warmXtrophic: OTC Data Plots

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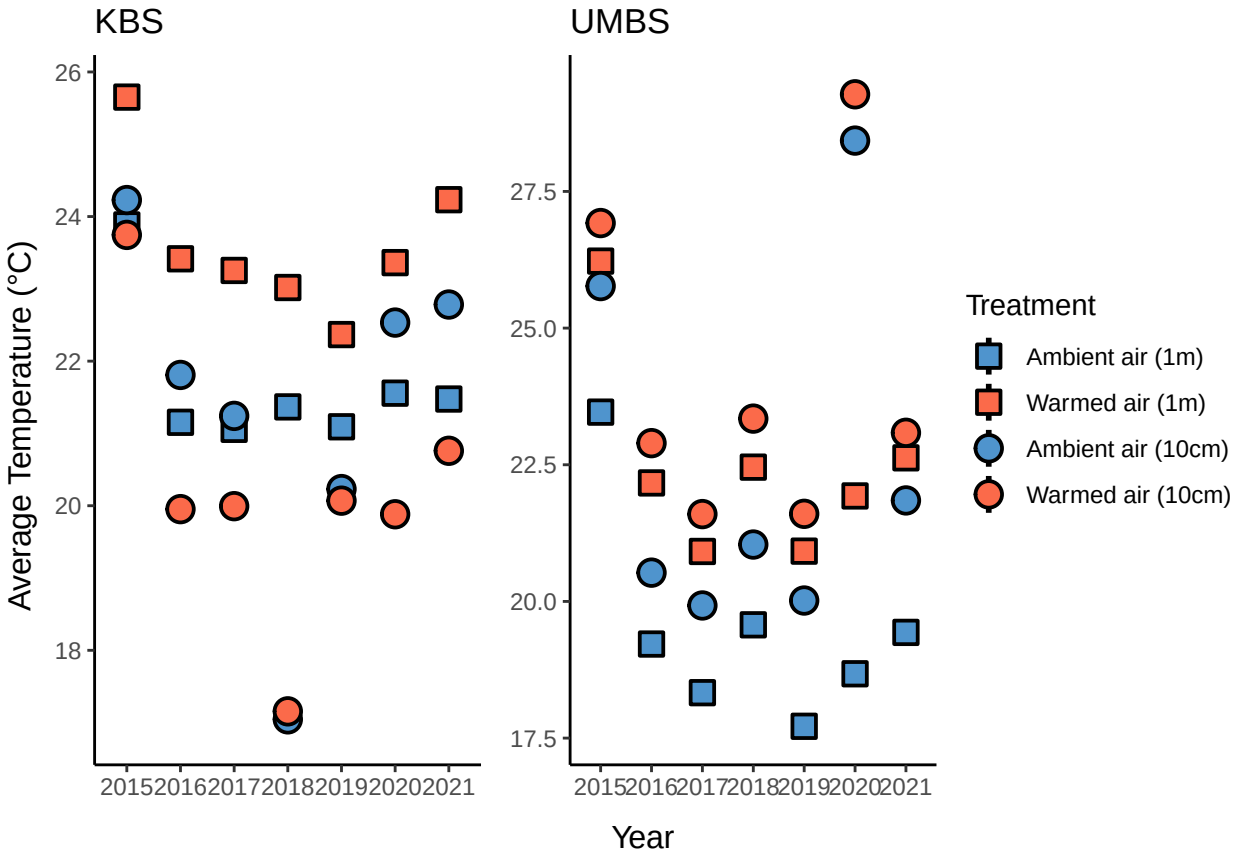
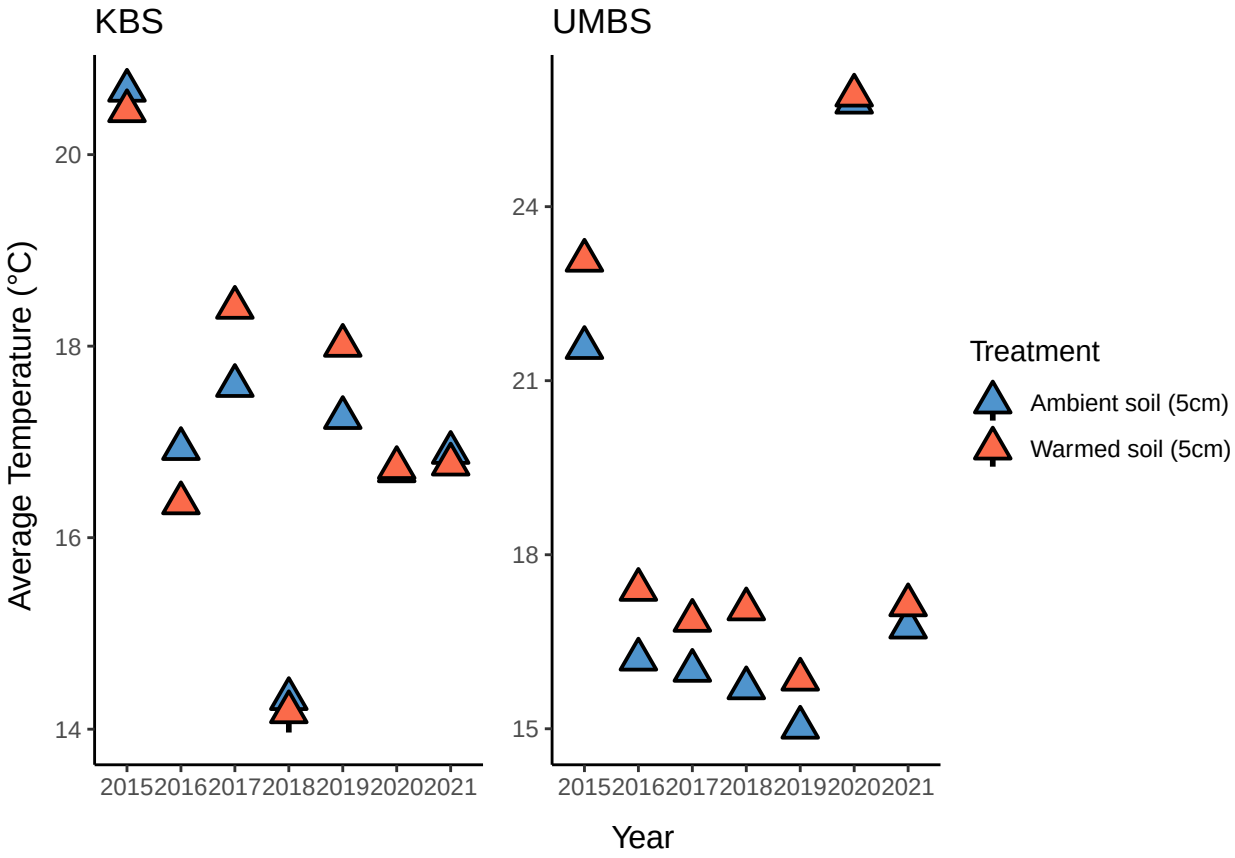
COLLABORATORS: Phoebe Zarnetske, Nina Lany, Kathryn Schmidt, Mark Hammond, Pat Bills, Kileigh Welshofer, Moriah Young
DATA INPUT: CSV files are located in the L1 hobo folder in the shared Google drive
DATA OUTPUT: Relevant plots for the HOBO data, other plots located in HOBO_plots_L2.R script
NOTES: Figures marked with (older) are plots generated in the past and may not be relevant/useful for the paper
A cleaner & easier to understand version of this code is in the .R script
Note: the bad sensor data for 2021 was not removed at KBS, nor was the wasp sensor data removed at UMBS

