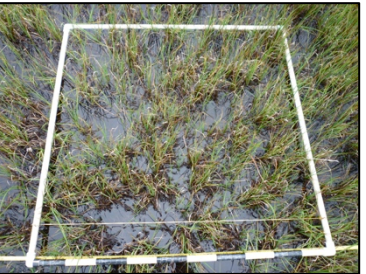
Subplot 1



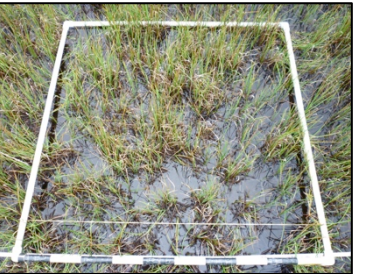
Subplot 2



Subplot 3



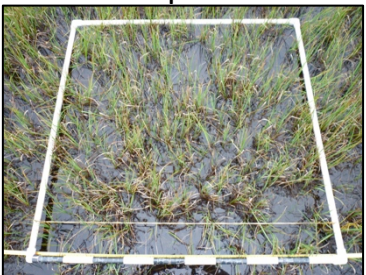
Subplot 4



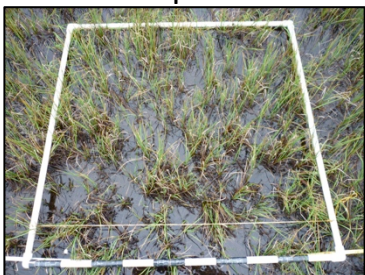
Subplot 5



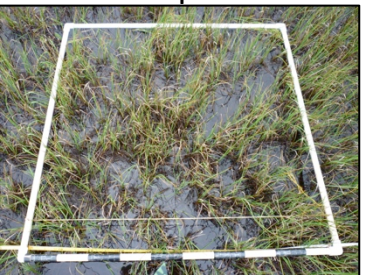
Subplot 6



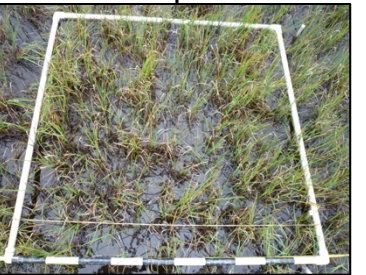
Subplot 7



Subplot 8

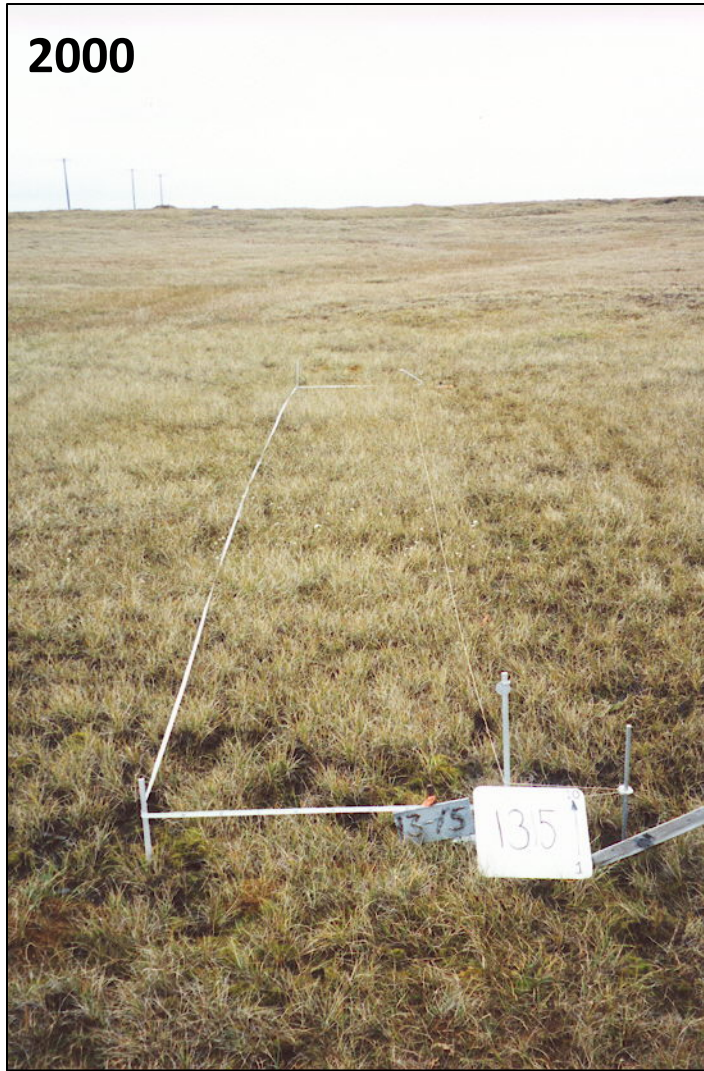


Subplot 9

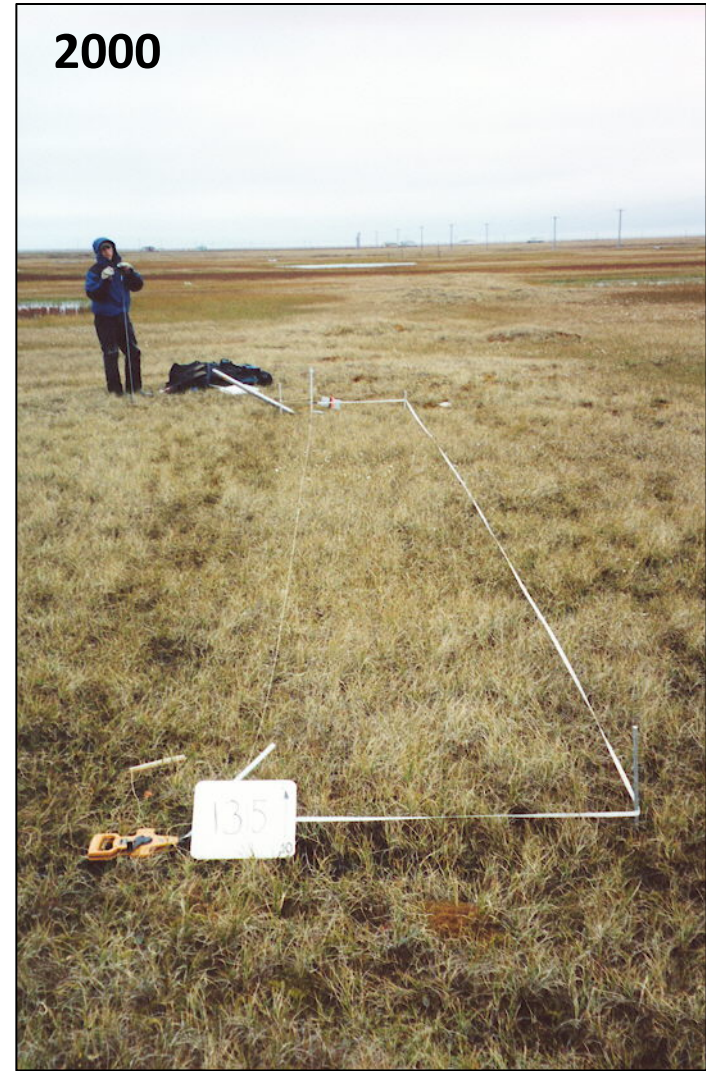


Subplot 10

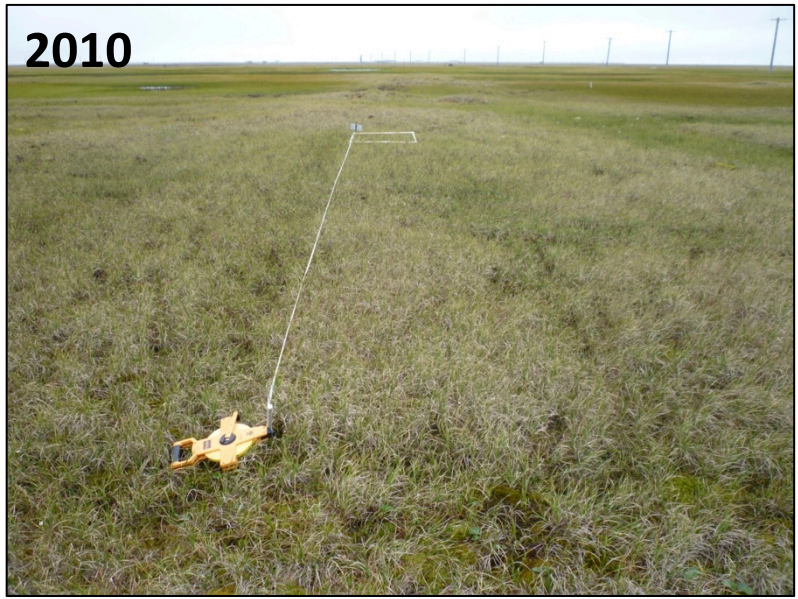
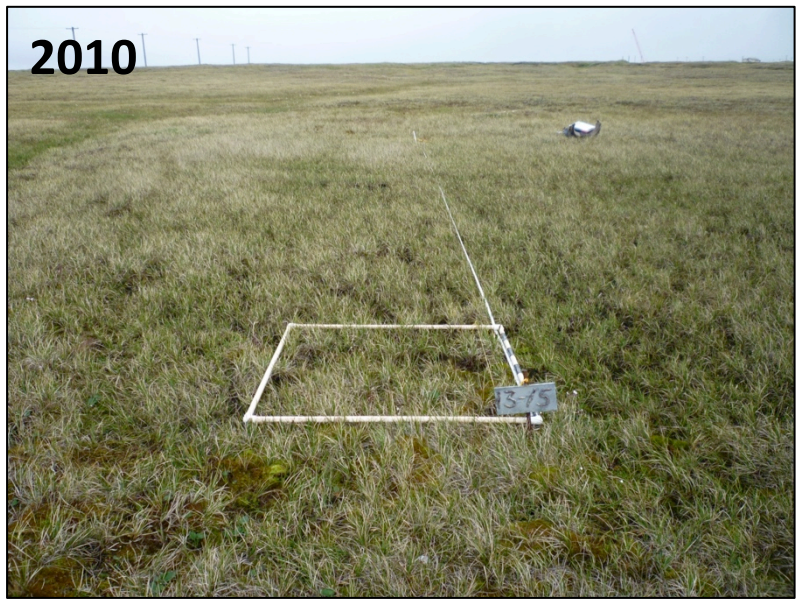




Subplots 1 → 10



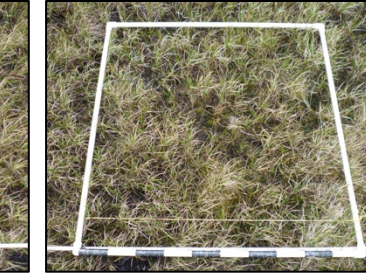
Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

