**Boiling River tree plot datasets README**

Title: Warming reduces diversity and alters composition of trees in the Amazon

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These datasets contain plot characteristics, tree composition data, and voucher data collected in June and October 2022 at the Boiling River forest in Huánuco Department, Peru. These datasets are included in analyses reported in Fortier et al. (2023).

The following files are included:

**1) "Plot\_chars.csv"**

This is the full dataset of plot characteristic for 70 3-m radius plots installed along the thermal gradient at the Boiling River. Soil data was interpreted by inverse distance weighting from “Soil \_data.xlsx” in the GitHub repository. Temperature data was gathered from the thermal gradient maps described in the main text (Fortier et al. 2023, Fig. 1).

------------- COLUMN DESCRIPTIONS -------------

Col. Variable Description

1. OBJECTID Row index

2. Plot Plot code

3. Soil.temp Soil temperature in degrees C measured with a 5-inch temperature

probe (data not used in analyses)

4. Slope Plot slope in degrees

5. Aspect Plot aspect in degrees from magnetic North

6. Perc.herb Estimated percentage of herbaceous ground cover

7. Dom.herb Dominant plant group(s) of herbaceous ground cover

8. No.lianas Number of lianas rooted within the plot

9. lat Latitude in decimal degrees

10. lon Longitude in decimal degrees

11. elev Elevation in meters

12. Ca\_available Available calcium (meq/100g)

13. pH pH

14. Zn Total Zinc (ppm)

15. N\_total Total nitrogen (percent)

16. Mn Total manganese (ppm)

17. Mg\_available Available magnesium (meq/100g)

18. K\_available Available potassium (meq/100g)

19. Fe Total iron (ppm)

20. Cu Total copper (ppm)

21. B\_soluble Soluble boron (ppm)

22. P\_available Available phosphorus (mg/kg)

23. tms\_clim15\_Tmax Plot MTWM as calculated from TOMST TMS-4 temperature

loggers (degrees C)

24. tms\_clim15\_MAT Plot MAT as calculated from TOMST TMS-4 temperature loggers

(deg C)

25. hobo\_clim\_Tmax Plot MTWM as calculated from HOBO MX-2301 loggers (deg C)

26. hobo\_clim\_MAT Plot MAT as calculated from HOBO MX-2301 loggers (deg C)

**2) "BR\_plot\_data.xlsx"**

This is the full dataset of trees in 70 3-m radius plots installed along the thermal gradient at the Boiling River.

------------- COLUMN DESCRIPTIONS -------------

Col. Variable Description

1. Plot Plot code

2. DBH Diameter at breast height (cm)

3. Distance Distance from plot center (m)

4. Family Family

5. Genus Genus

6. Sp Specific epithet

7. Binomial Scientific name (this is blank, to be filled in when matched with

"DETERMINACIONES BOTANICAS - RIO HIRVIENTE.xlsx")

8. Coll If individual was collected, voucher number of collection (in

parentheses if the individual matches a voucher)

9-12. DBH2-5 Additional diameter measurements for multi-stemmed individuals

13. Comments General comments about the individual

**3) "DETERMINACIONES BOTANICAS - RIO HIRVIENTE.xlsx"**

This is the data of vouchers collected in the field to confirm and/or refine species identifications in the herbarium.

------------- COLUMN DESCRIPTIONS -------------

Col. Variable Description

1. Proyecto Project name

2. Coll.no Collection number

3. Colector Principal collector

4. Familia Family

5. Genero Genus

6. Especie Specific epithet

7. Autor Author of scientific name

8. Hábito Plant habit

9. País Country

10. Departamento Department

11. Provincia Province

12. Distrito District

**4) "occ\_clean\_final.csv"**

This is the cleaned occurrence data with bioclimatic variables at each occurrence location. Species included are each fully identified species in the Boiling River tree plots. Occurrence data was gathered from BIEN and GBIF.

------------- COLUMN DESCRIPTIONS -------------

Col. Variable Description

1. X or [nameless] Row index

2. species Species name

3. latutude Latitude in decimal degrees

4. longitude Longitude in decimal degrees

5. date\_collected Date of collection

6. bio\_1 Annual mean temperature (degrees C)

7. bio\_10 Mean temperature of warmest quarter (degrees C)

8. bio\_11 Mean temperature of coldest quarter (degrees C)

9. bio\_12 Annual precipitation (mm)

10. bio\_13 Precipitation of wettest month (mm)

11. bio\_14 Precipitation of driest month (mm)

12. bio\_15 Precipitation seasonality (coefficient of variation)

13. bio\_16 Precipitation of wettest quarter (mm)

14 bio\_17 Precipitation of driest quarter (mm)

15. bio\_18 Precipitation of warmest quarter (mm)

16. bio\_19 Precipitation of coldest quarter (mm)

17. bio\_2 Mean diurnal range (Mean of monthly (max temp – min temp))

18. bio\_3 Isothermality (bio\_2/bio\_7) (x100)

19. bio\_4 Temperature seasonality (standard deviation x100)

20. bio\_5 Max temperature of warmest month (degrees C)

21. bio\_6 Min temperature of coldest month (degrees C)

22. bio\_7 Temperature annual range (bio\_5-bio\_6) (degrees C)

23. bio\_8 Mean temperature of wettest quarter (degrees C)

24. bio\_9 Mean temperature of driest quarter (degrees C)