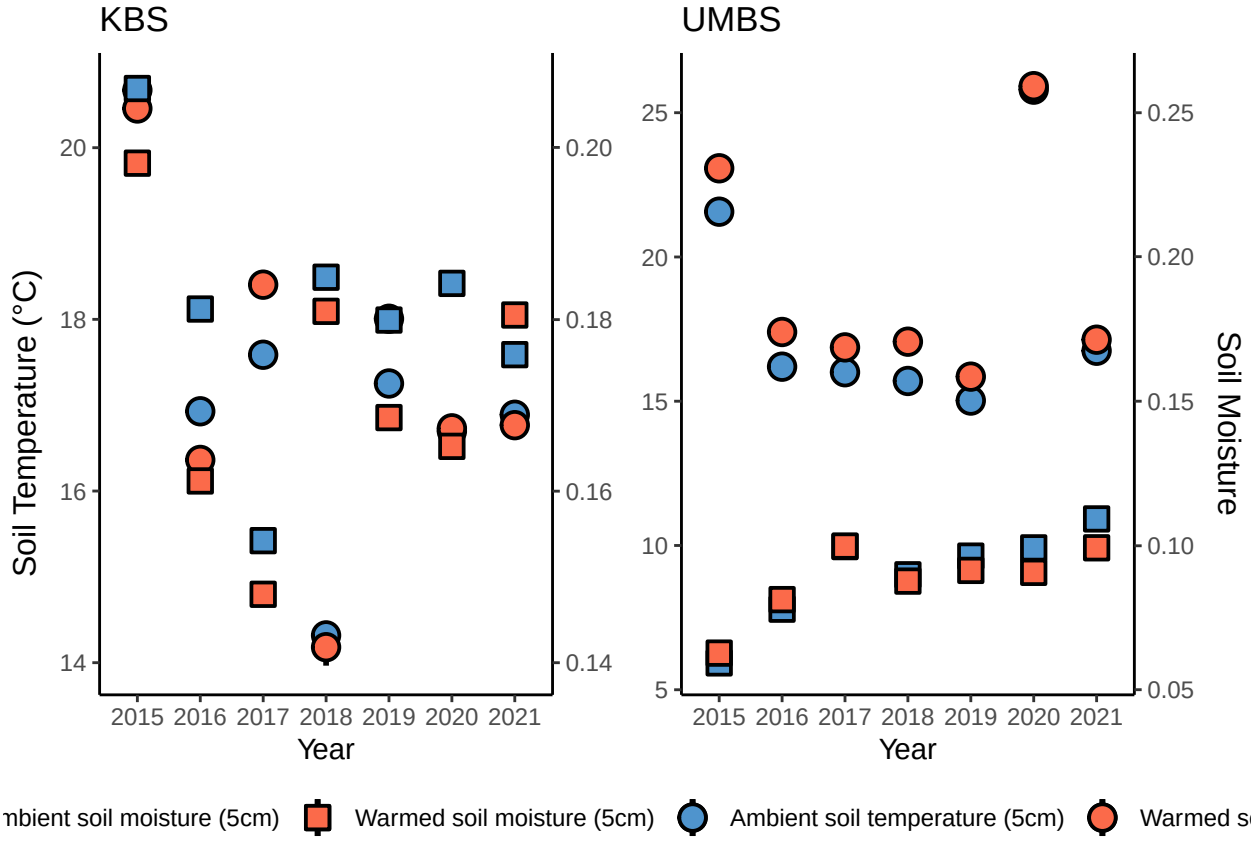
Air temperatures at KBS and UMBS



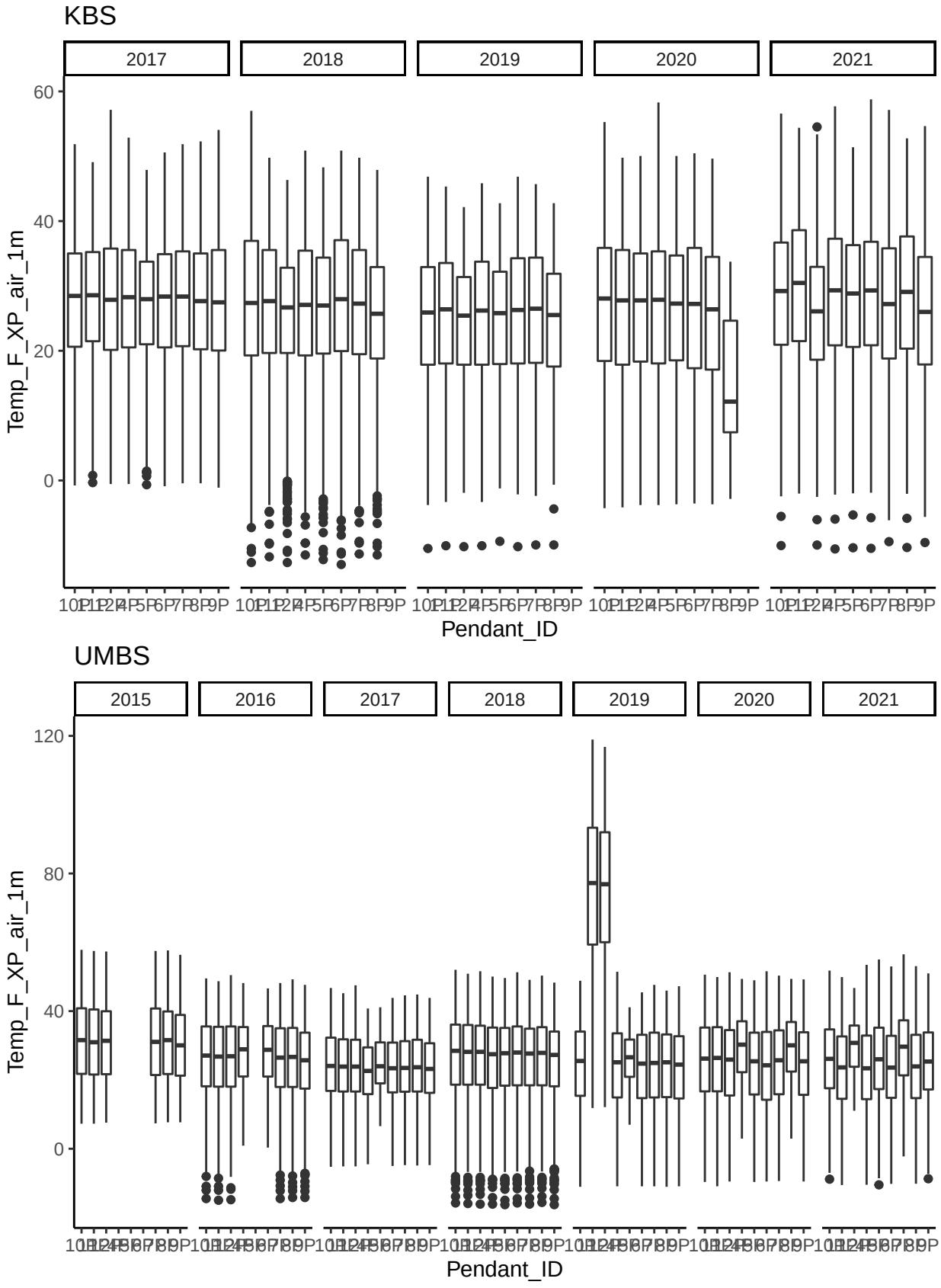
Soil temperatures at KBS and UMBS



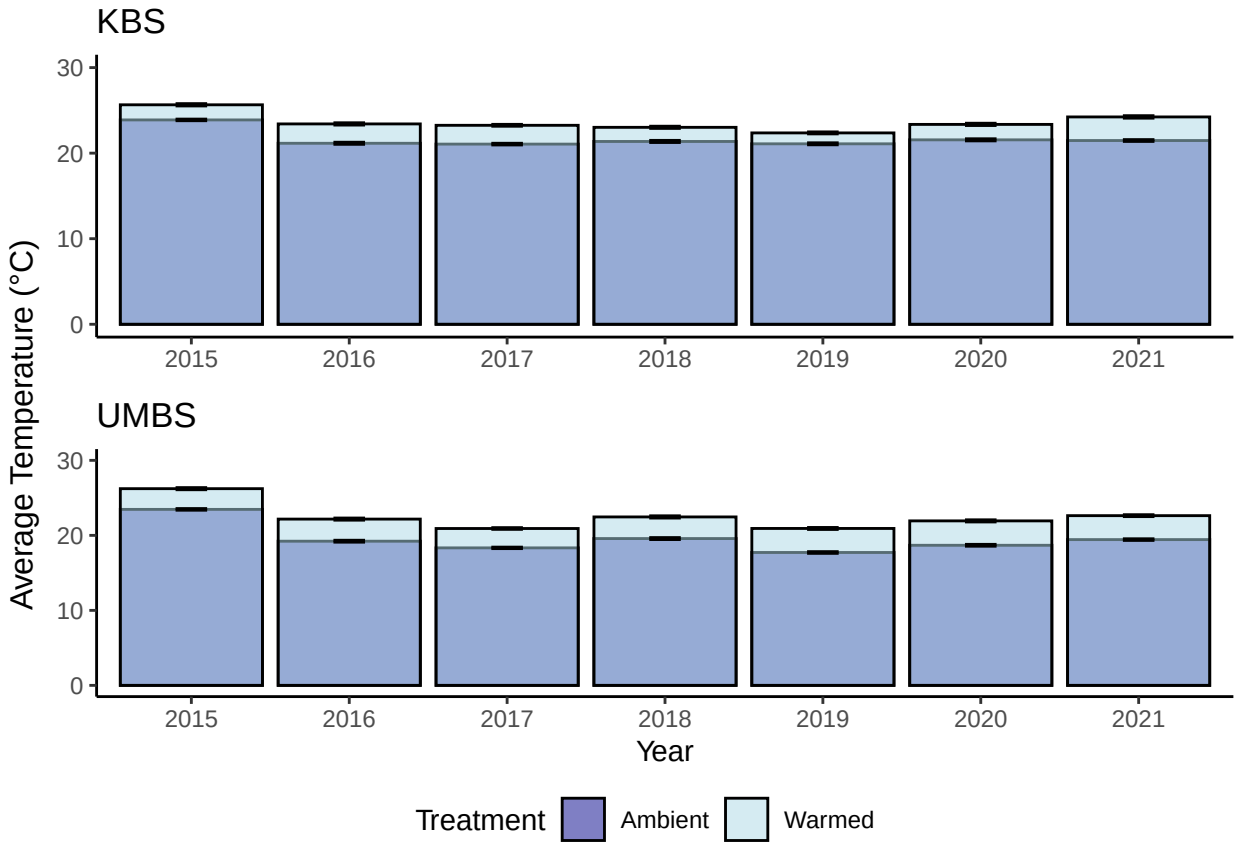