Subplot 7

Subplot 8

Subplot 9

Subplot 10

2010 disturbance – ATV tracks



ATV tracks



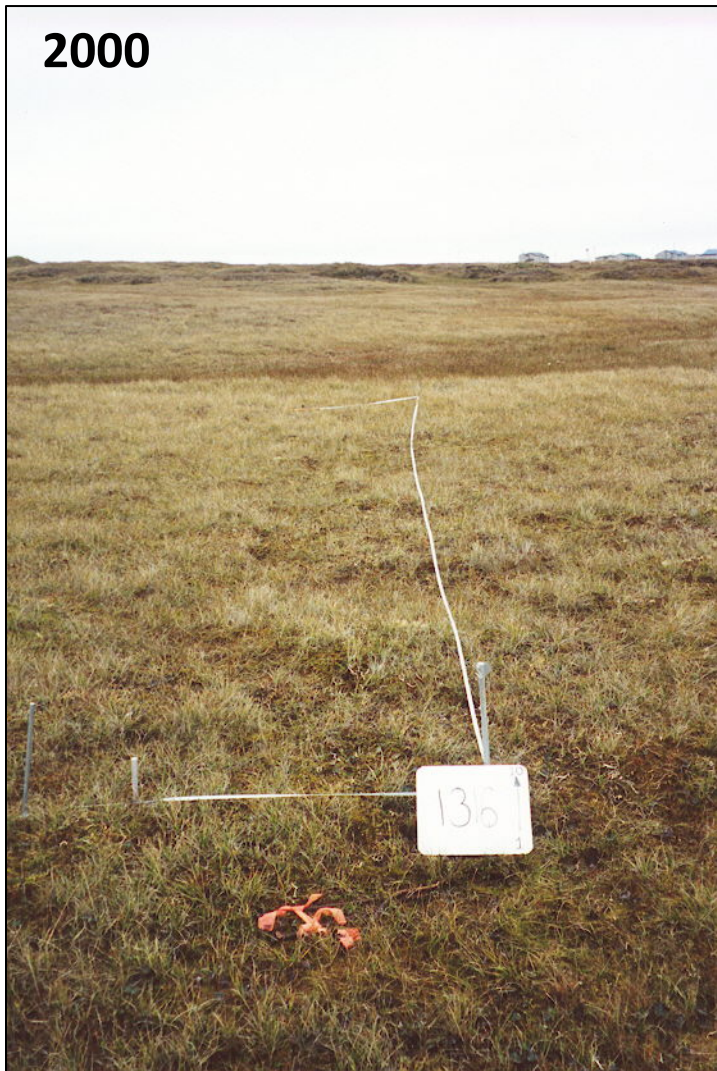
*Salix rotundifolia* only growing in ATV tracks

1972

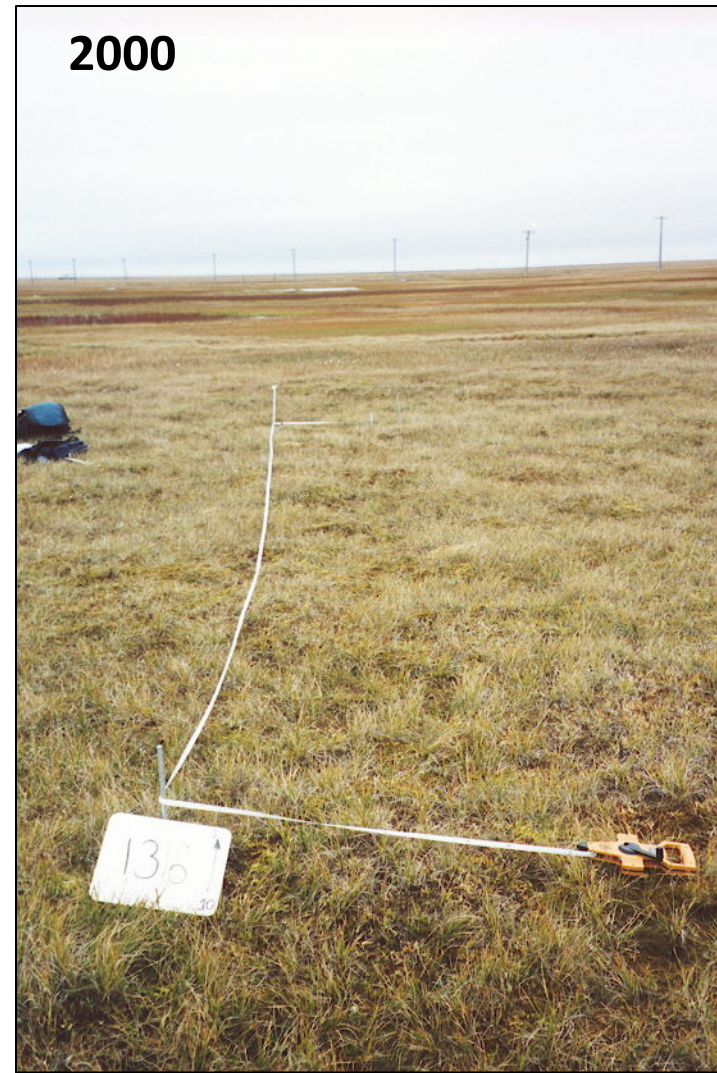


1972





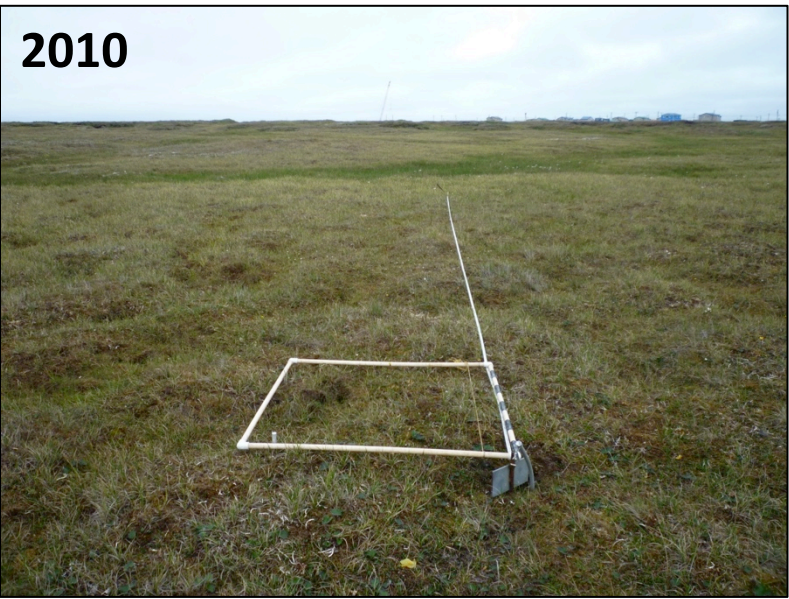
Subplots 1 → 10



Subplots 10 → 1

2000

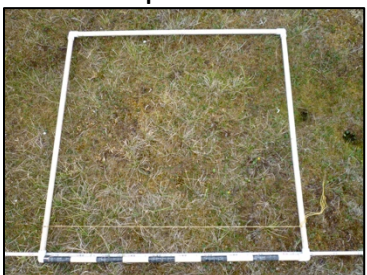




Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5

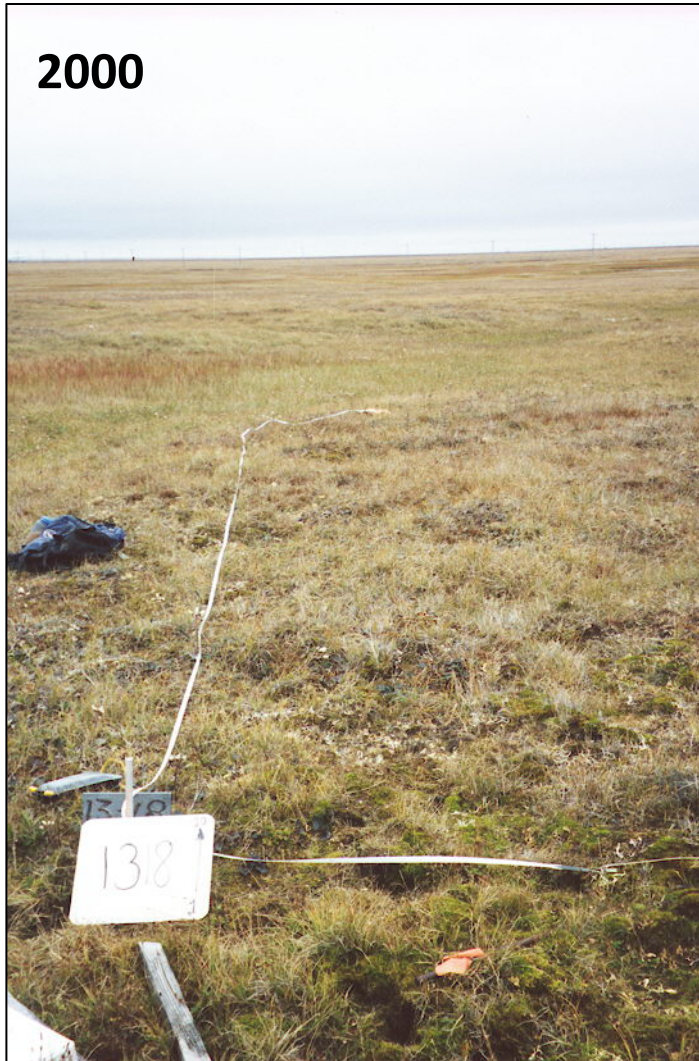
Subplot 6

Subplot 7

Subplot 8

Subplot 9

Subplot 10



Subplots 1 → 10



Subplots 10 → 1

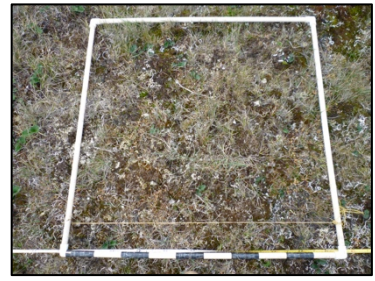
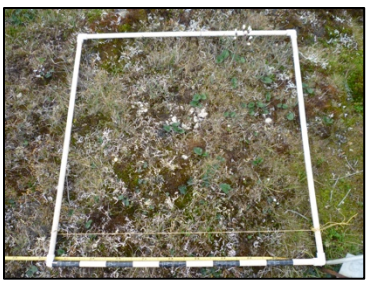




Subplots 1 → 10

Subplots 10 → 1

2010



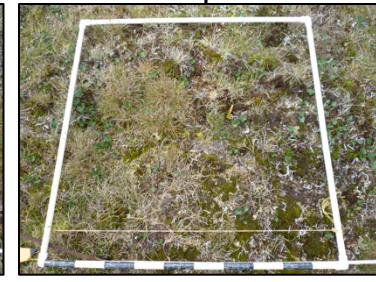
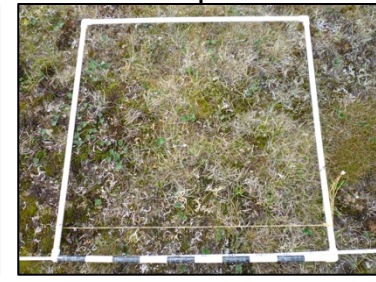
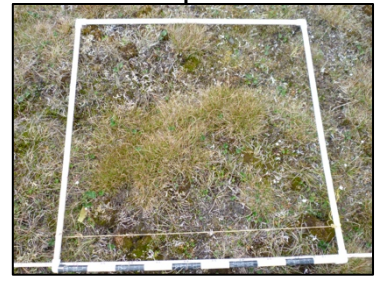
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

