

warmXtrophic: OTC Data Plots

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June 28, 2021

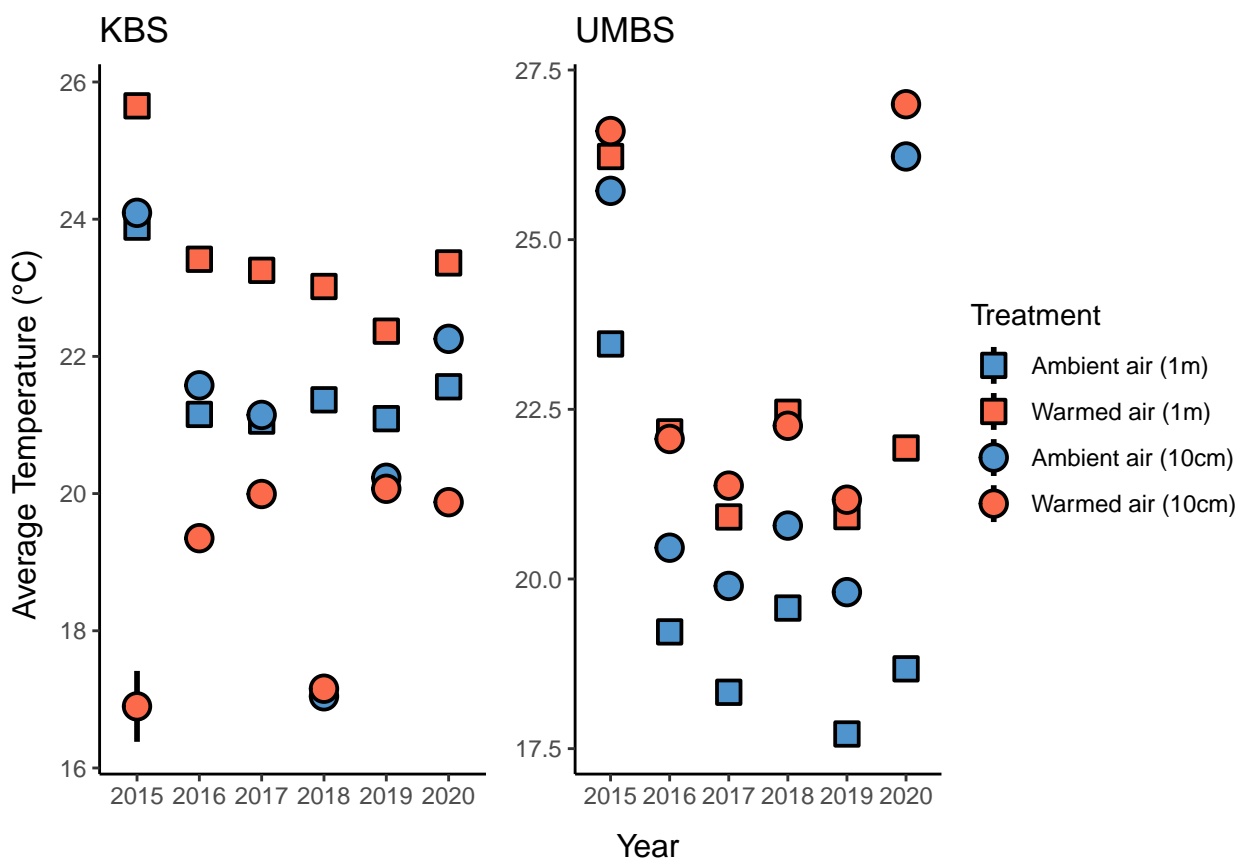
COLLABORATORS: Phoebe Zarnetske, Nina Lany, Kathryn Schmidt, Mark Hammond, Pat Bills, Kileigh Welshofer, Moriah Young

DATA INPUT: CSV files are located in the L1 hobo folder in the shared Google drive

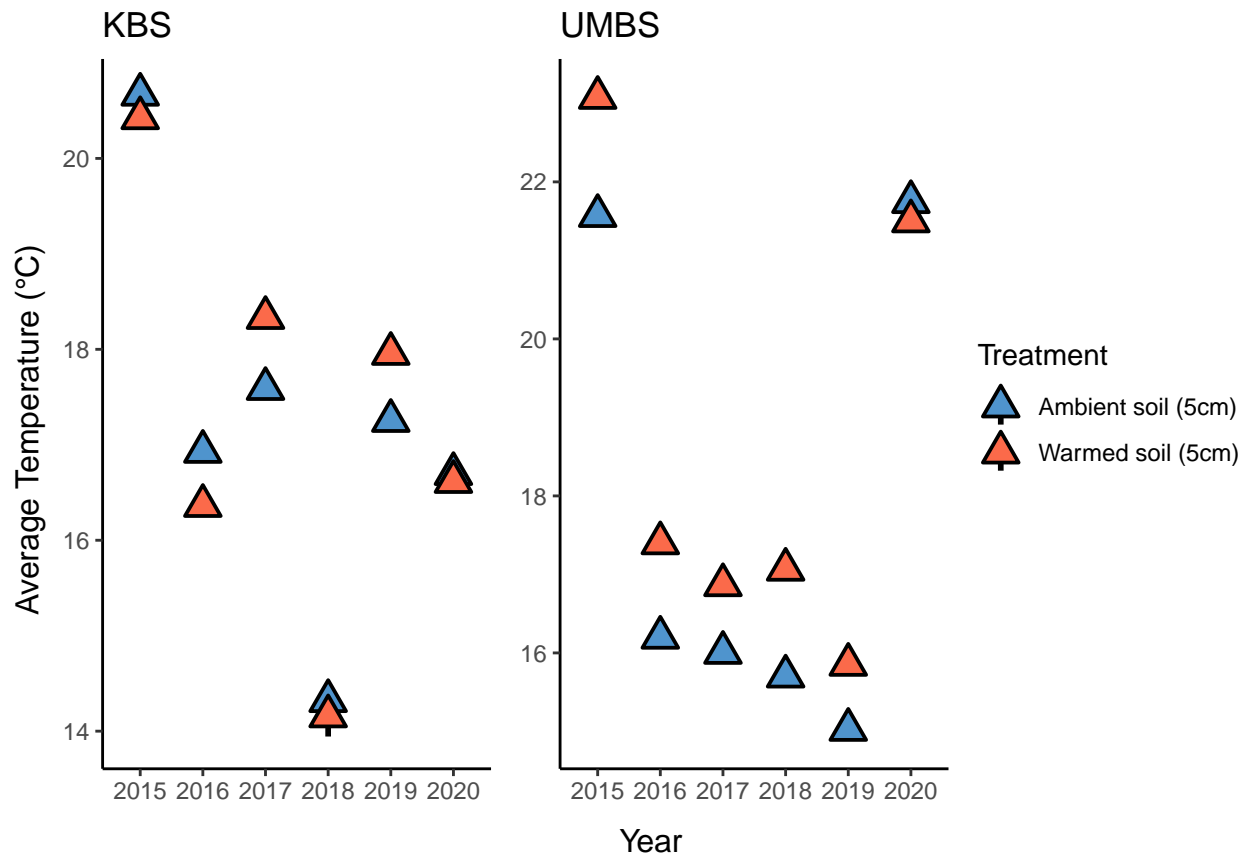
DATA OUTPUT: Relevant plots for the HOBO data, other plots located in HOBO_plots_L2.R script