KBS and UMBS soil temperature and moisture - dual y axis plot



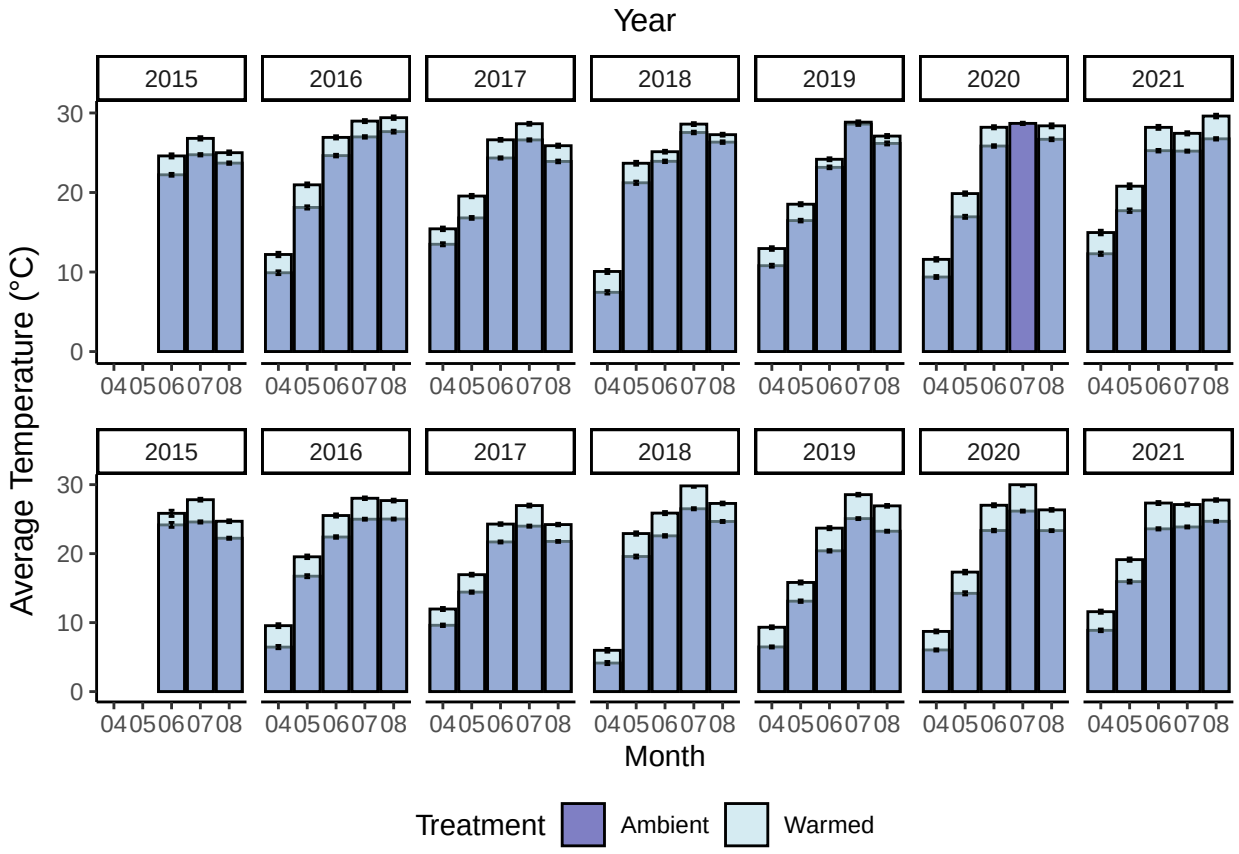
KBS and UMBS air temperature pendants - looking to see if warming is consistent btwn chambers