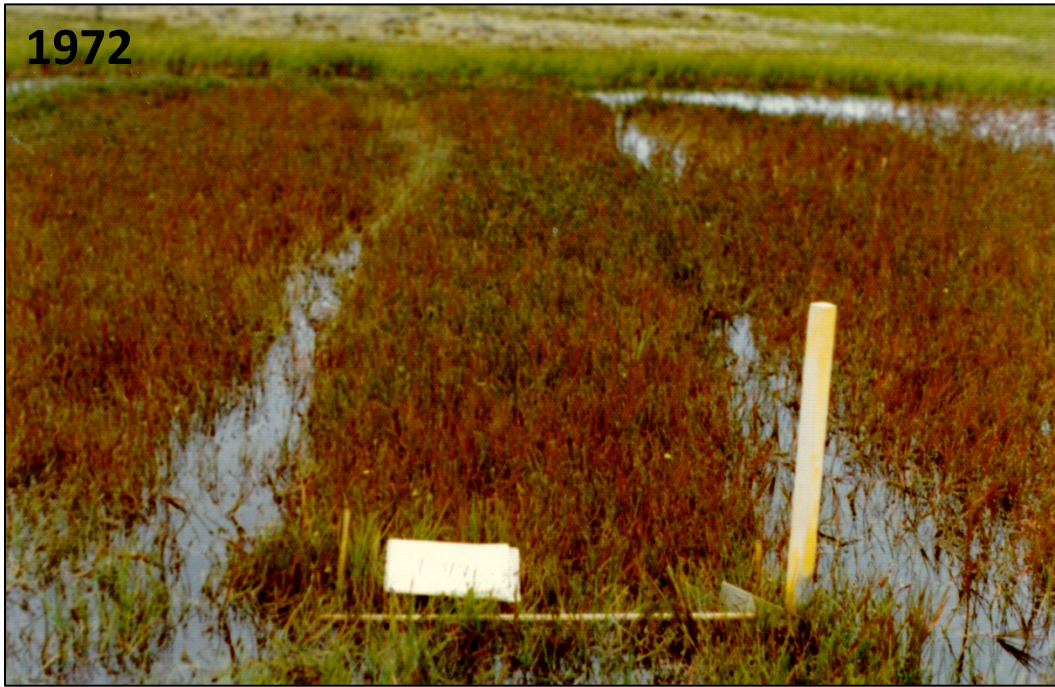
Subplot 7

Subplot 8

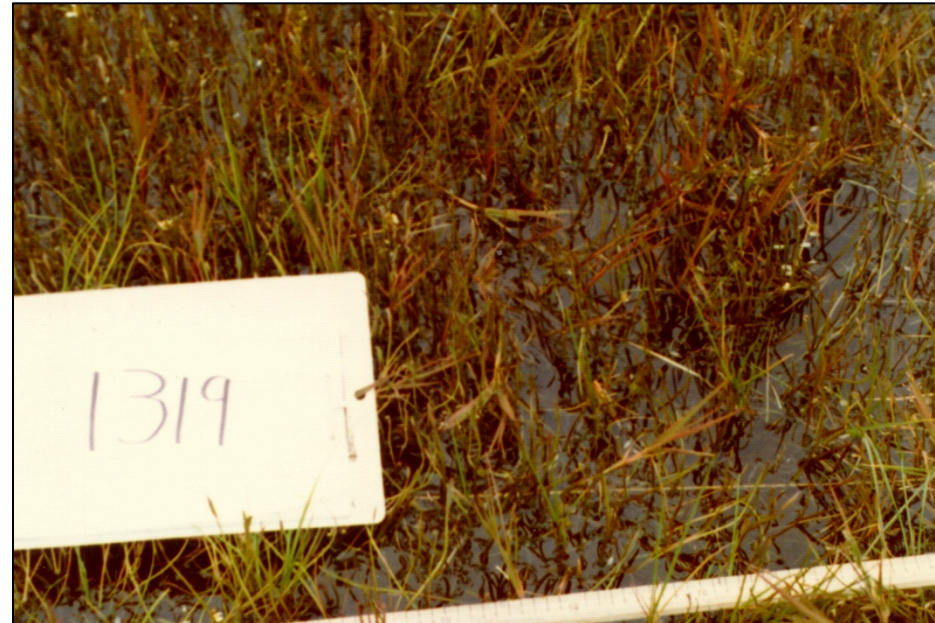
Subplot 9

Subplot 10

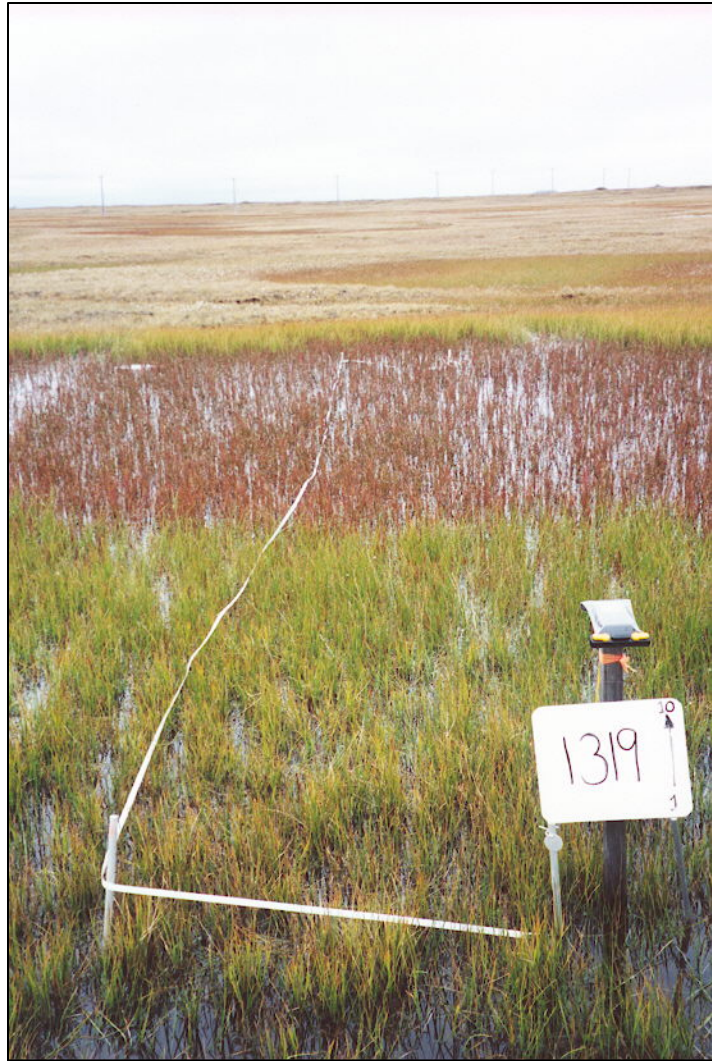
1972



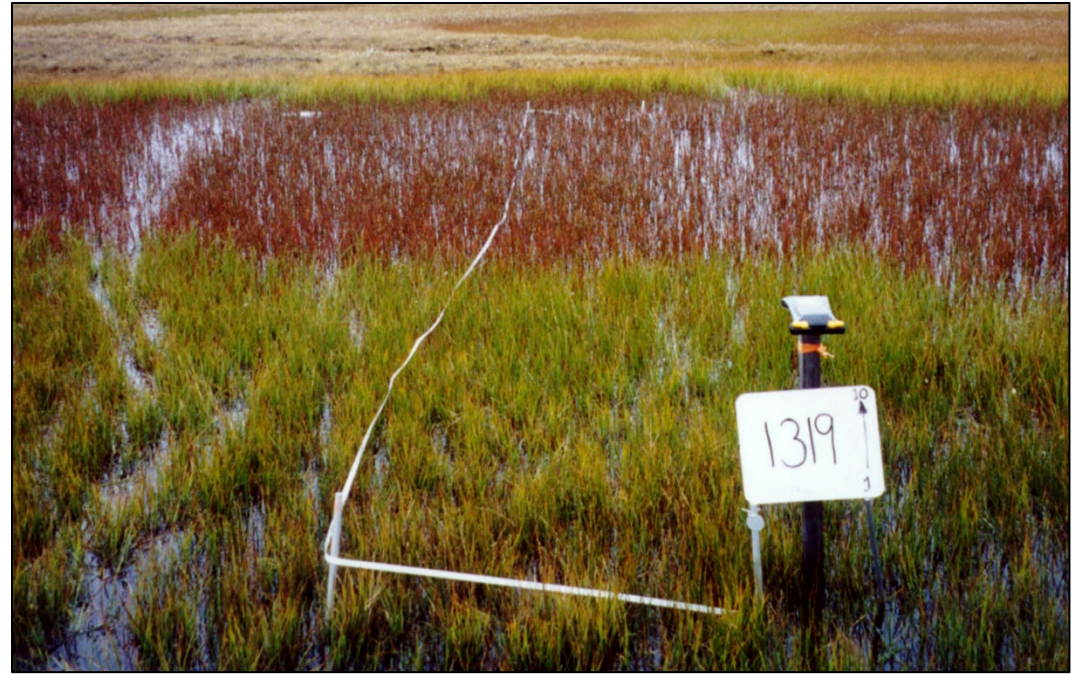
1972



2000

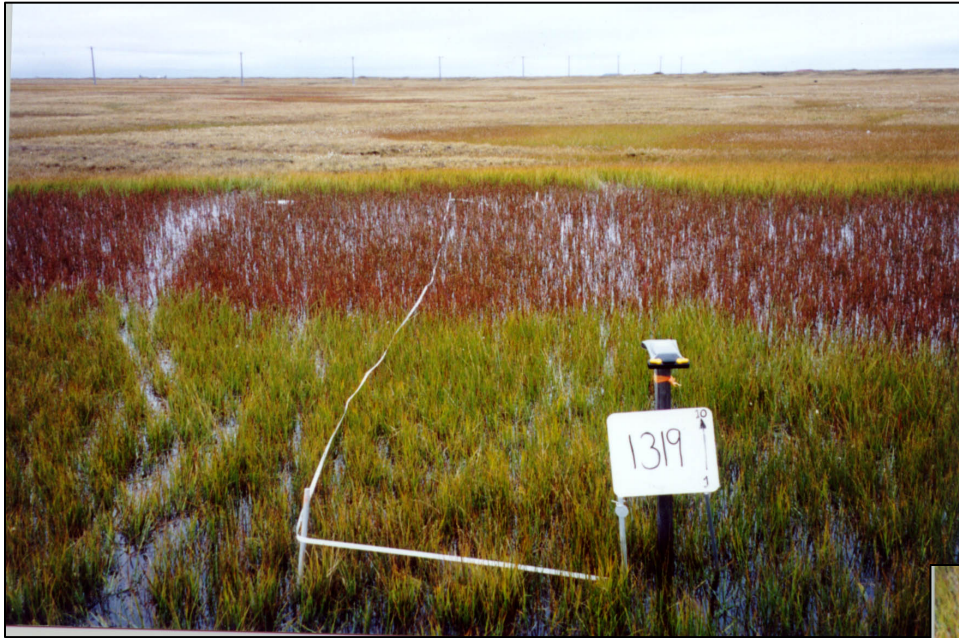


2000

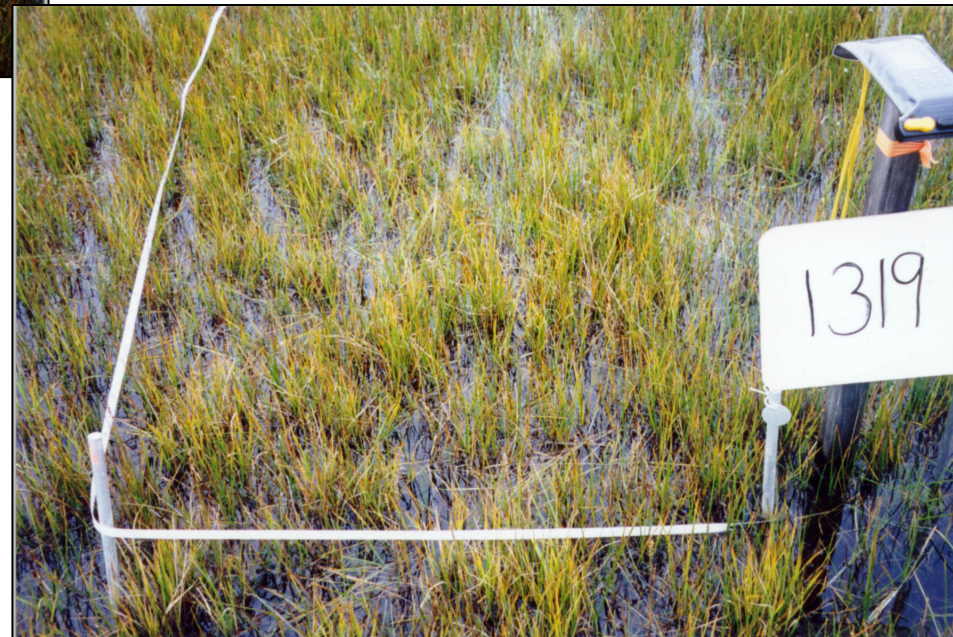


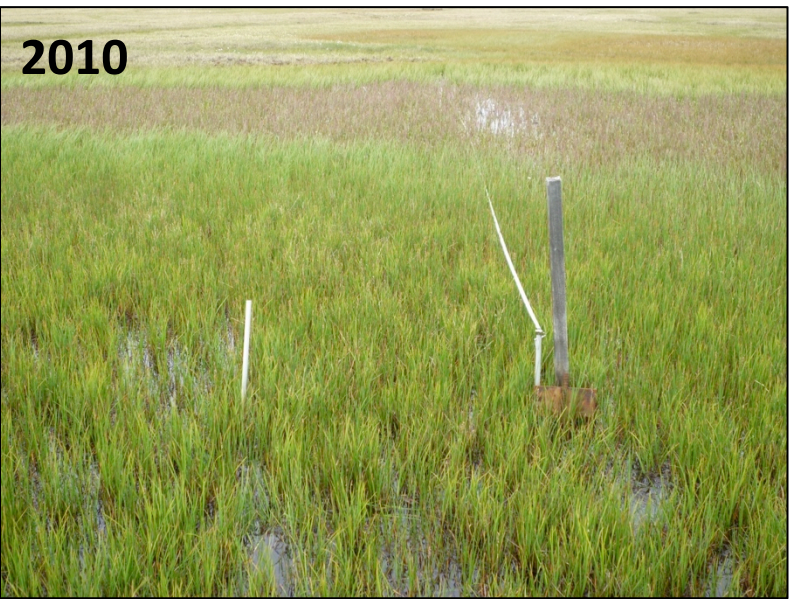
Subplots 1 → 10

2000



2000

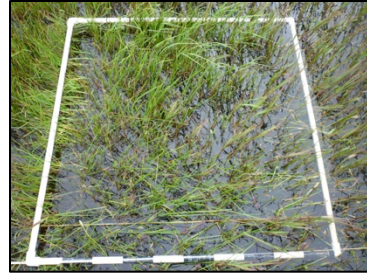
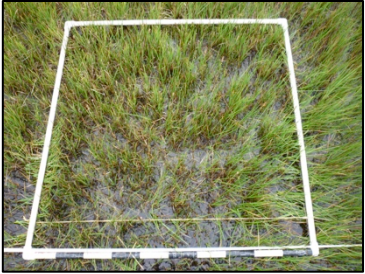
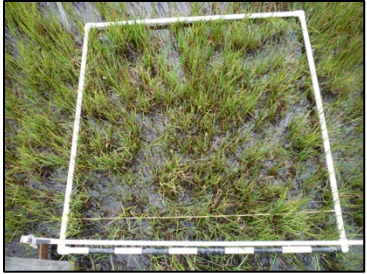




Subplots 1 → 10

Subplots 10 → 1

