Bird communities along elevation gradient in Yushan Mountain, Taiwan

Source of data

Ding (1993), Ding et al. (2005)

Description of the dataset

Estimated bird density in 50 sites across the elevation gradient, located in natural vegetation and sampled from March to July 1992. Sampling was done by the variable circular-plot method, when during four hours after sunrise, for six minutes every hour distance and sex of all birds seen or heard was recorded (not including migrant birds). On each site, birds were counted 16 times for a total of 96 minutes.

Locality

The region of Mt. Yushan (23°28′30″N,120°54′00″E) (3952 m asl), in the vicinity of the highest peak in Taiwan. The sampling stations spanned an elevation range from 1400 to 3700 m and were located in a 10 km × 10 km area.

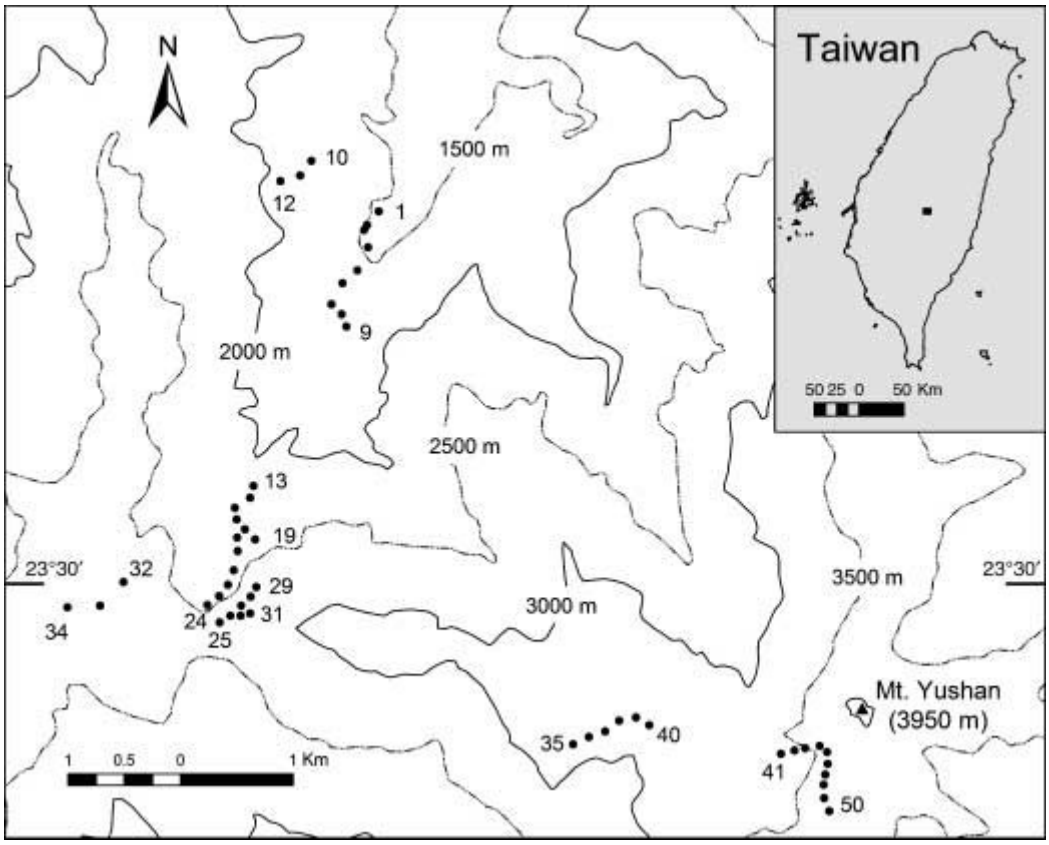


Figure 1: Distribution of the sampling locations in the Yushan region, Taiwan. (Fig. 1 from Ding et al. 2005.)

Environmental variables

Name of variable	Description
Veg.	Vegetation type: B - broad-leaf evergreen forests, M - mixed coniferous-broadleaf forests, S - Spruce forests, F - Fir forests, H - Hemlock forests, J - Juniper shrubland
Veg_ext	Vegetation types extended (according to Ding et al. 2005): MC: Machilus-Castanopsis zone, LQ - Lower Quercus zone, UQ - Upper Quercus zone, MI - mixed coniferous-broadleaf forests, SP - Spruce forests, FI - Fir forests, HE - Hemlock forests, JU - Juniper shrubland
ELE	Elevation [m a.s.l.]
ASP	Aspect (norhteness): 1-8; 1 - southwest (warmest), 8 - northeast (coldes)
SLP	Slope
EXP	Exposure: 0 - valley, 2 - lower slope, 4 - middle slope, 6 - upper slope, 8 - ridge, 10 - peak
CH	Canopy height [m]
GC	Ground cover
HC	Herb cover
SC	Shrub cover
T2C	Secondary tree cover
T1C	Canopy cover
TFV	Total foliage volume
FHD	Foliage height diversity index
CP	Conifer percentage
TD	Tree density
MDB	Mean tree DBH
SDDB	Standard deviation of tree DBH
TBA	Tree basal area
TSD	Tree species diversity

Data for download

File name	File type	Description
ybirds.xlsx	Excel file	Contains species × sample matrix, environmental variables, explanation of species abbreviations and metadata
ybirds_spe.txt	tab-delimited txt format	Sample × species matrix (50 samples in rows, 59 species in columns)
ybirds_env.txt	tab-delimited txt format	Sample × env. variables matrix (50 samples in rows, 20 env. variables in columns)
ybirds_biomass.txt	tab-delimited txt format	Species × trait data (biomass of each species in g, from Supplementary materials in Ding et al. 2005)

Compositional and environmental data (for all species)

```
ybirds.spe <- read.delim
('https://raw.githubusercontent.com/zdealveindy/anadat-r/master/data/ybirds_spe.txt
', row.names = 1)
ybirds.env <- read.delim
('https://raw.githubusercontent.com/zdealveindy/anadat-r/master/data/ybirds_env.txt
', row.names = 1)
ybirds.biomass <- read.delim
('https://raw.githubusercontent.com/zdealveindy/anadat-r/master/data/ybirds_biomass
.txt', row.names = 1)
```

References

- Ding, T.-S. (1993) Avian community ecology of mature forests in Mt. Yushan. Master Thesis, National Taiwan University, Taiwan (pdf)
- Ding, T.-S., Yuan, H.-W., Geng, S., Lin, Y.-S. & Lee, P.-F. (2005) Energy flux, body size and density in relation to bird species richness along an elevational gradient in Taiwan. Global Ecology and Biogeography, 14: 299-306. (pdf)

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