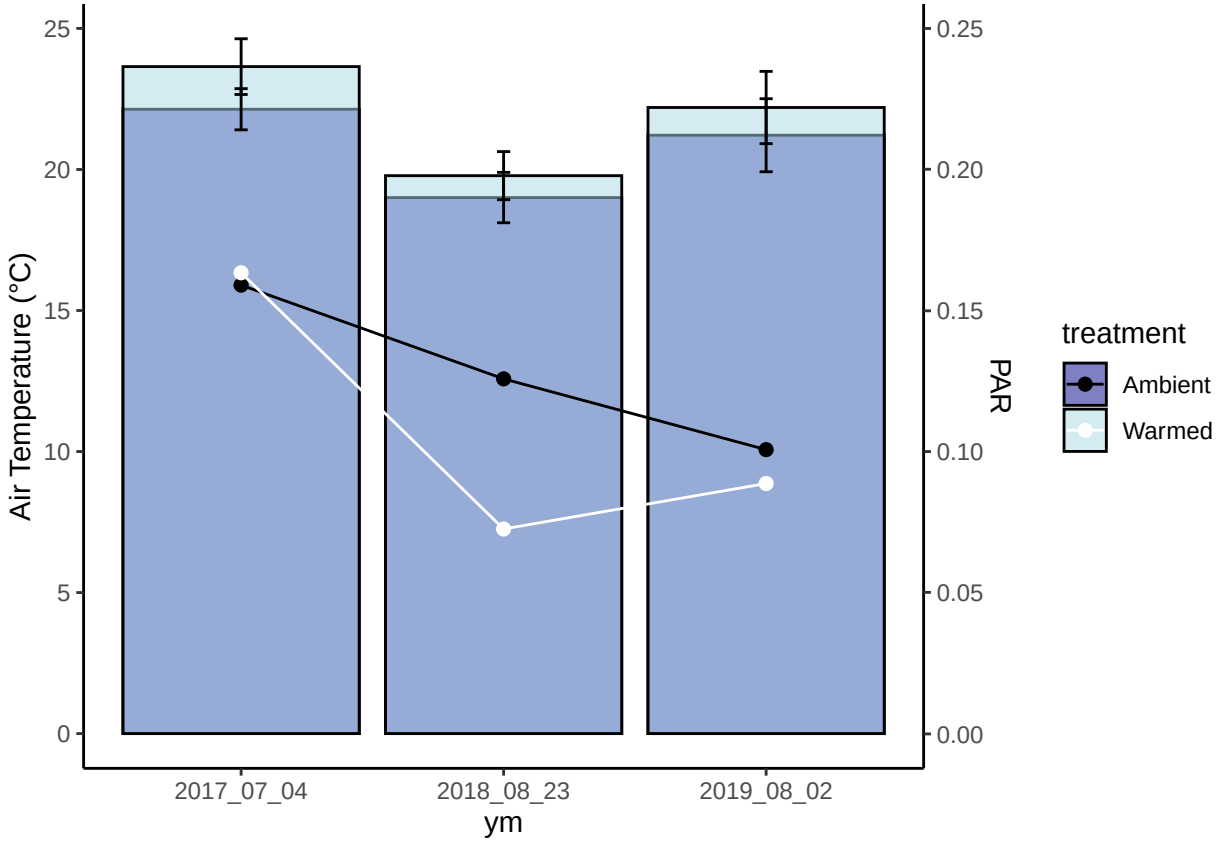
Other air temperature plot by year (older)



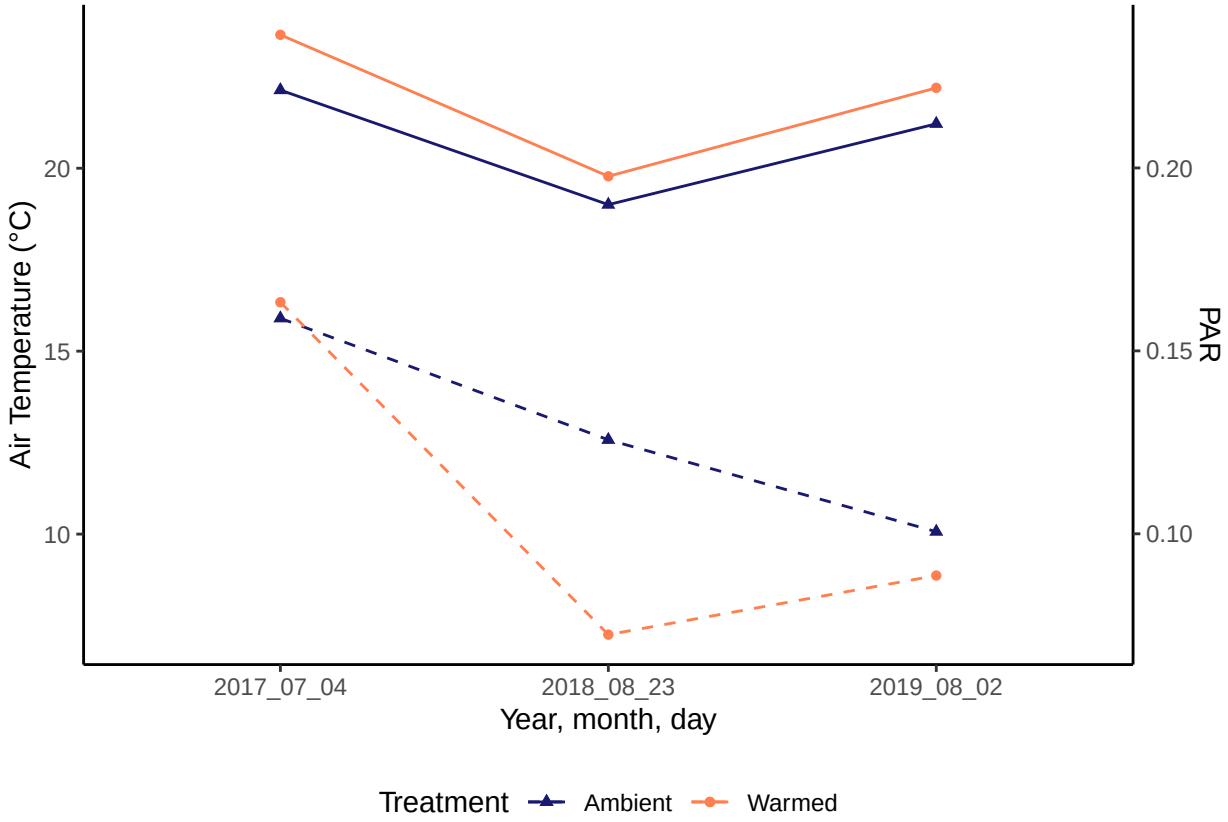
Other air temperature plot by month (older)