2010



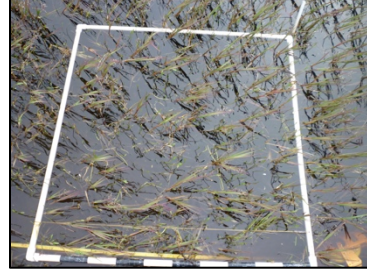
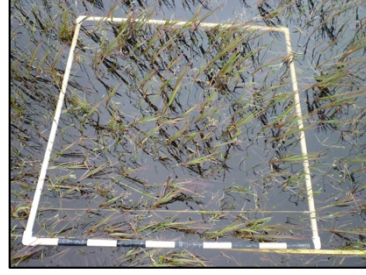
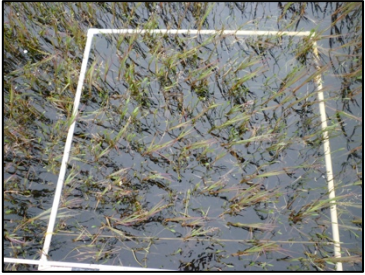
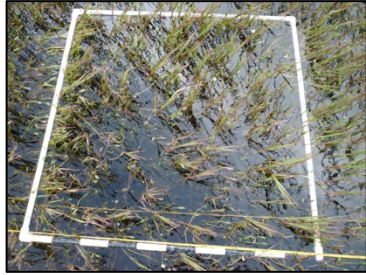
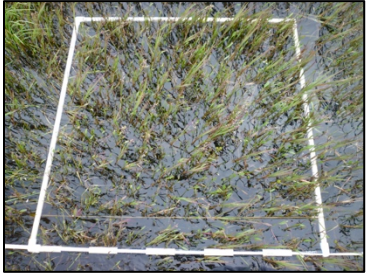
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

Subplot 7

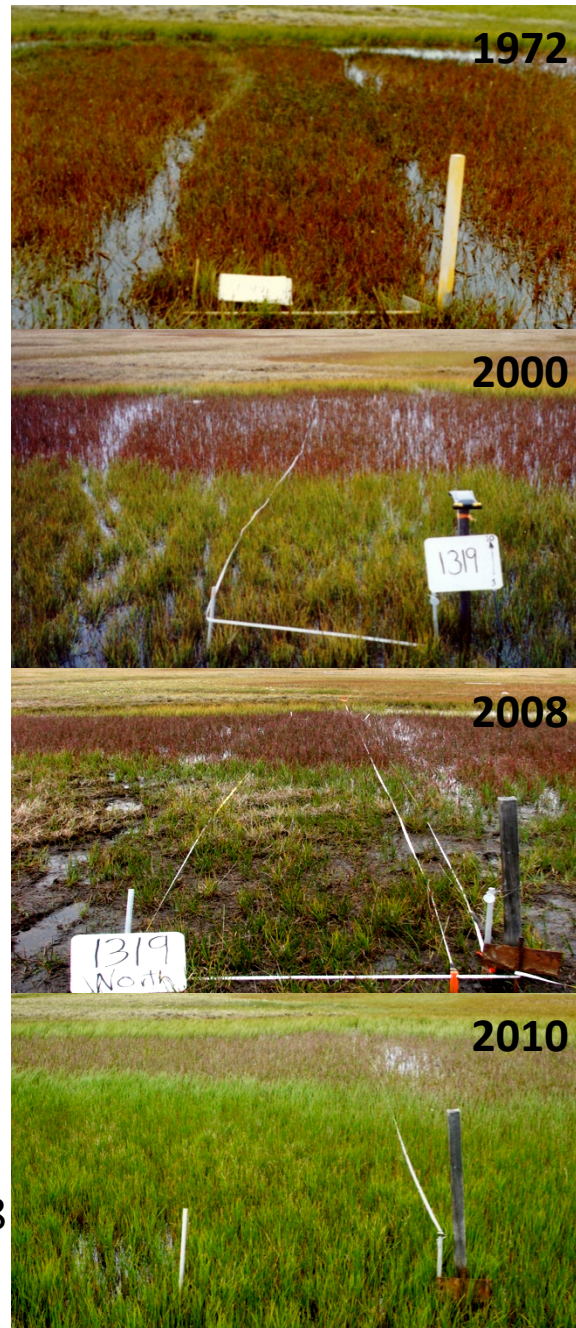
Subplot 8

Subplot 9

Subplot 10

# Plot 2010-1319

## Repeat plot photography



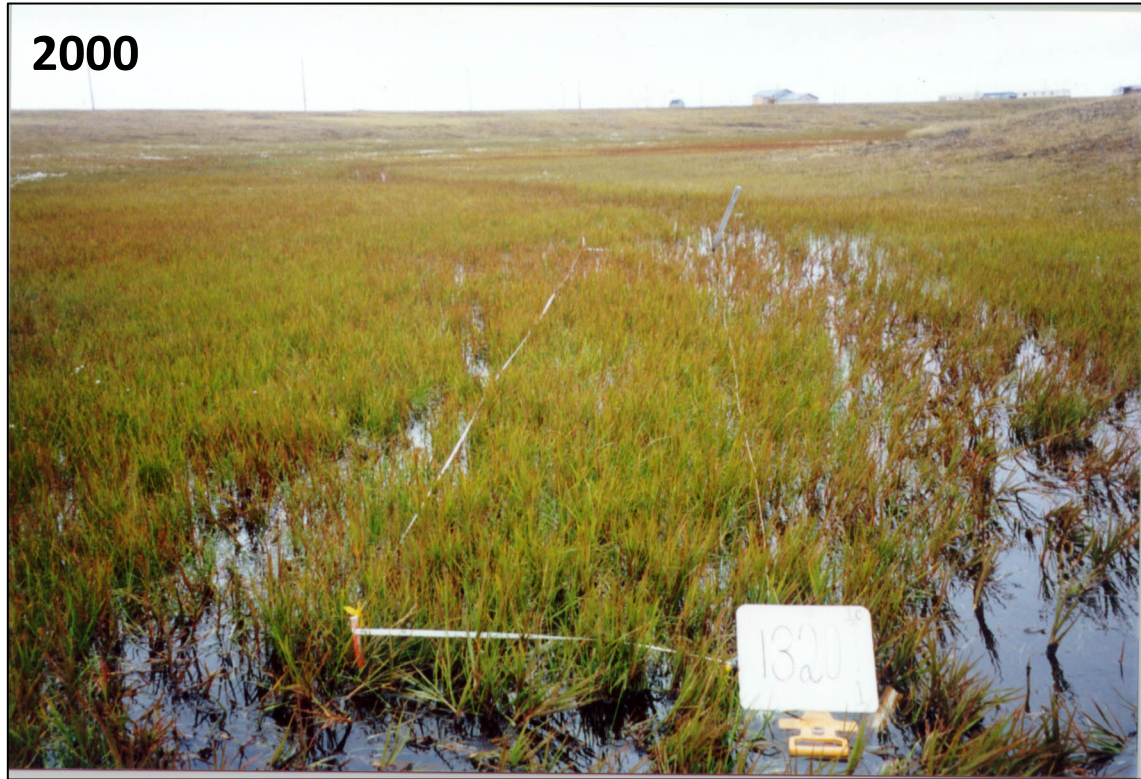
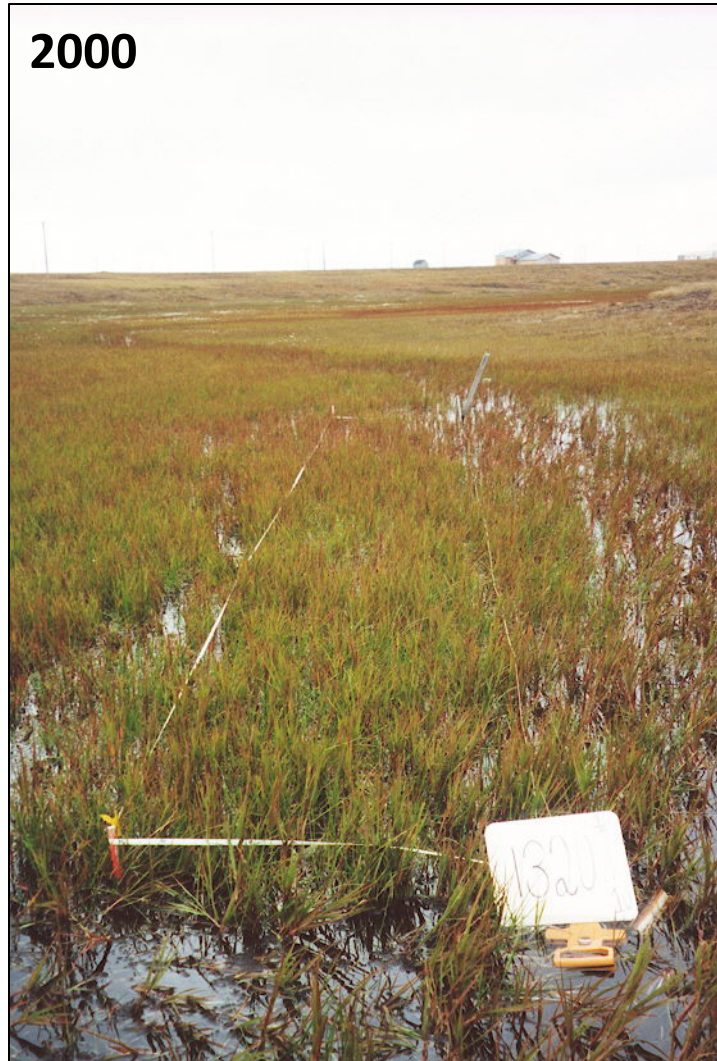
The decrease in biomass in 2008 occurred during a lemming population outbreak.