NOTES: Figures marked with (older) are plots generated in the past and may not be relevant/useful for the paper

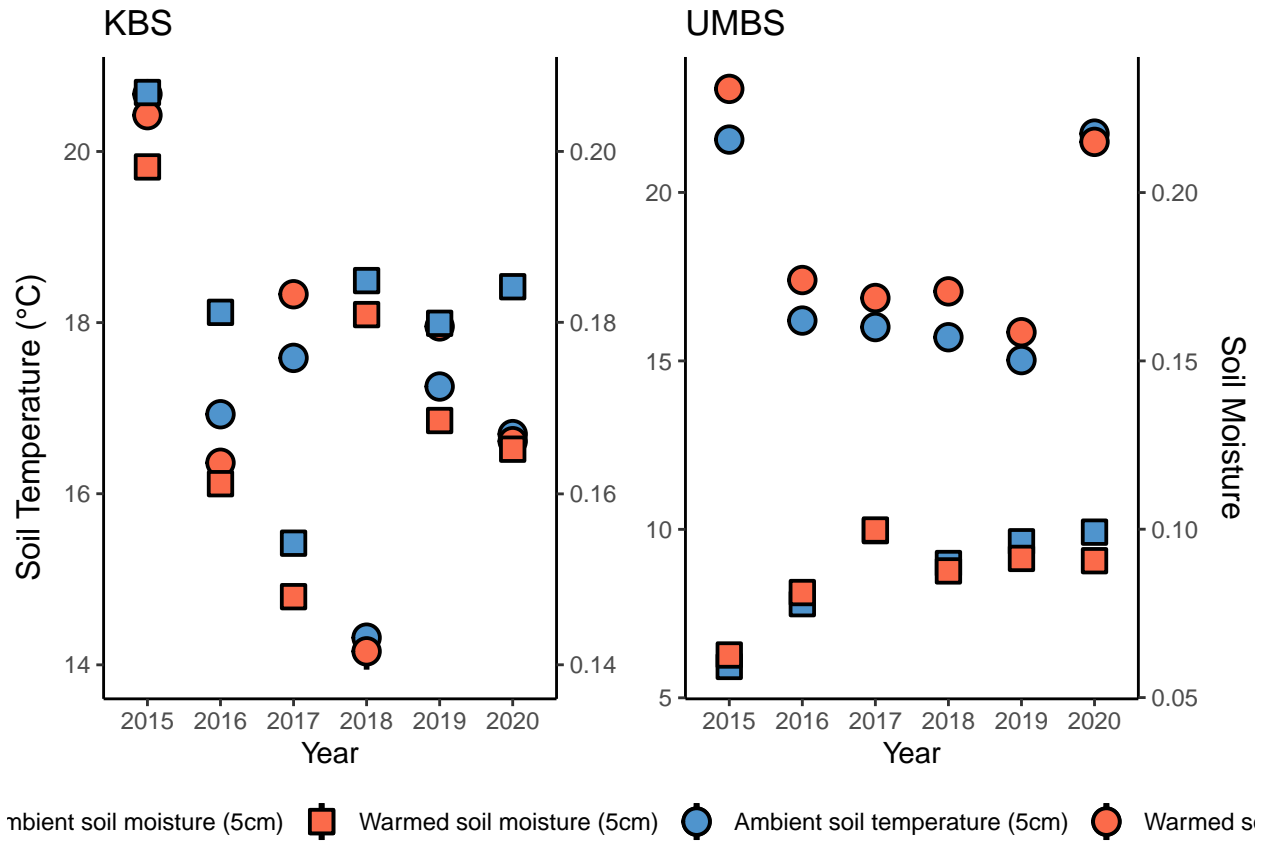
Air temperatures at KBS and UMBS