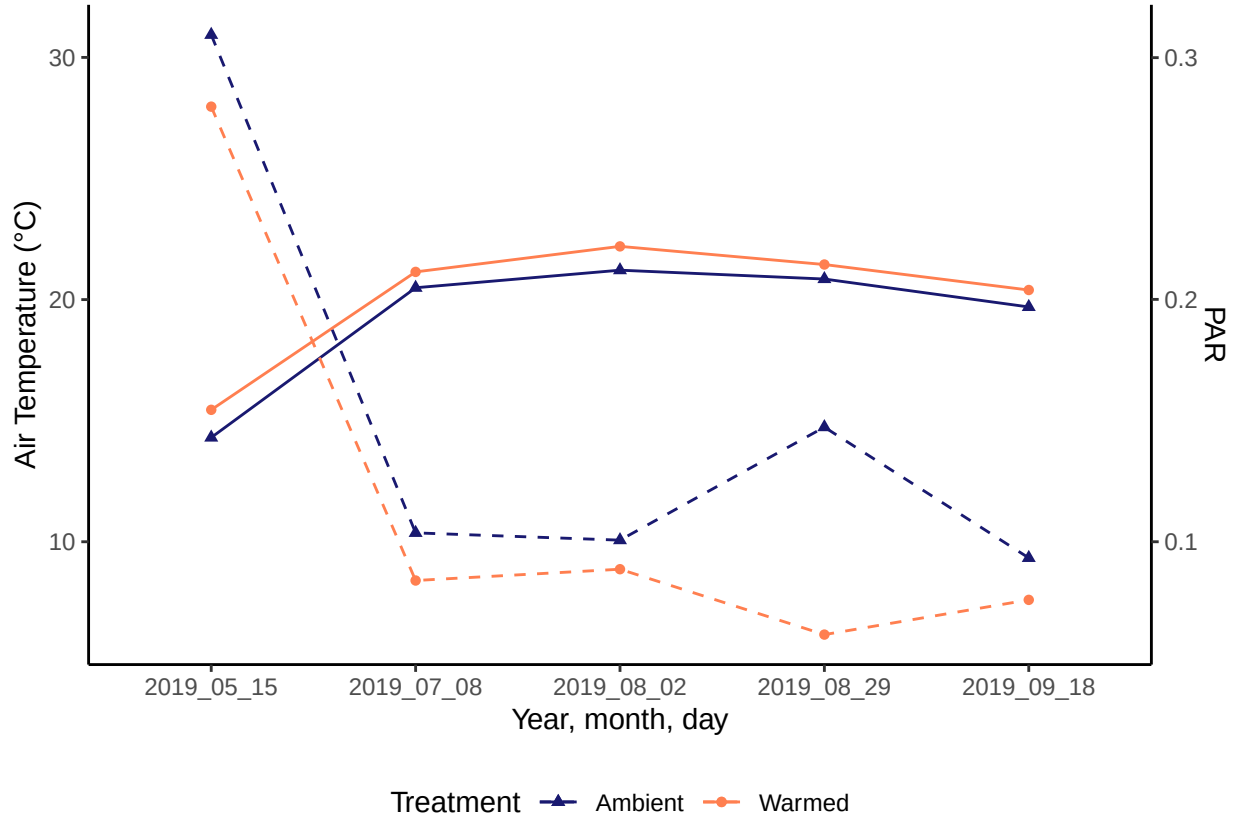
KBS - Comparing PAR to HOBO from 2017-2019; only one day is shown for each year because PAR measurements were only taken on one day at KBS for 2017 and 2018 (older)



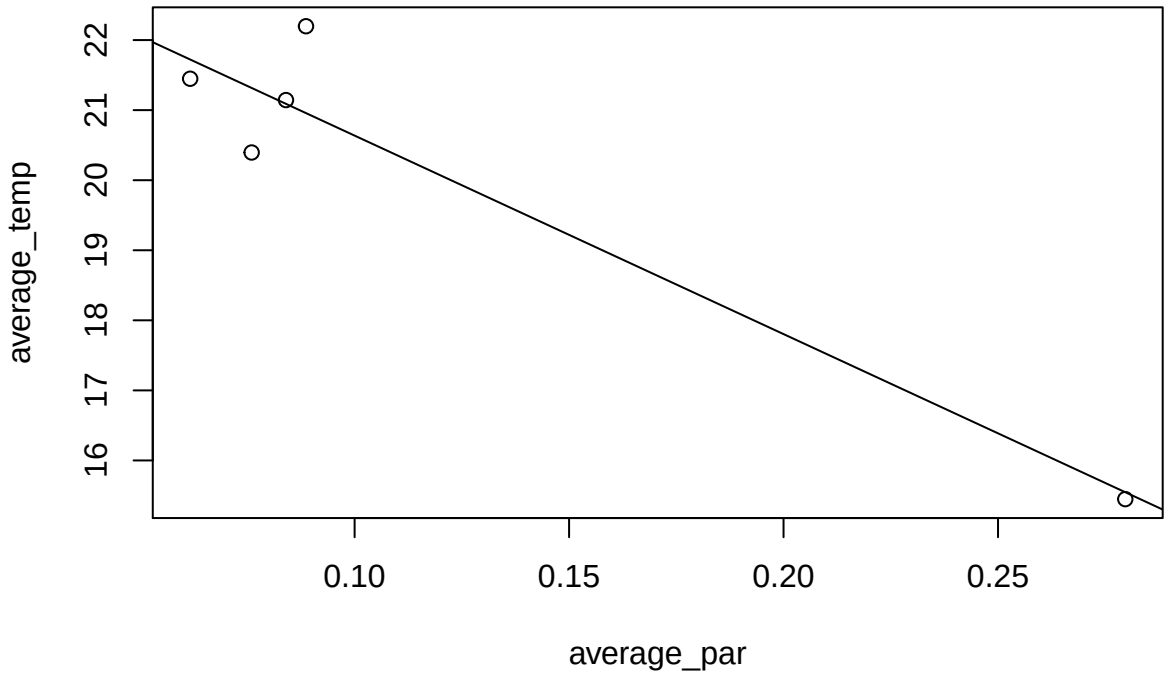
KBS - Again, comparing PAR to HOBO, this time in line format - PAR in dashed lines (older)