1972



1972

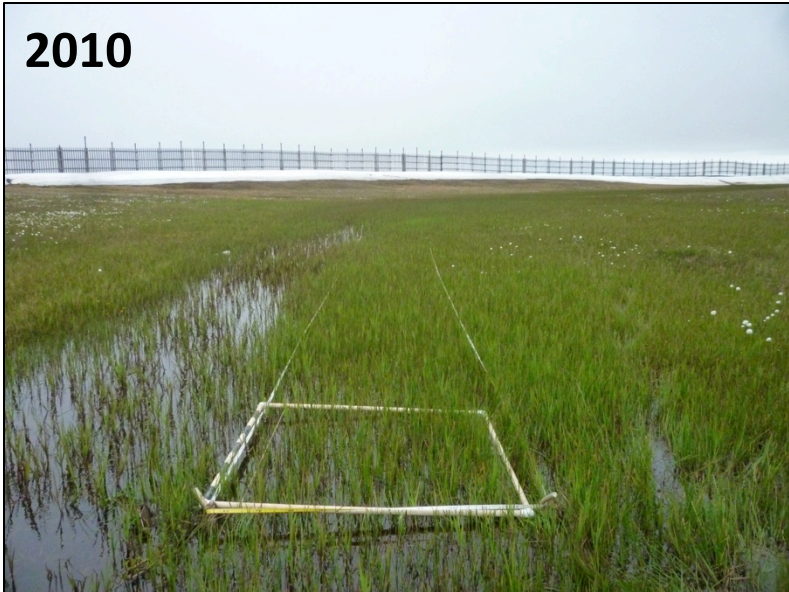






2000

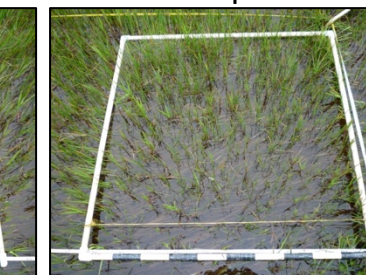
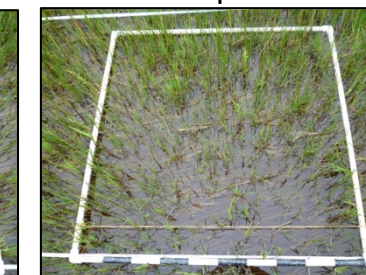
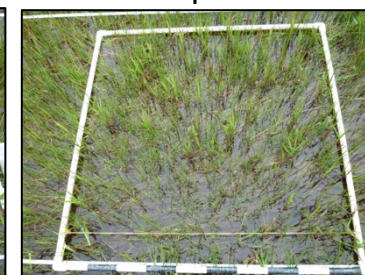
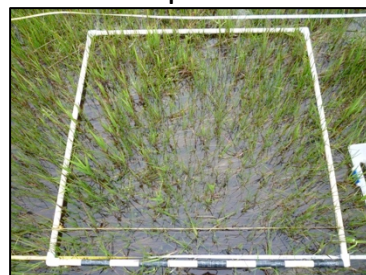
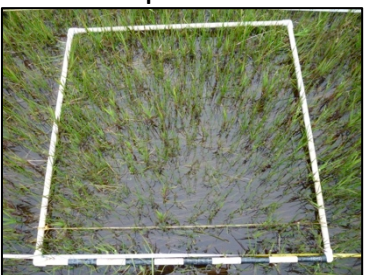
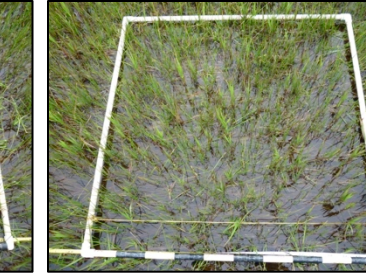
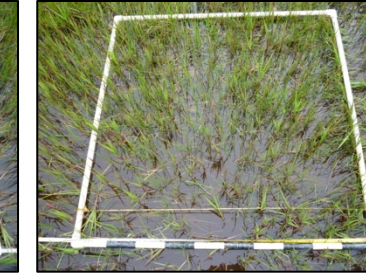
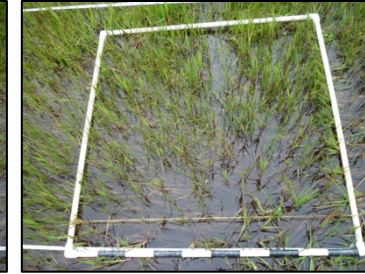
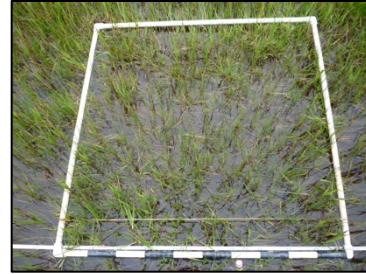
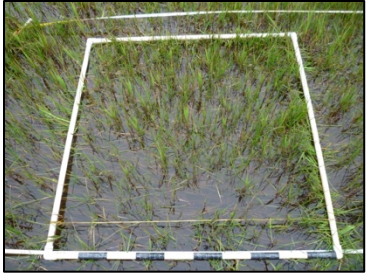




Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5

Subplot 6

Subplot 7

Subplot 8

Subplot 9

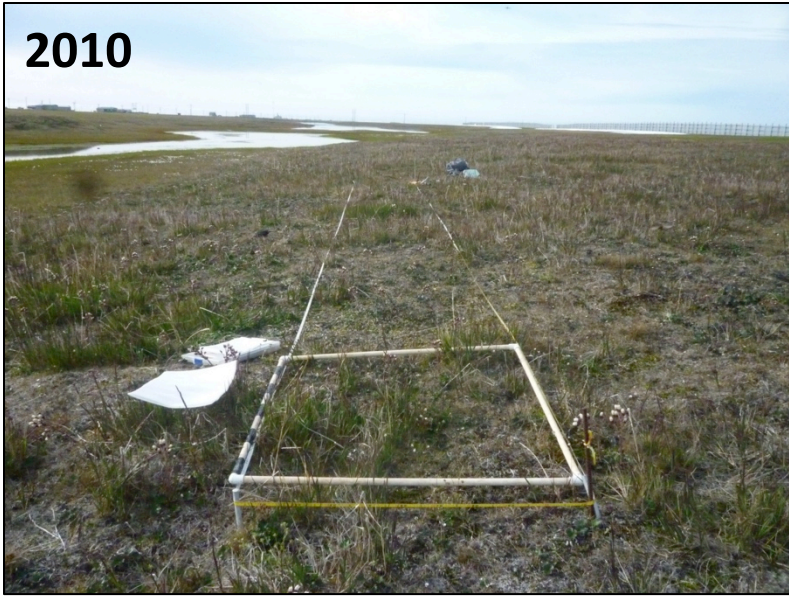
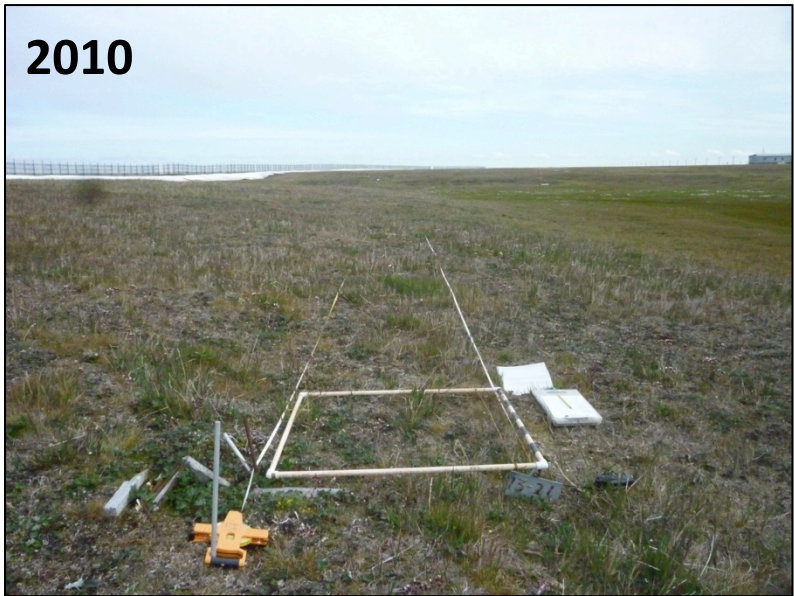
Subplot 10