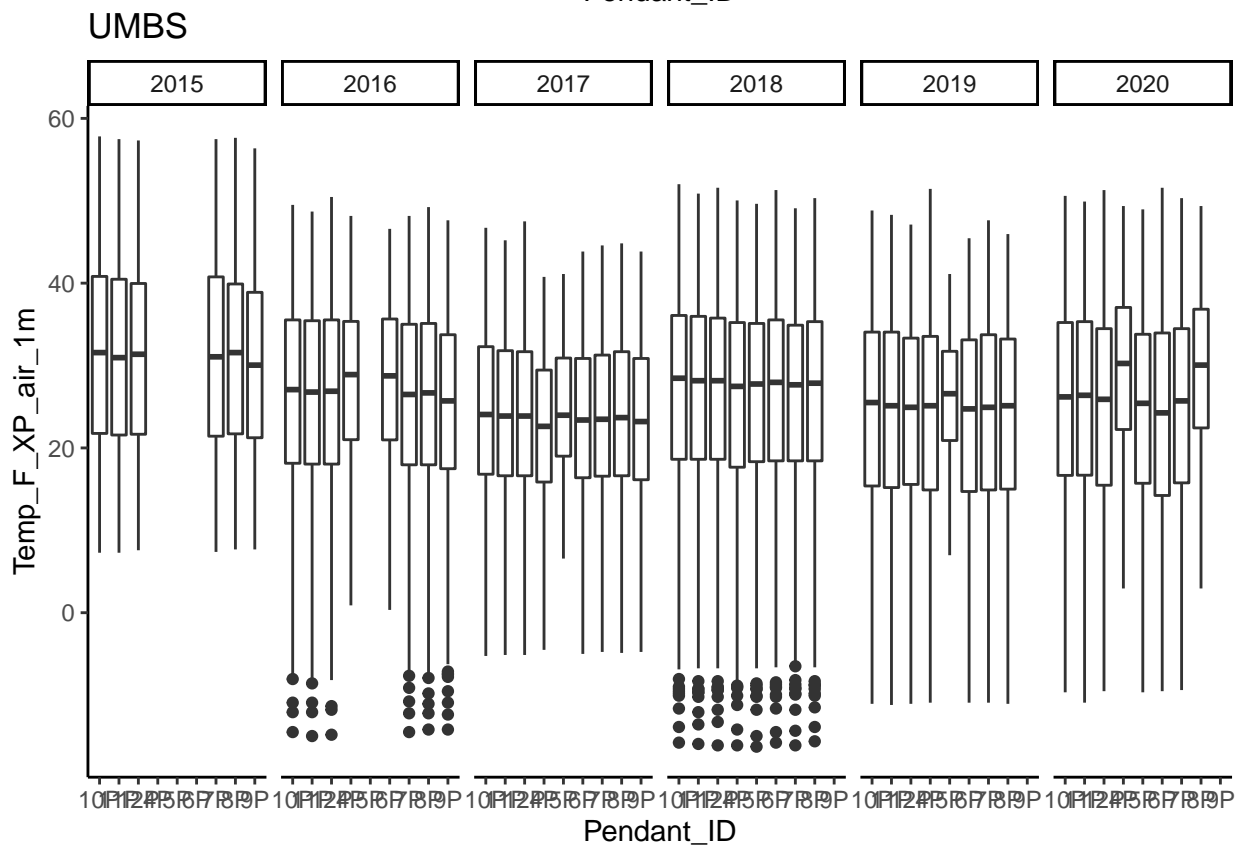
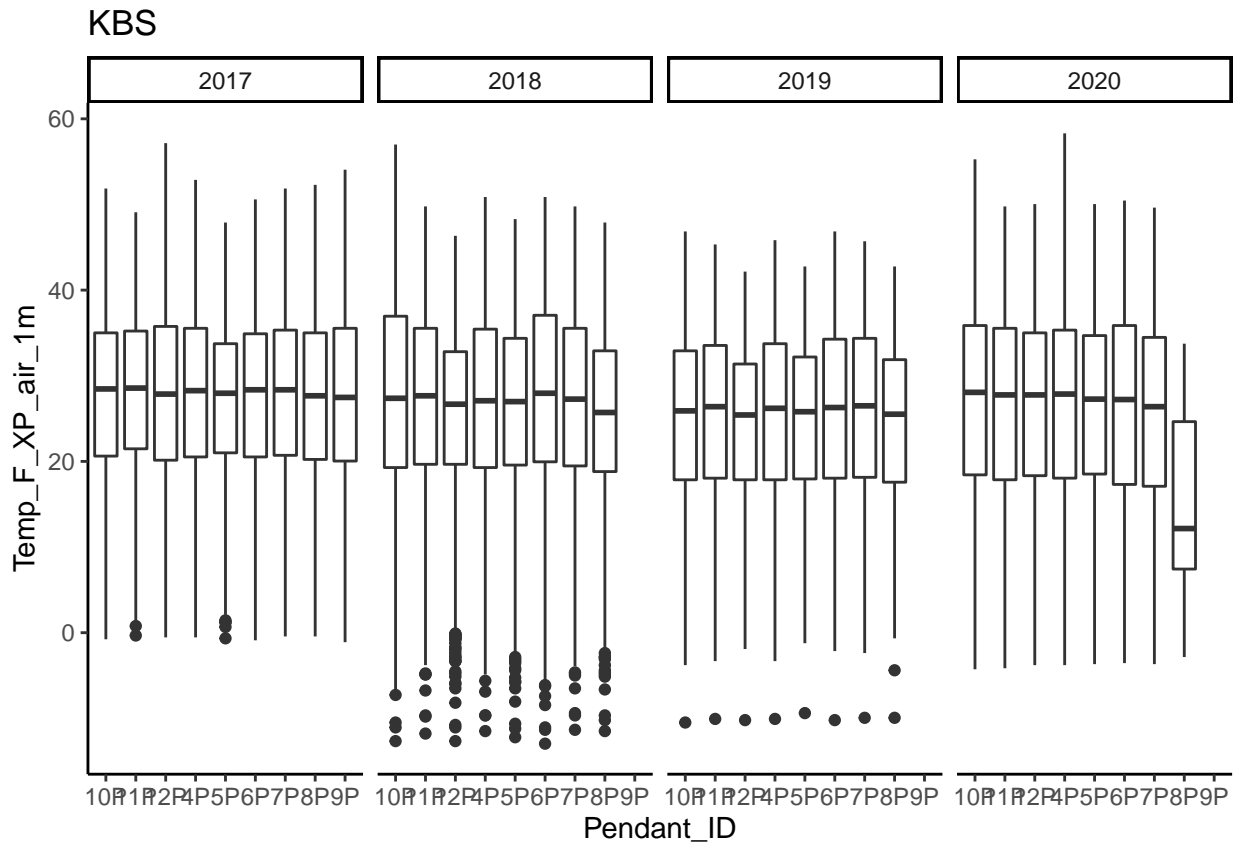
Soil temperatures at KBS and UMBS



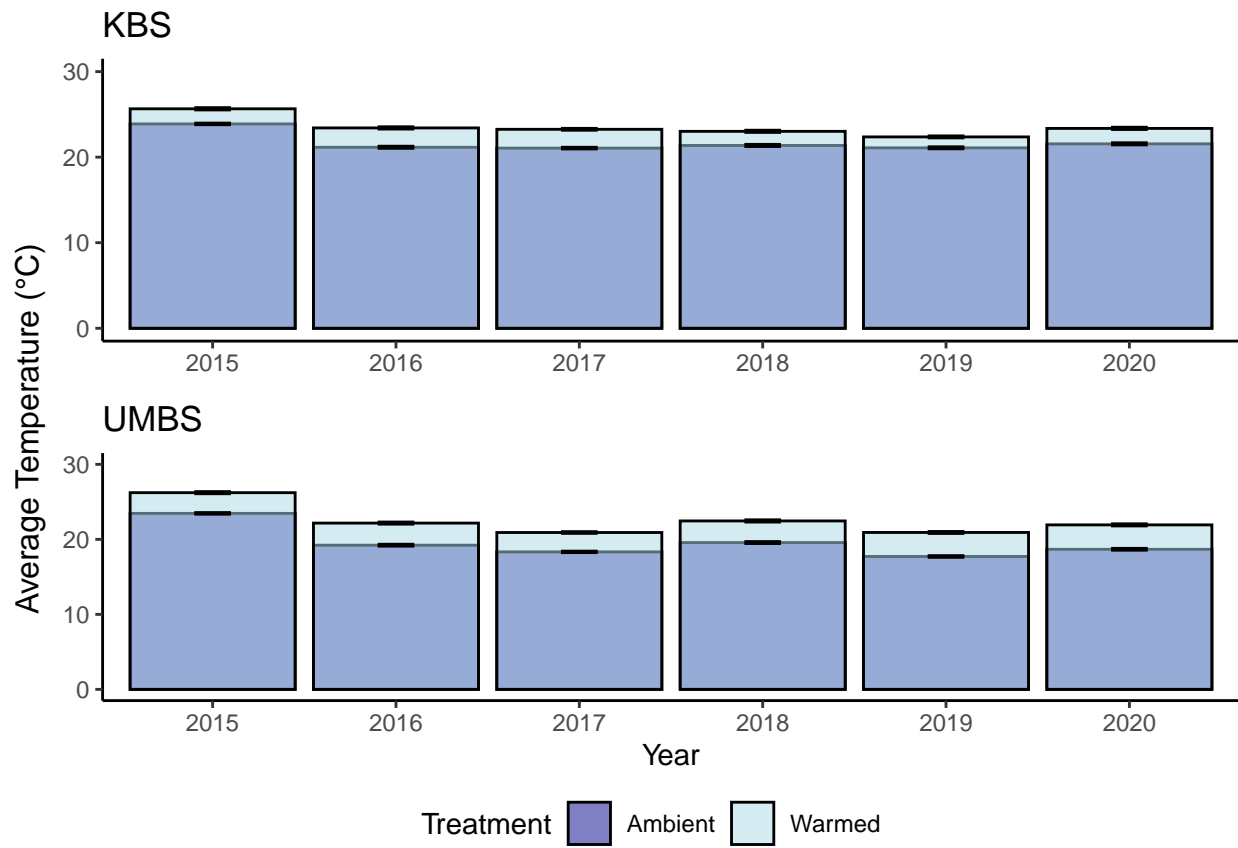
KBS and UMBS soil temperature and moisture - dual y axis plot