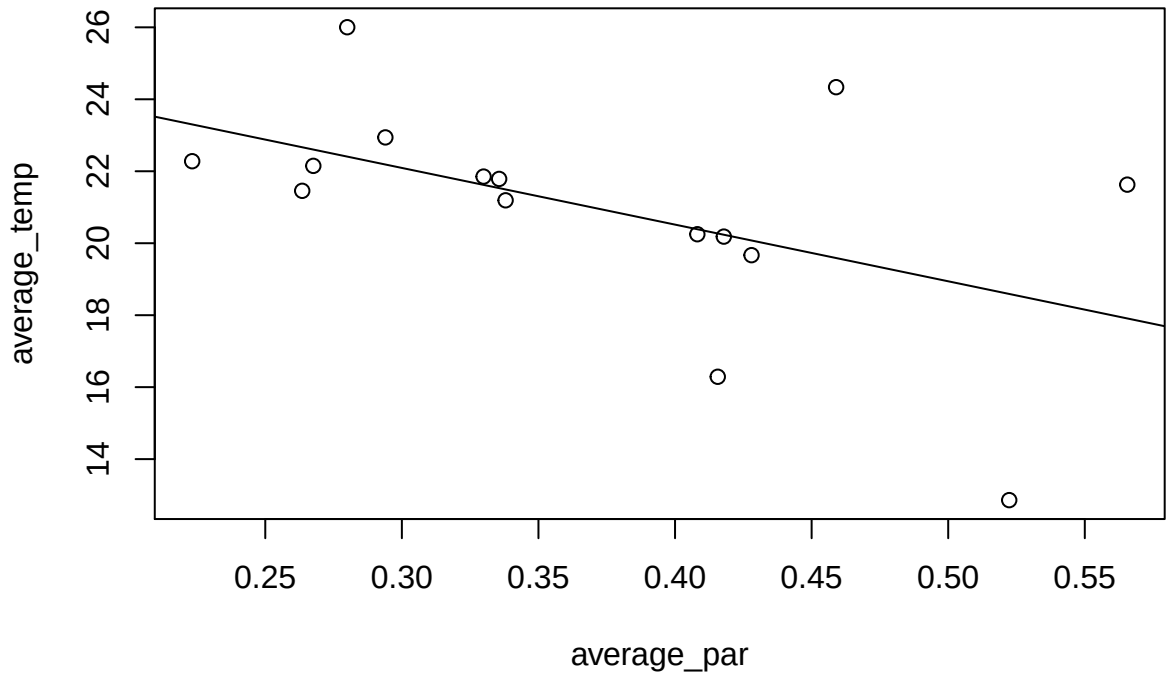
KBS- Comparing PAR to HOBO for only 2019 because multiple PAR measurements were taken that year - PAR in dashed lines (older)



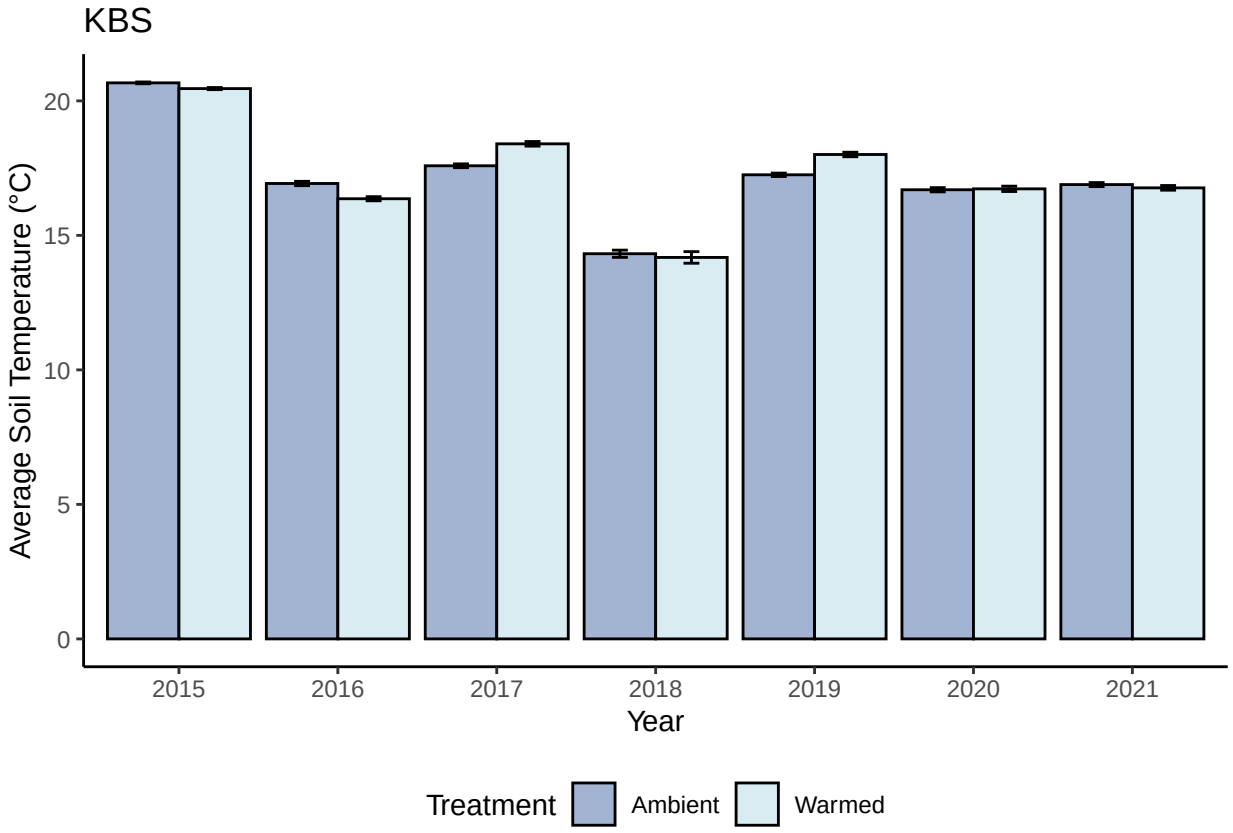
KBS - Simple linear regression between temp and par: $F(1,3) = 32.21$, p-value $= 0.011$ (older)



