Abundance and beta-diversity of bumble bees and wildflowers in the Berchtesgadener Alps

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DATA FILES

1. `floral_tax.csv`

Description: Supplies family-level taxonomy for the floral taxa in our study.

Columns:

1. `plant.sp` = plant species
2. `plant.genus` = plant genus
3. `plant.family` = plant family

2. `network.csv`

Description: Bumble- bee-wildflower visitation data used in all analyses of (1) bumble bee abundance, (2) bumble bee beta-diversity, and (3) interaction beta-diversity.

Columns:

1. `year` = year
2. `dayofyear` = day of year since January 1
3. `site` = site name
4. `snowcover` = whether site was snow-covered
5. `plant.sp` = full plant species name
6. `plant.genus` = plant genus name
7. `flower cover` = flower cover in m^2 to the nearest 0.01 m^2
8. `day` = day of month
9. `month` = month
10. `date` = date

3. `floral_survey.csv`

Description: Floral survey data used in all analysis of (1) floral abundance and (2) floral beta-diversity.

Columns:

1. `year` = year
2. `dayofyear` = day of year since January 1
3. `site` = site name
4. `trap.time` = time interaction was observed
5. `caste` = bumble bee caste (queen, male, worker, NA = parasitic *Psithryus*)
6. `pollen` = whether the bee had visible pollen loads
7. `bb.sp` = abbreviated bumble bee species name
8. `bb.sp.lat` = full bumble bee species name
9. `plant.sp.abb` = abbreviated plant species name
10. `plant.sp` = full plant species name
11. `plant.genus` = plant genus name
12. `day` = day of month
13. `month` = month
14. `date` = date

4. `site_data.csv`

Description: Site data including elevation, management, and geographic coordinates.

Columns:

1. `site` = site name
2. `elev.class` = elevation category (oben, mitte, unten)
3. `management` = site management (mowing, grasing, none)
4. `temp.mean` = mean temperature recorded with iButton devices
5. `elev.mean` = mean elevation
6. `transect` = transect name
7. `slope.calc` = slope calculated from min and max elevation
8. `slope.est` = estimated slope
9. `elev.min` = minimum elevation within site
10. `elev.max` = maximum elevation within site
11. `lat` = latitude (decimal degrees)
12. `lon` = longitude (decimal degrees)
13. `elev.class2` = alternative elevation binning
14. `tree_line` = whether a site was above or below the tree line; only for sites included in analysis (hence NAs)

CODE FILES

1. `ms1_abundance.Rmd`

Description: R script for running abundance analyses.

2. `ms1_beta_diversity.Rmd`

Description: R script for running beta-diversity analyses.