Subplots 1 → 10



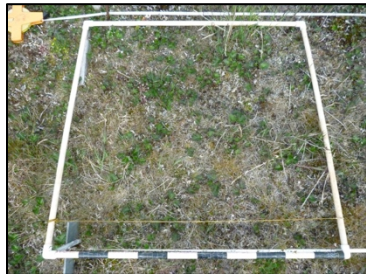
Subplots 10 → 1



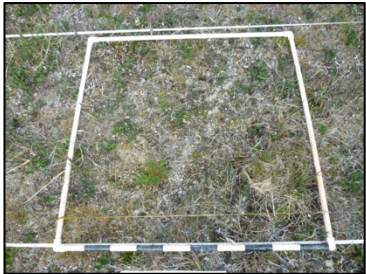
Subplots 1 → 10

Subplots 10 → 1

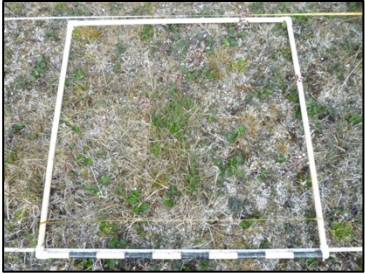
2010



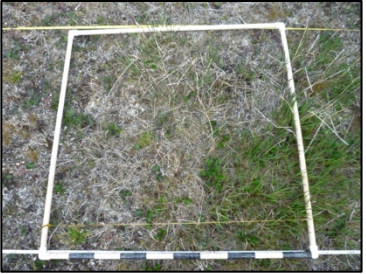
Subplot 1



Subplot 2



Subplot 3



Subplot 4



Subplot 5



Subplot 6



Subplot 7



Subplot 8



Subplot 9

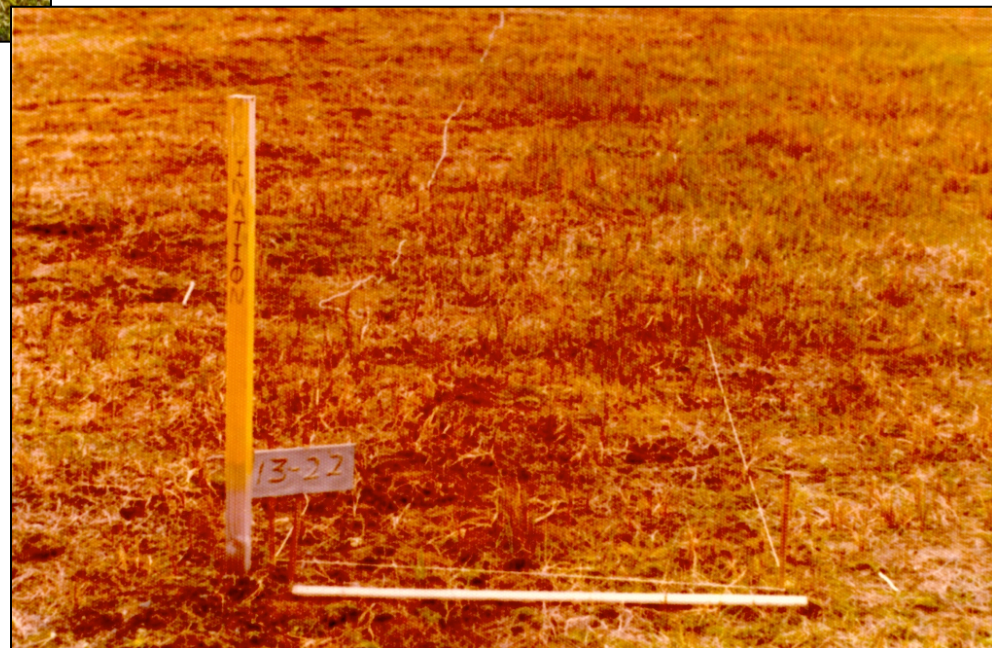


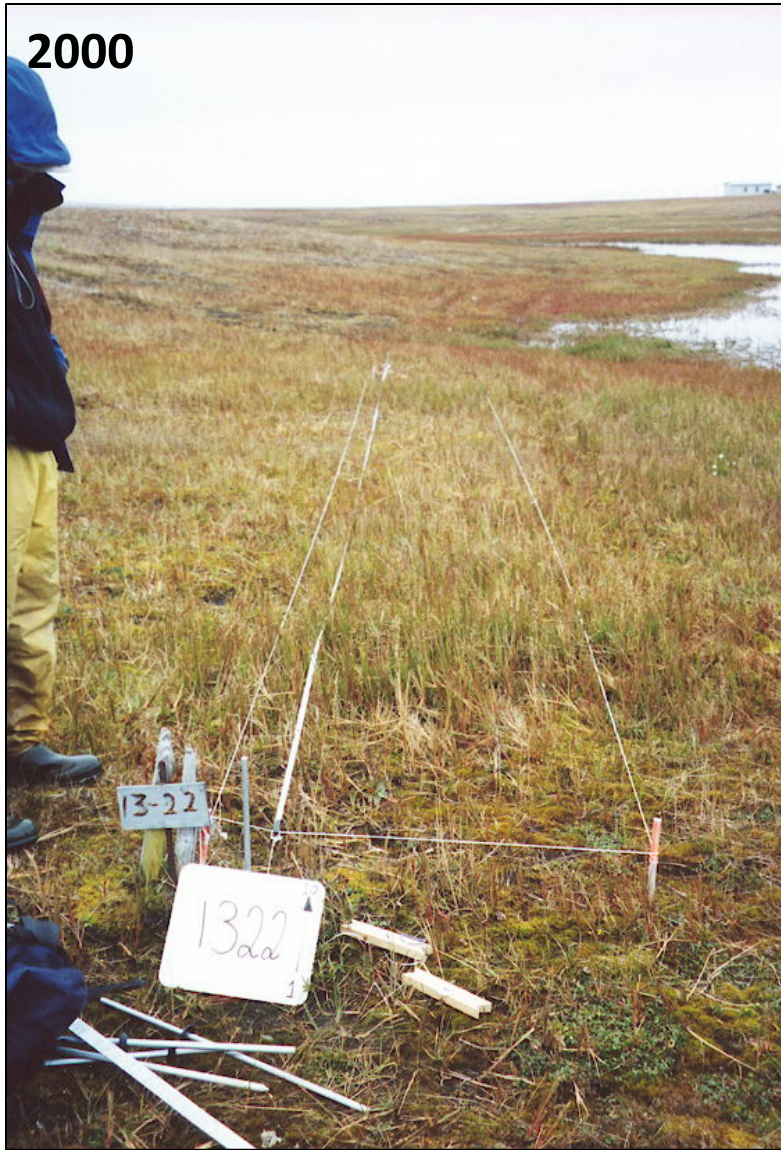
Subplot 10

1972

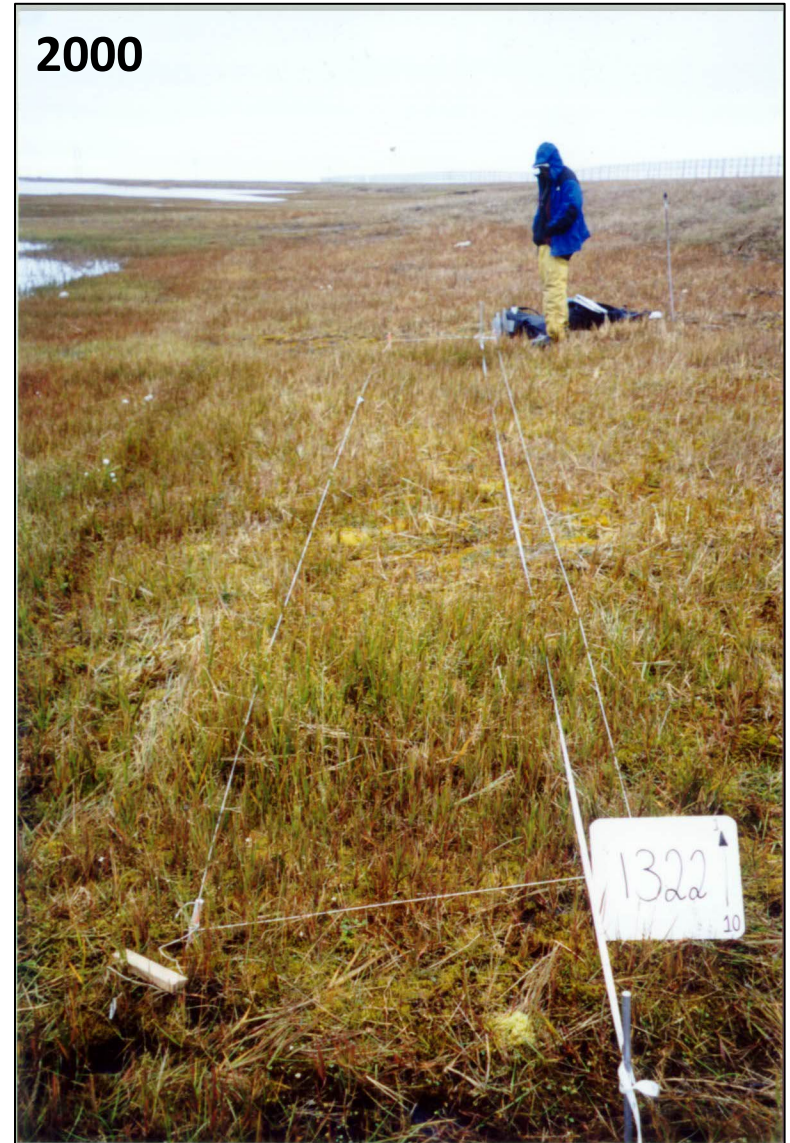


1972





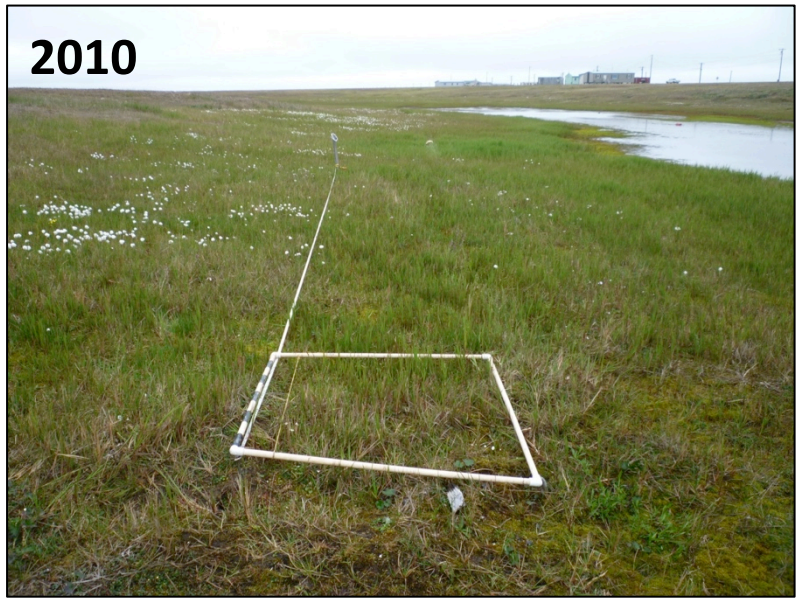
Subplots 1 → 10



Subplots 10 → 1

2000





Subplots 1 → 10

Subplots 10 → 1

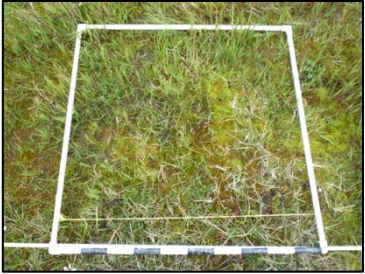
2010