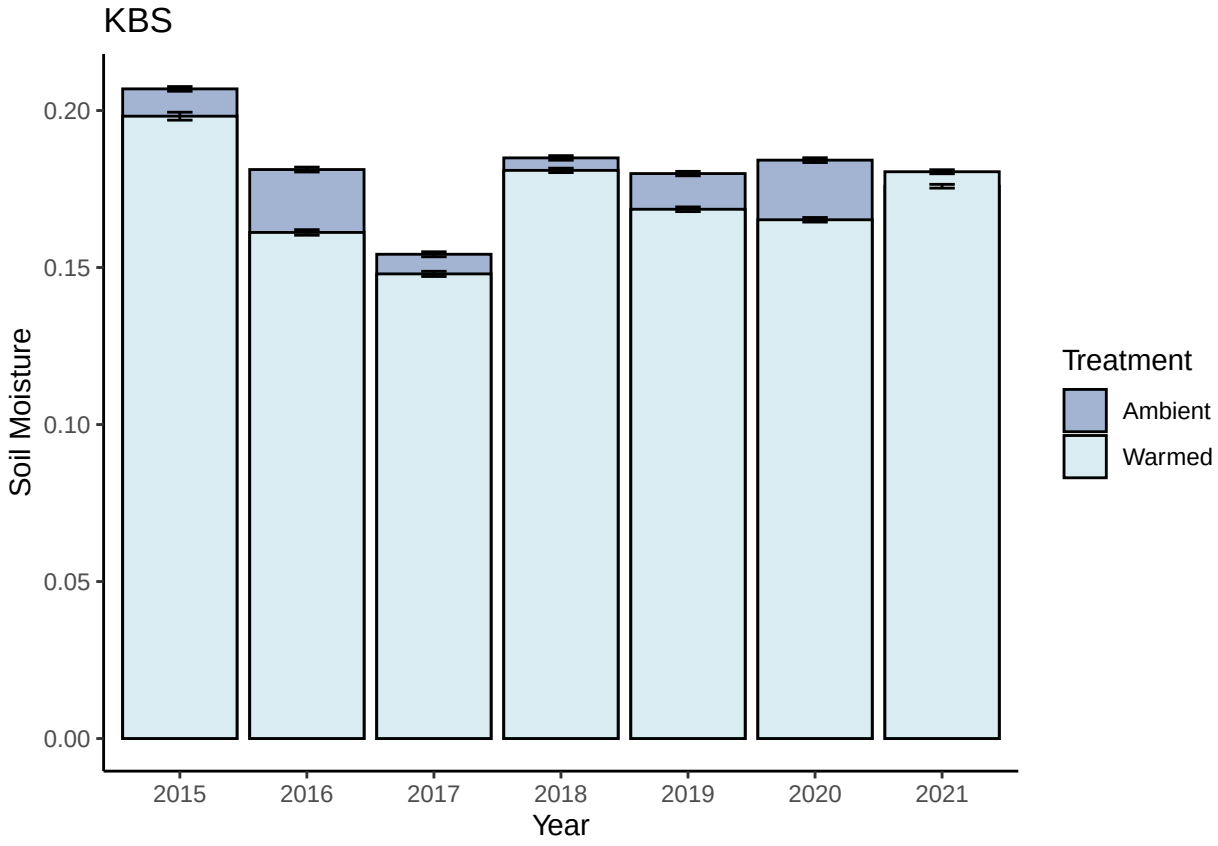
UMBS - Simple linear regression between temp and par: F(1,13) = 1.45, p-value = 0.25 (older)



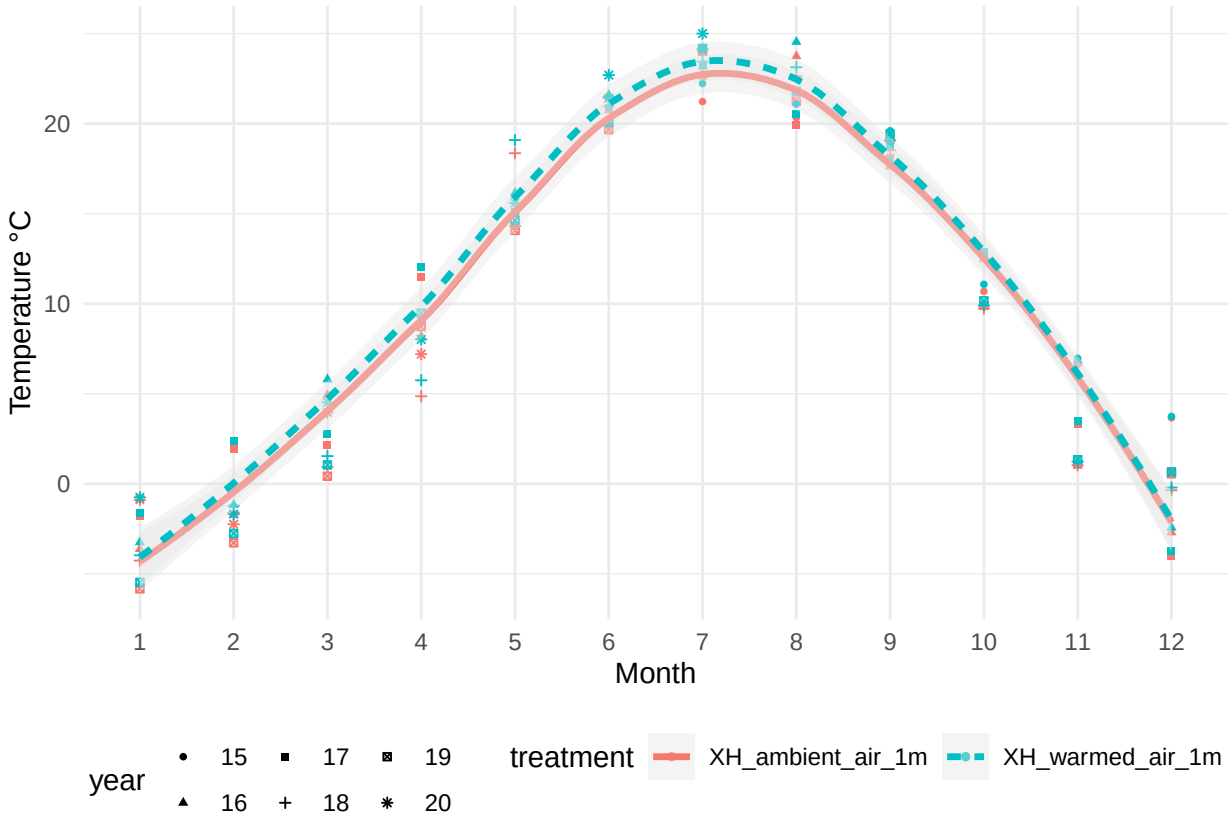
Soil temperature over time - varies between ambient or warmed treatments no sig difference for 2018 (p-value = 0.87) (older)