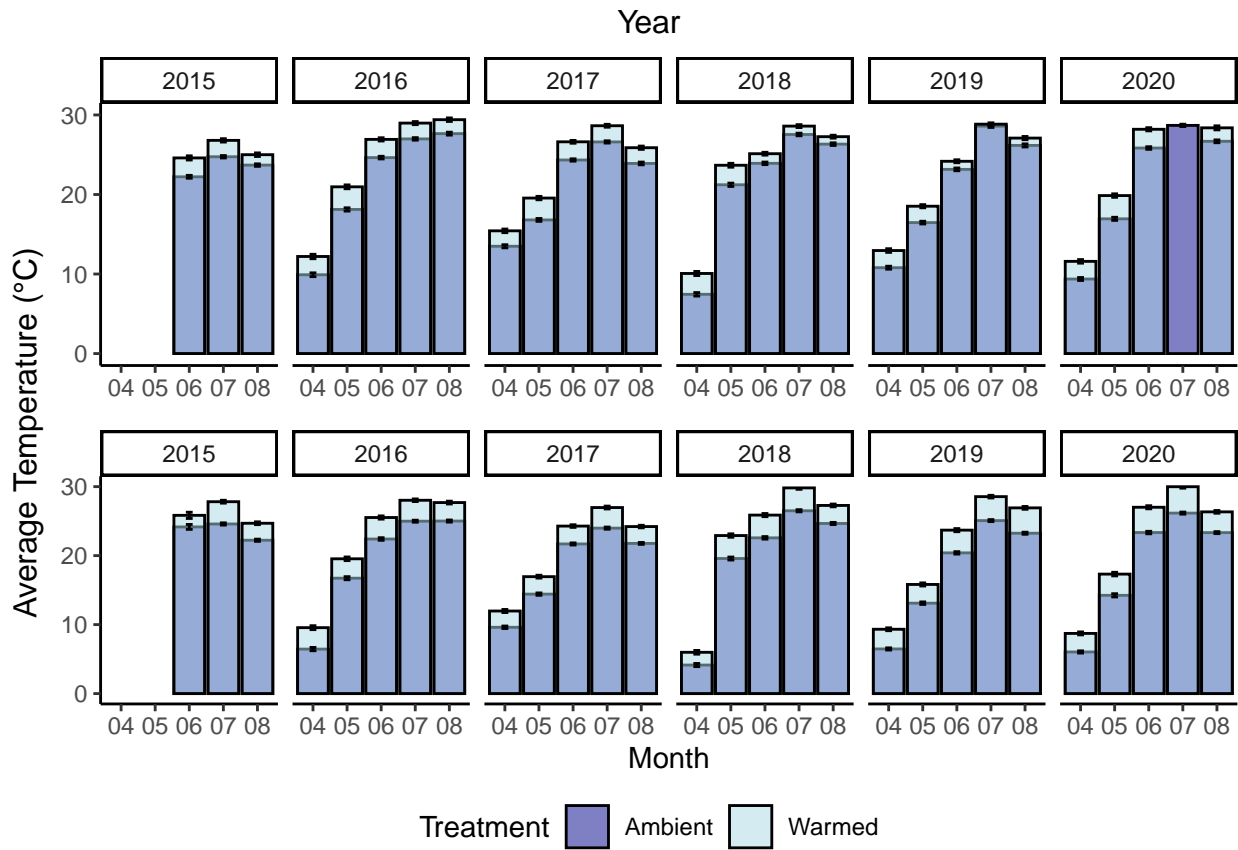
KBS and UMBS air temperature pendants - looking to see if warming is consistent btwn chambers



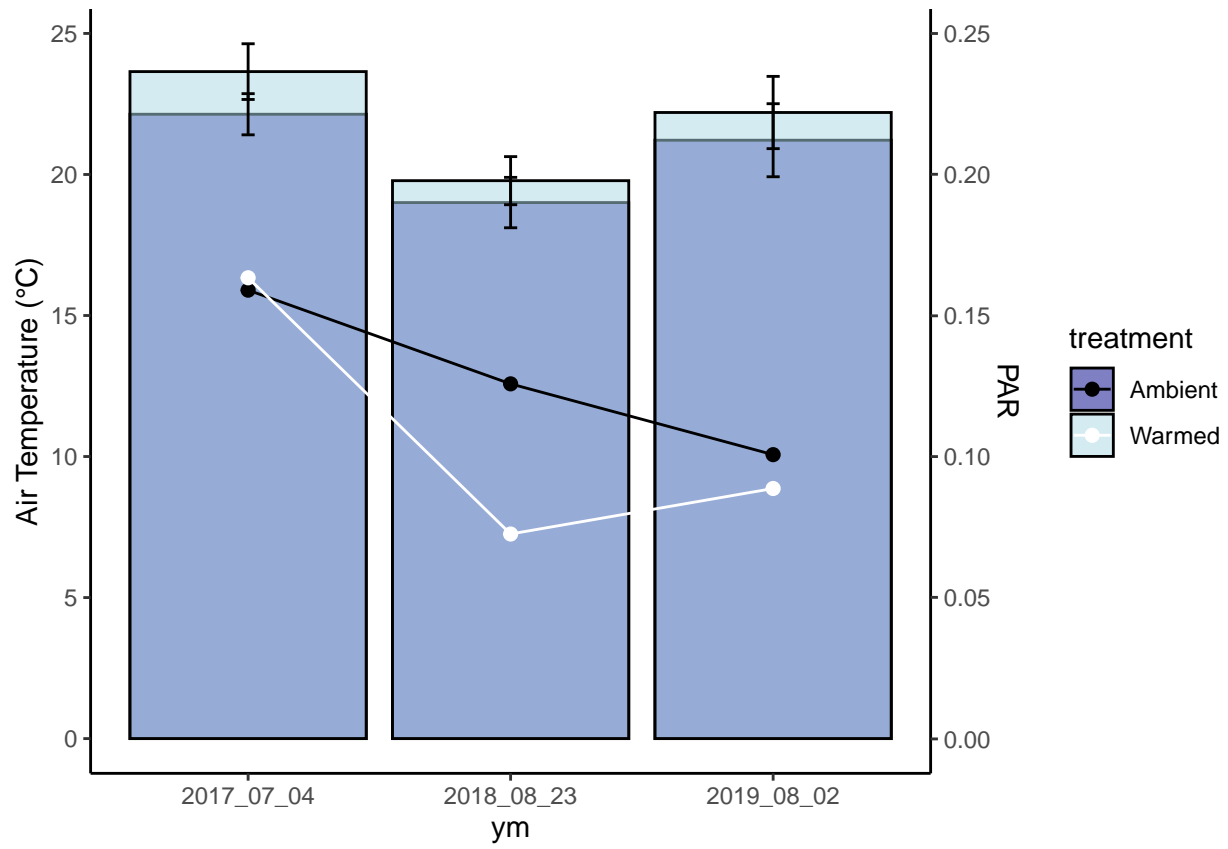
Other air temperature plot by year (older)