Subplot 1



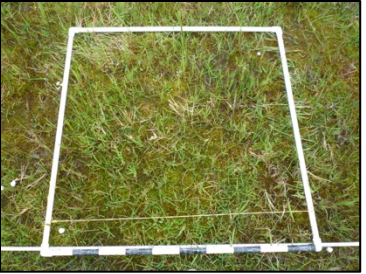
Subplot 2



Subplot 3



Subplot 4



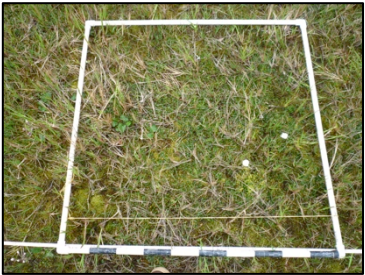
Subplot 5



Subplot 6



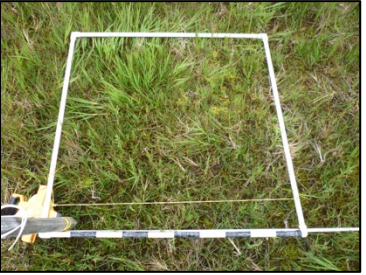
Subplot 7



Subplot 8



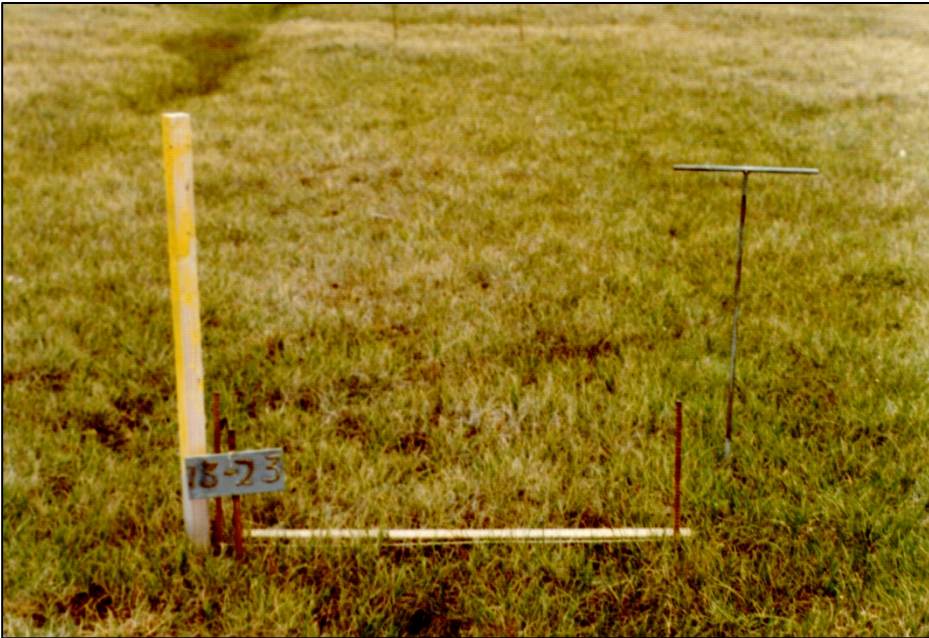
Subplot 9



Subplot 10

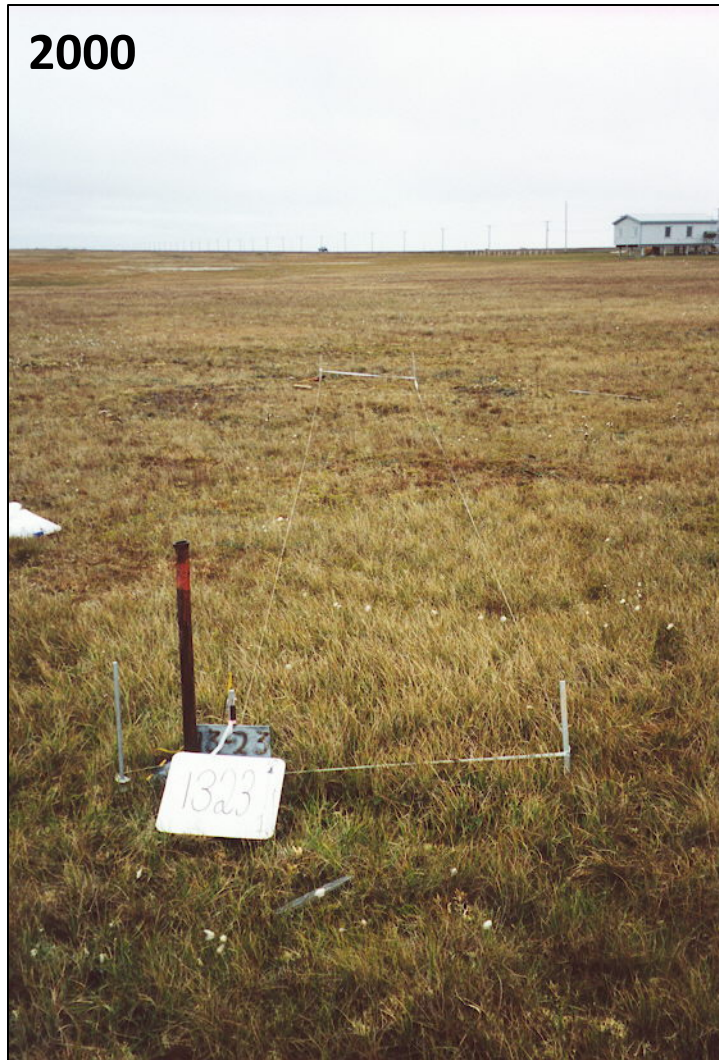


1972

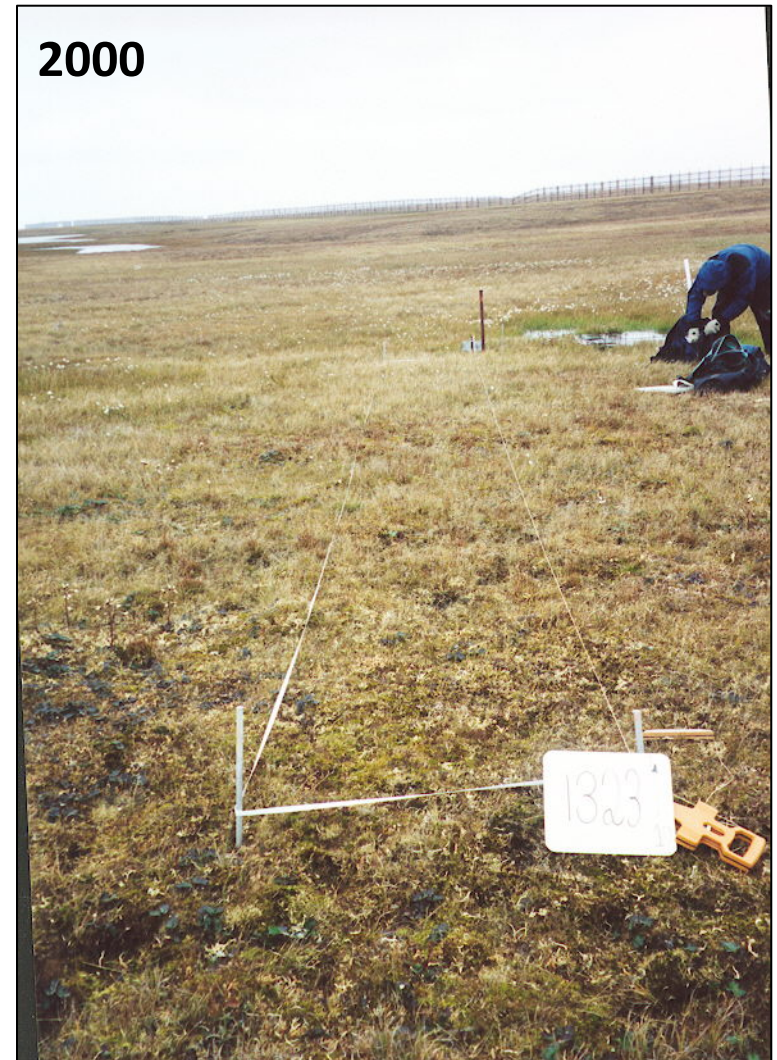


1972



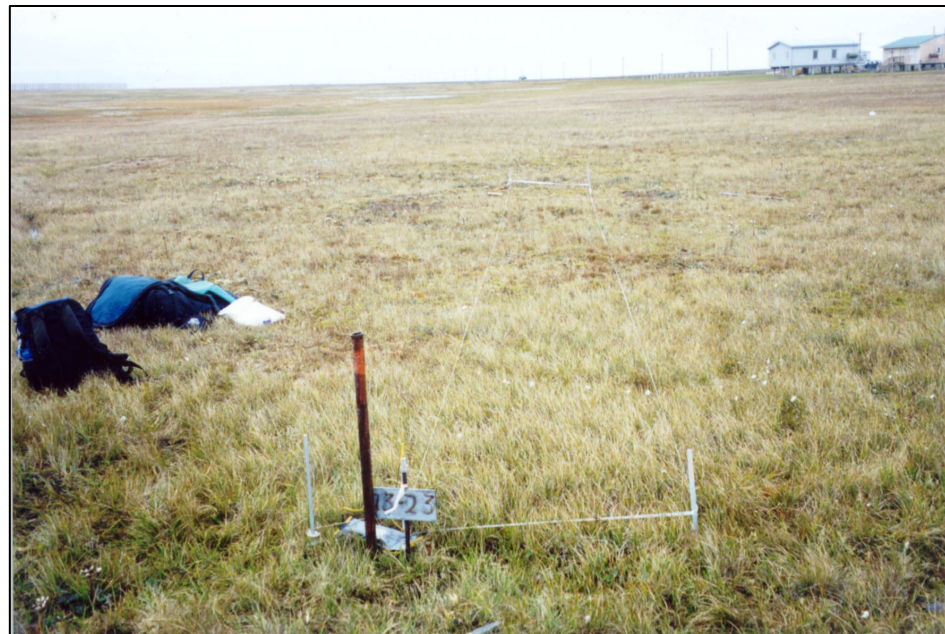


Subplots 1 → 10

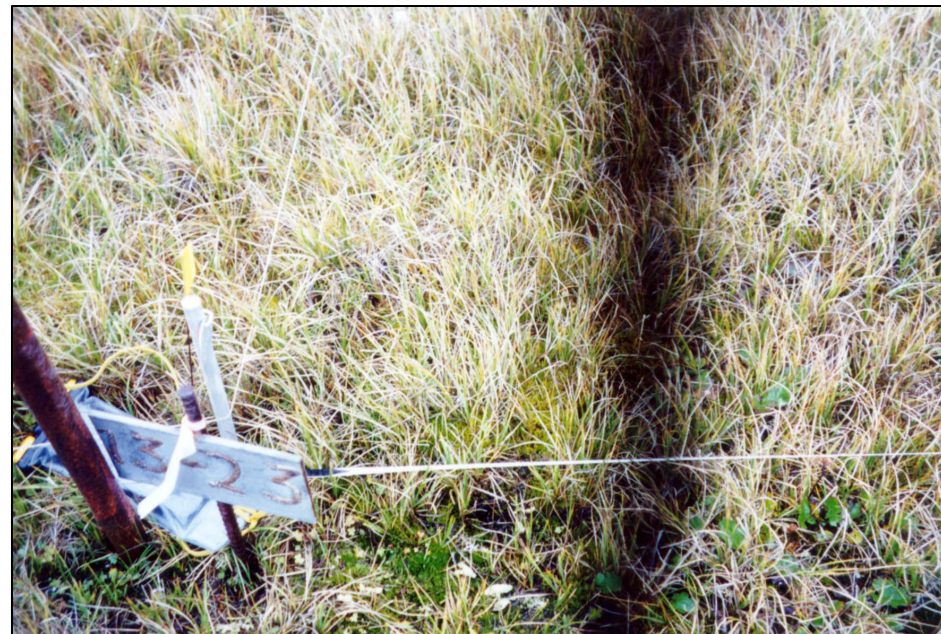


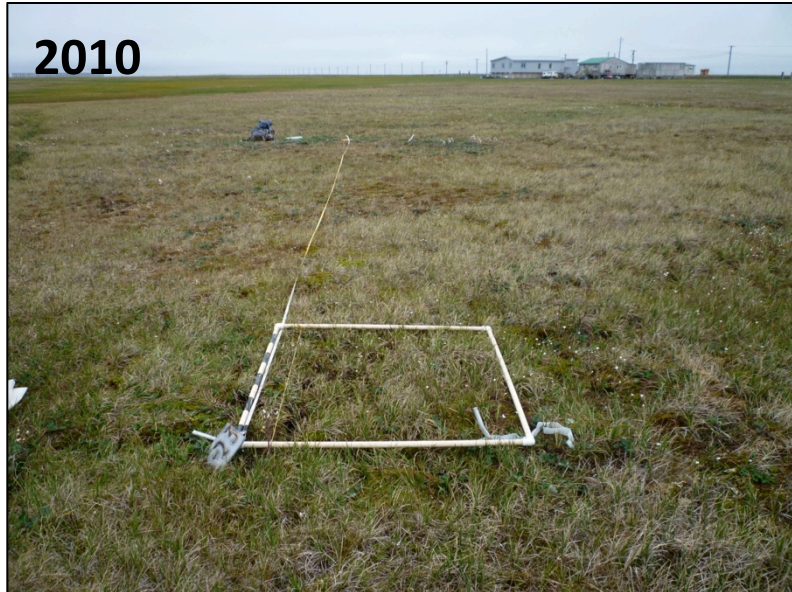
Subplots 10 → 1

2000



2000

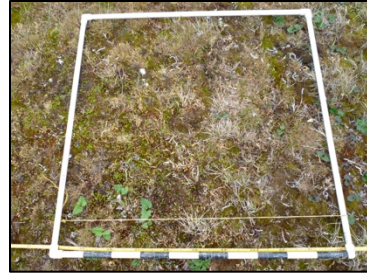
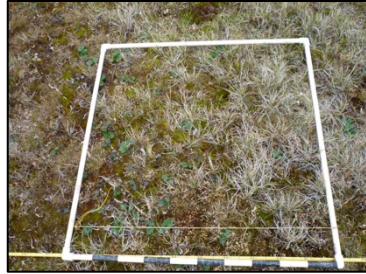
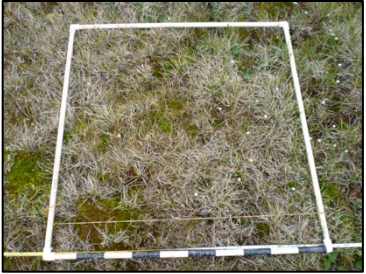




Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5

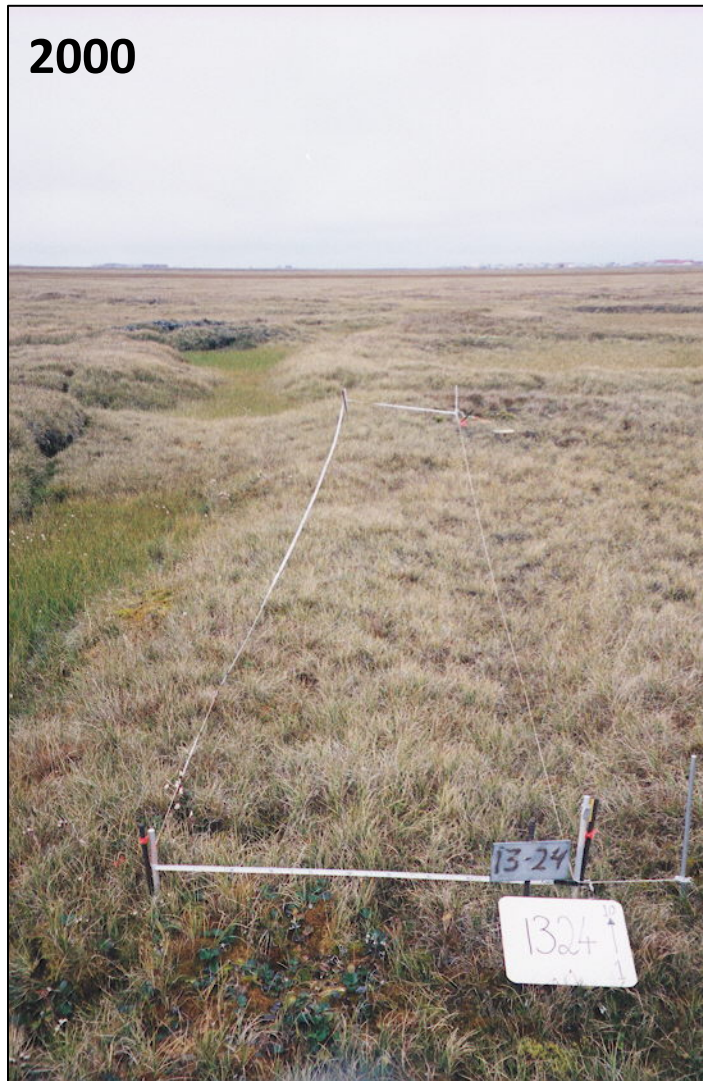
Subplot 6

Subplot 7

Subplot 8

Subplot 9

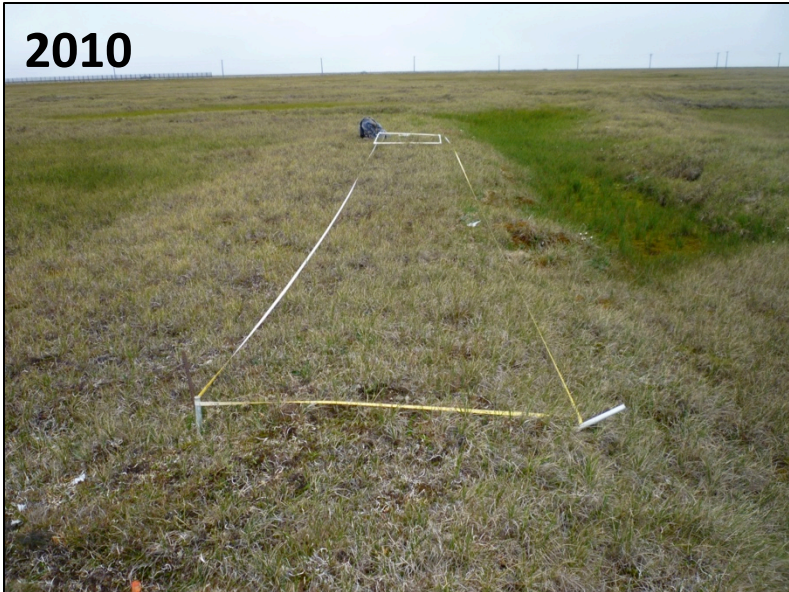
Subplot 10



Subplots 1 → 10



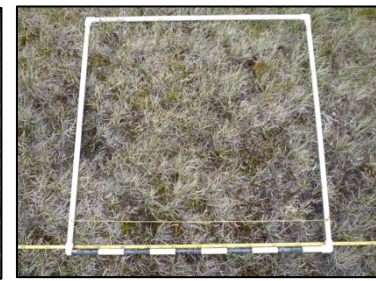
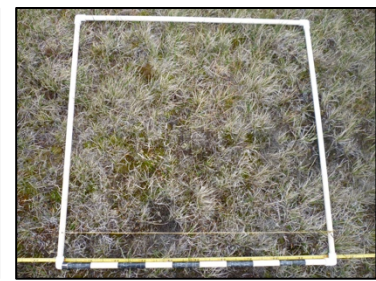
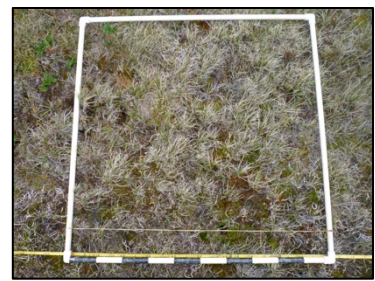
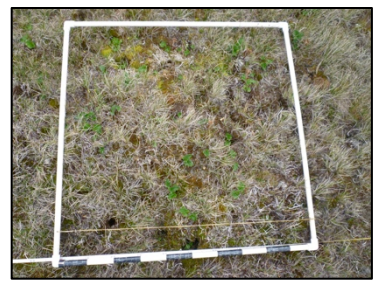
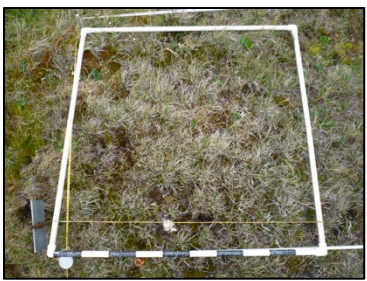
Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



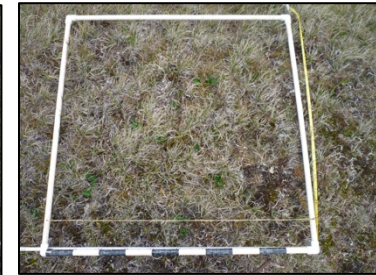
Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



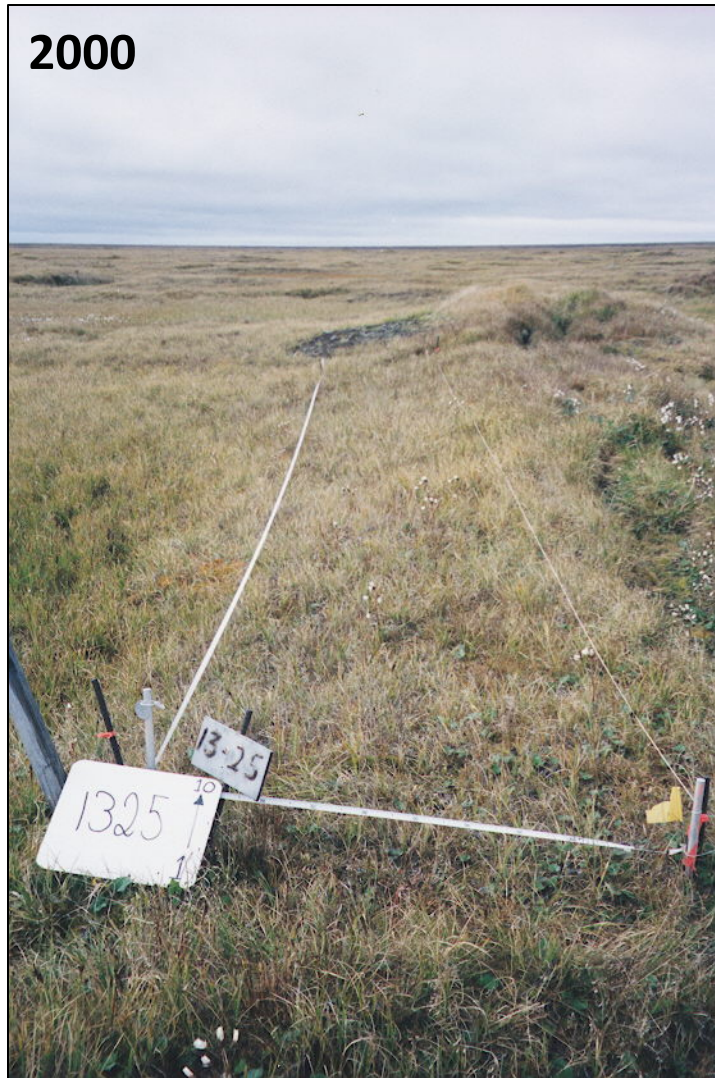
Subplot 6

Subplot 7

Subplot 8

Subplot 9

Subplot 10



Subplots 1 → 10



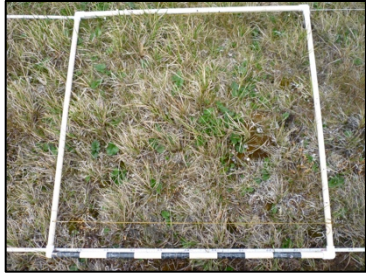
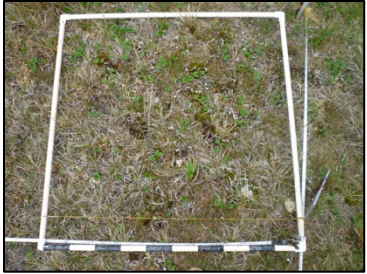
Subplots 10 → 1



Subplots 1 → 10

Subplots 10 → 1

2010



Subplot 1

Subplot 2

Subplot 3

Subplot 4

Subplot 5



Subplot 6

Subplot 7

Subplot 8

Subplot 9

Subplot 10