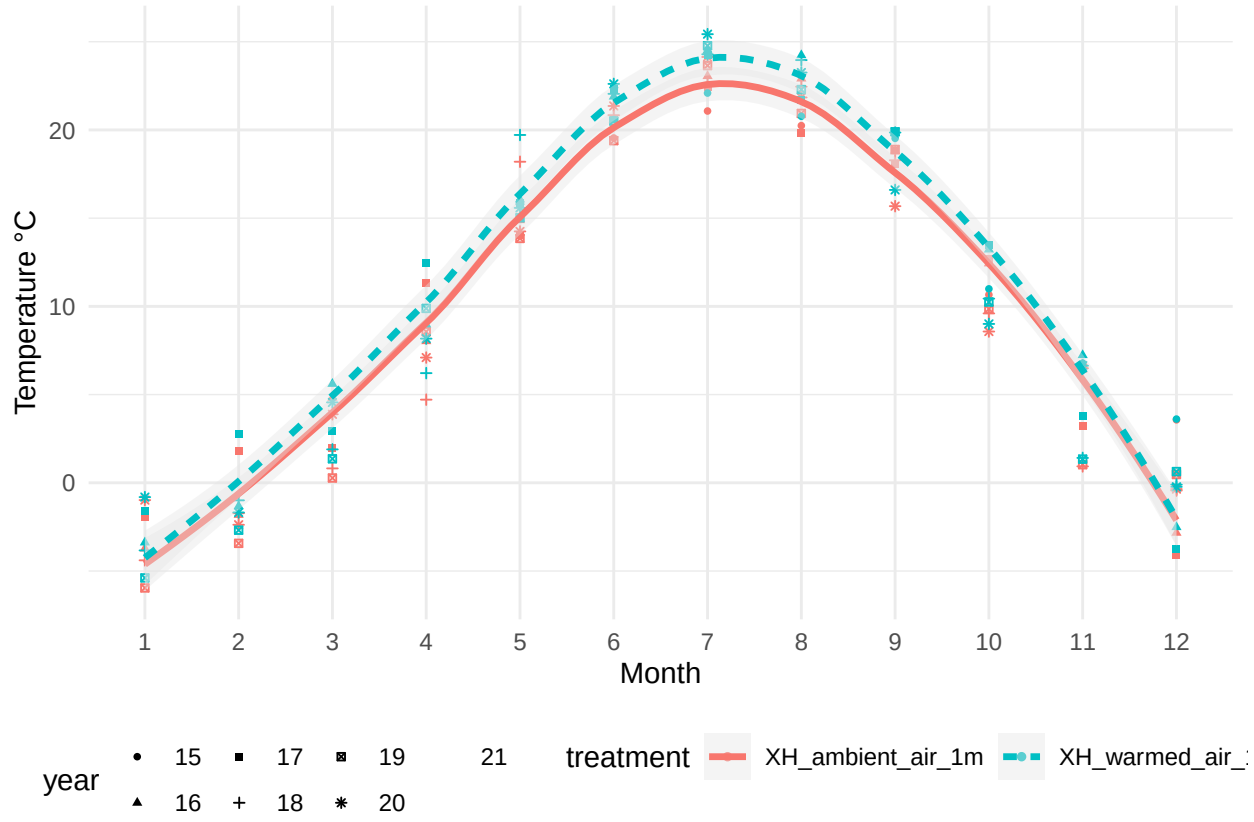
Soil moisture over time - ambient retains more moisture (p-value < 0.001 for all) (older)



1H sensor


Temperature °C
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
Month
year
15
16
17
18
19
20
treatment
XH_ambient_air_1m
XH_warmed_air_1m

2H sensor


Temperature °C
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10
11
12
Month
year
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16
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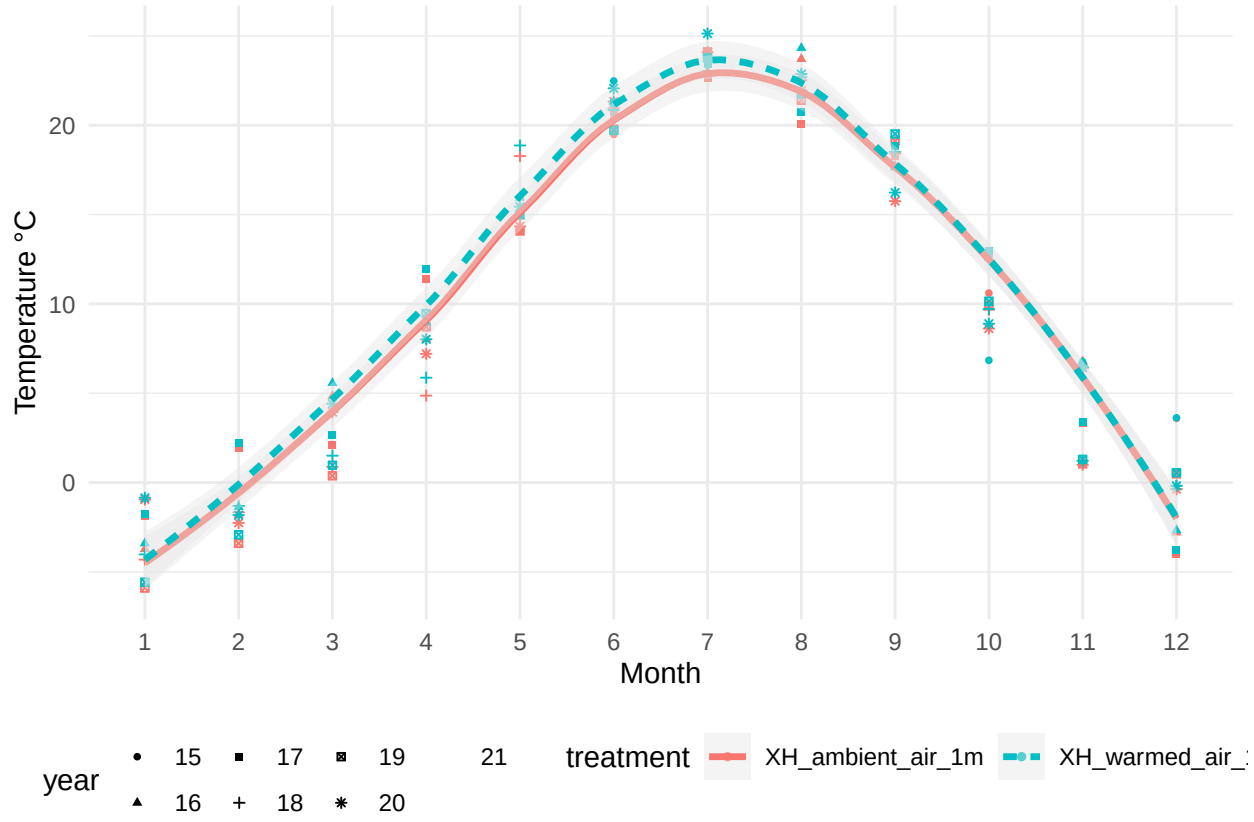
20
21
treatment
XH_ambient_air_1m
XH_warmed_air_

3H sensor


Temperature °C
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Month
year
15
16
17
18
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20
21
treatment
XH_ambient_air_1m
XH_warmed_air_