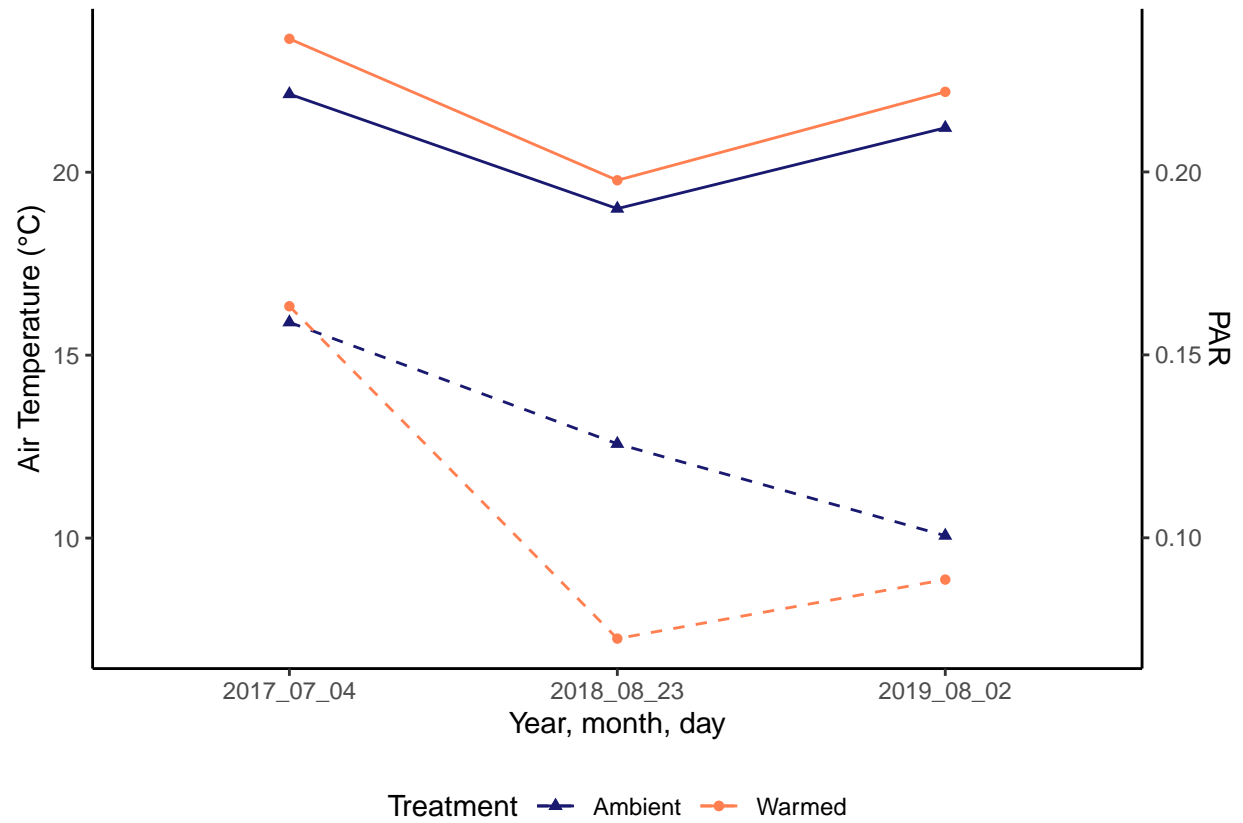
Other air temperature plot by month (older)



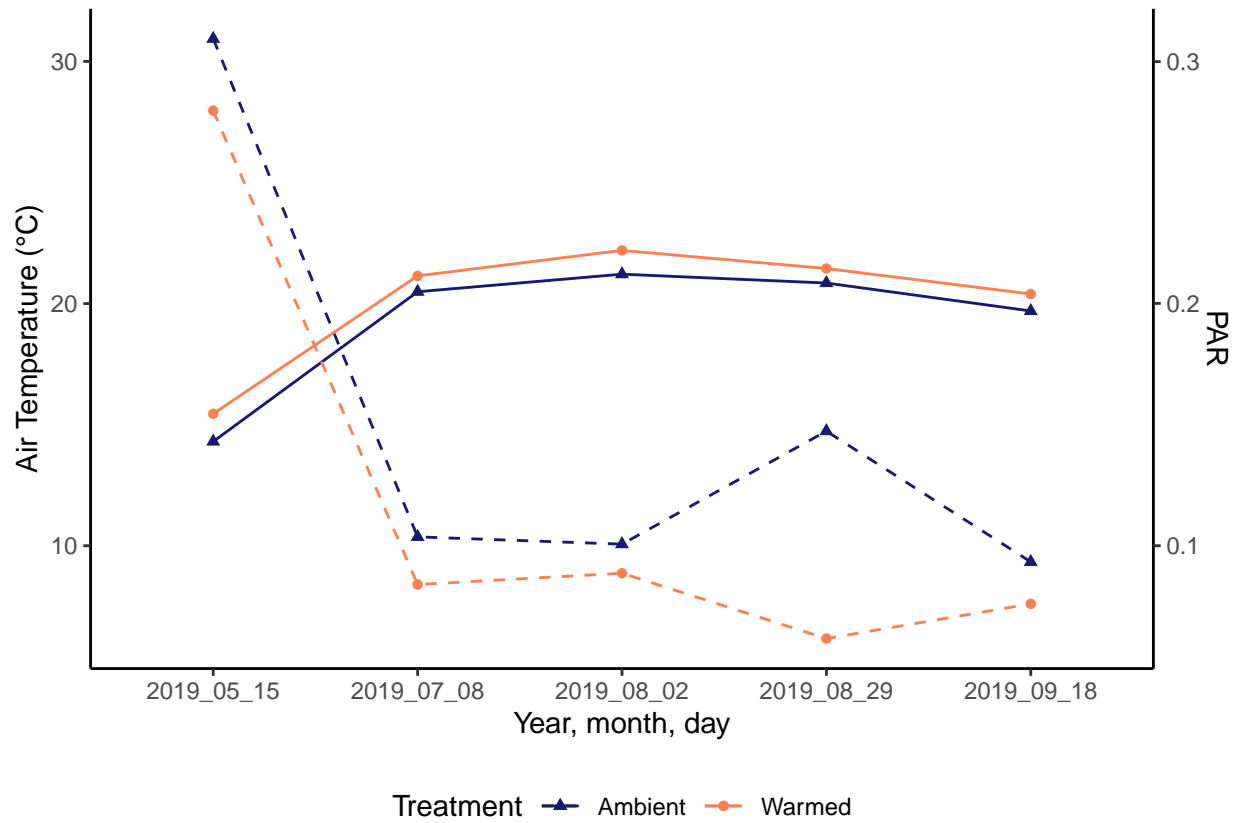
KBS - Comparing PAR to HOB0 from 2017-2019; only one day is shown for each year because PAR measurements were only taken on one day at KBS for 2017 and 2018 (older)



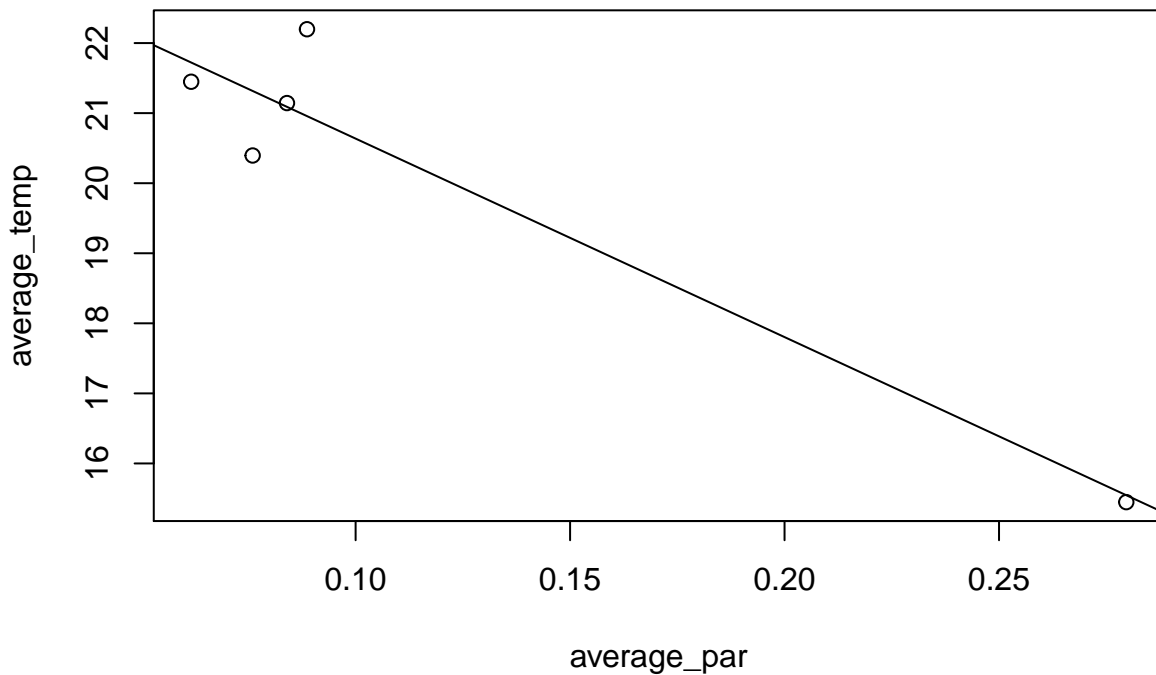
KBS - Again, comparing PAR to HOBO, this time in line format - PAR in dashed lines (older)



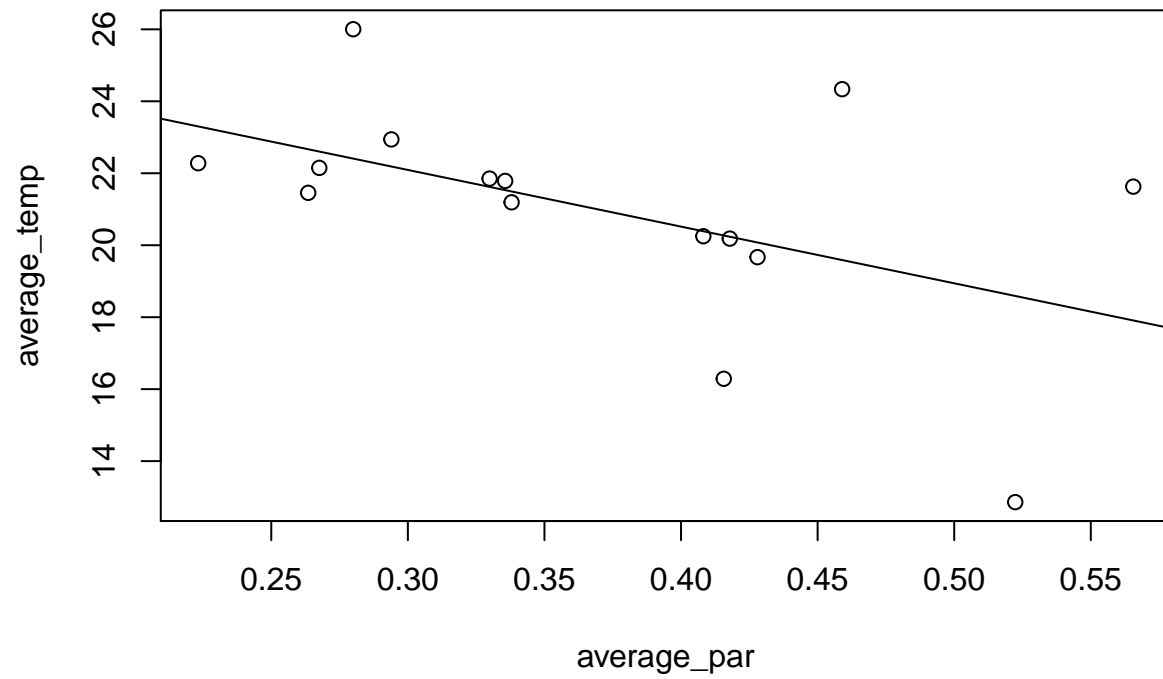
KBS- Comparing PAR to HOB0 for only 2019 because multiple PAR measurements were taken that year - PAR in dashed lines (older)



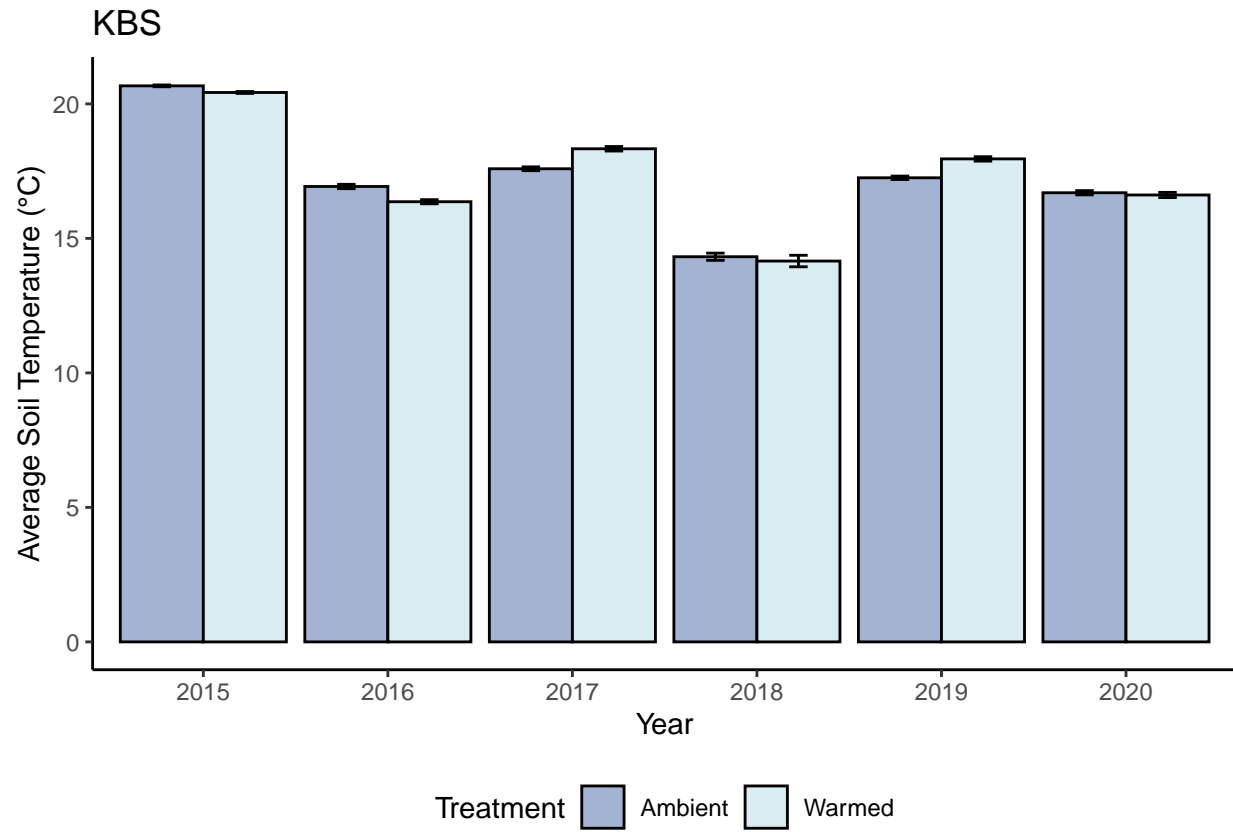
KBS - Simple linear regression between temp and par: $F(1,3) = 32.21$, p-value = 0.011 (older)



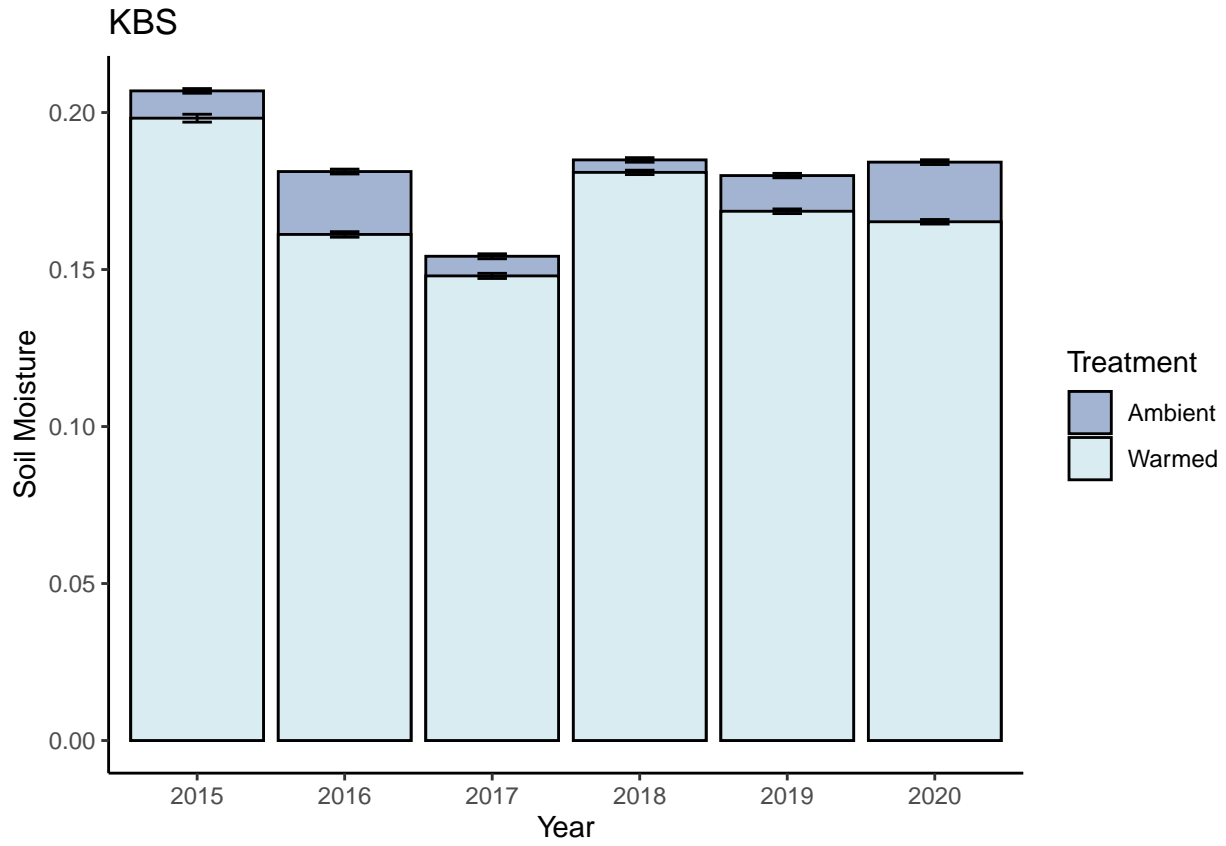
UMBS - Simple linear regression between temp and par: $F(1,13) = 1.45$, p-value = 0.25 (older)



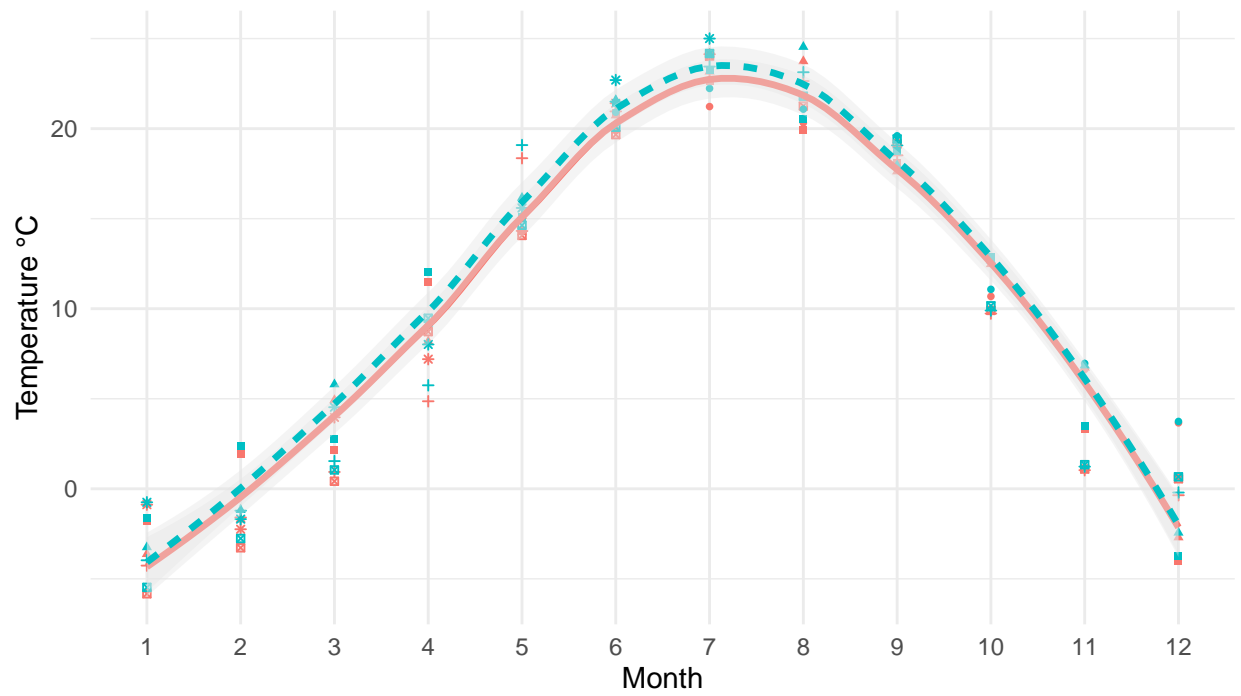
Soil temperature over time - varies between ambient or warmed treatments
no sig difference for 2018 (p-value = 0.87) (older)



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

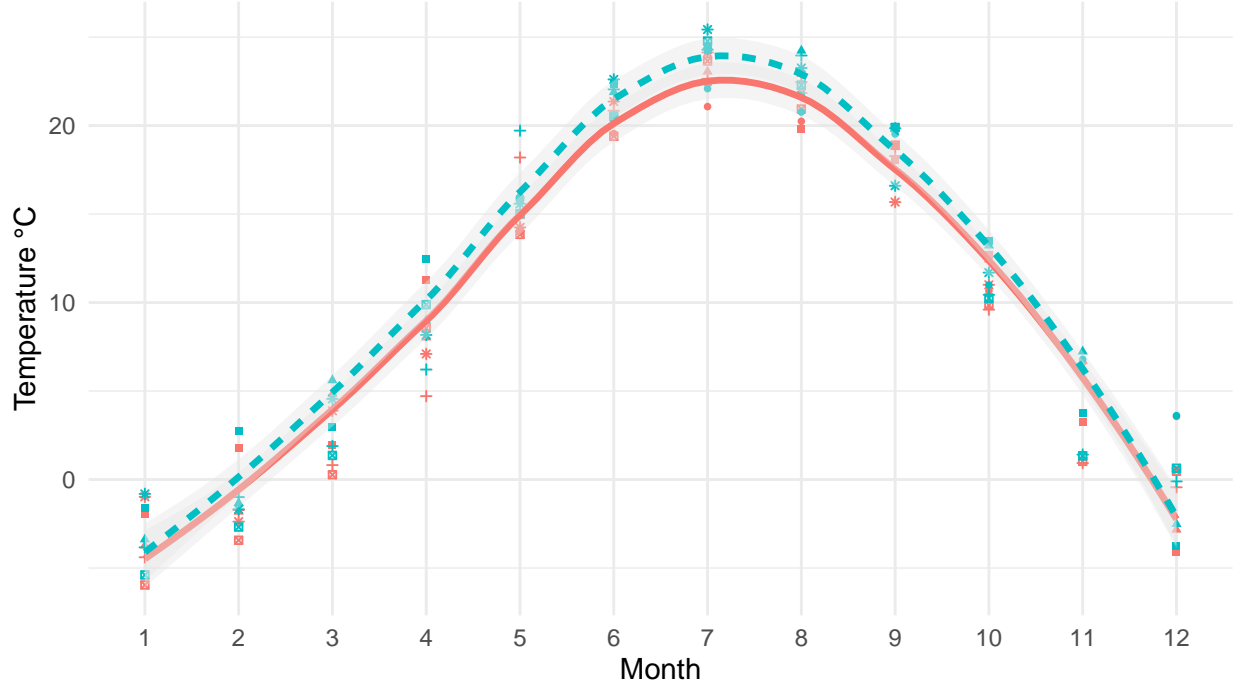


1H sensor



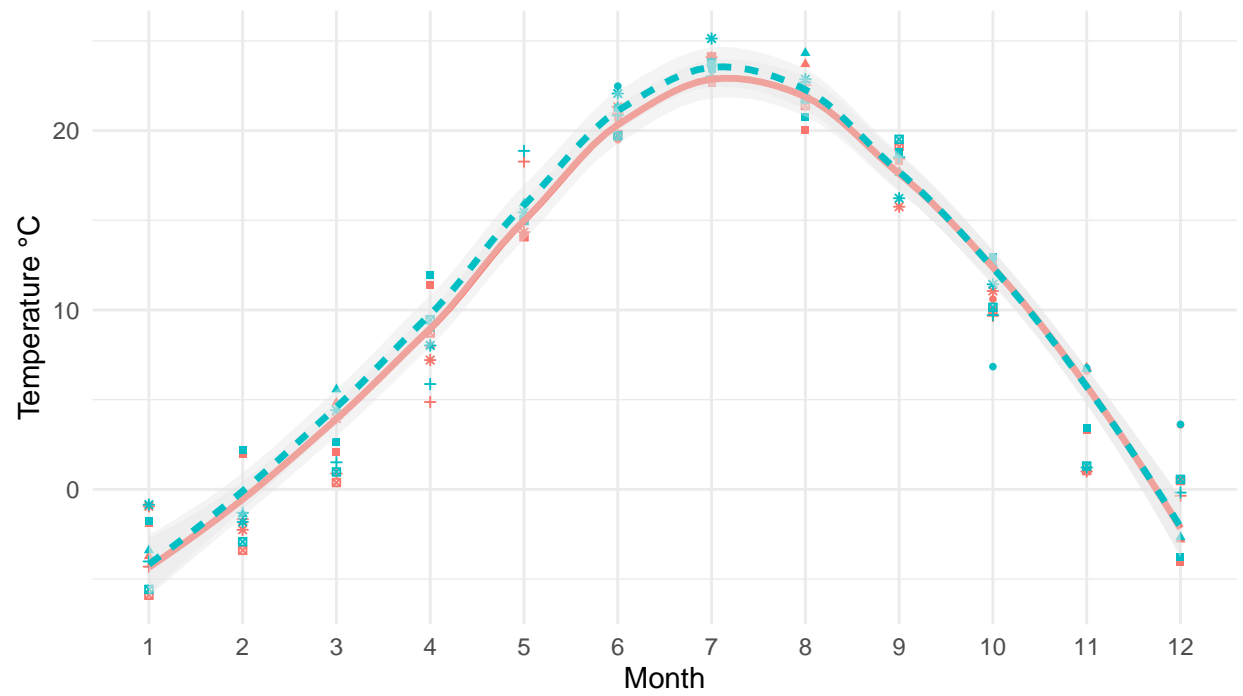
year • 15 ■ 17 ▣ 19 treatment — XH_ambient_air_1m - - XH_warmed_air_1m
 ▲ 16 + 18 * 20

2H sensor



year • 15 ■ 17 ■ 19 treatment — XH_ambient_air_1m - - XH_warmed_air_1m
 ▲ 16 + 18 * 20

3H sensor



year • 15 ■ 17 ▣ 19 treatment — XH_ambient_air_1m - - XH_warmed_air_1m
 ▲ 16 + 18 * 20