

Ecography

ECOG-04611

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2019. Annual temperature variation influences the
vulnerability of montane bird communities to land-use
change. – Ecography doi: 10.1111/ecog.04611

Supplementary material

Appendix 1.

Table A1. List of species recorded on transects, for which abundances were estimated using *N*-mixture models, with their dietary guild and migratory behaviour.

Species	Diet	Migratory behaviour
<i>Abroscopus schisticeps</i>	insectivore	year-round resident
<i>Actinodura egertoni</i>	omnivore	year-round resident
<i>Actinodura nipalensis</i>	omnivore	year-round resident
<i>Actinodura waldeni</i>	omnivore	year-round resident
<i>Aegithalos concinnus</i>	insectivore	year-round resident
<i>Aethopyga nipalensis</i>	omnivore	altitudinal migrant
<i>Alcippe nipalensis</i>	omnivore	year-round resident
<i>Anthus hodgsoni</i>	insectivore	altitudinal migrant
<i>Anthus sylvanus</i>	insectivore	altitudinal migrant
<i>Arborophila torqueola</i>	omnivore	year-round resident
<i>Blythipicus pyrrhotis</i>	insectivore	year-round resident
<i>Carduelis spinoides</i>	granivore	altitudinal migrant
<i>Carpodacus nipalensis</i>	granivore	altitudinal migrant
<i>Certhia discolor</i>	insectivore	year-round resident
<i>Certhia himalayana</i>	insectivore	year-round resident
<i>Certhia nipalensis</i>	insectivore	year-round resident
<i>Cettia brunnescens</i>	insectivore	altitudinal migrant
<i>Cettia brunnifrons</i>	insectivore	altitudinal migrant
<i>Cettia castaneocoronota</i>	insectivore	altitudinal migrant
<i>Cettia fortipes</i>	insectivore	altitudinal migrant
<i>Chloropsis hardwickii</i>	omnivore	year-round resident
<i>Chrysophlegma flavinucha</i>	insectivore	year-round resident
<i>Columba hodgsonii</i>	frugivore	altitudinal migrant
<i>Cutia nipalensis</i>	insectivore	year-round resident
<i>Dendrocitta formosae</i>	omnivore	year-round resident
<i>Dendrocopos darjellensis</i>	insectivore	year-round resident
<i>Dendrocopos himalayensis</i>	insectivore	year-round resident
<i>Dendrocopos hyperythrus</i>	insectivore	year-round resident
<i>Dicaeum ignipectus</i>	omnivore	altitudinal migrant
<i>Dicrurus leucophaeus</i>	insectivore	altitudinal migrant
<i>Emberiza cia</i>	granivore	altitudinal migrant
<i>Emberiza pusilla</i>	granivore	altitudinal migrant
<i>Ficedula strophliata</i>	insectivore	altitudinal migrant
<i>Fulvetta vinipectus</i>	insectivore	year-round resident
<i>Garrulax albogularis</i>	omnivore	year-round resident
<i>Garrulax caerulatus</i>	omnivore	year-round resident
<i>Glaucidium brodiei</i>	carnivore	year-round resident
<i>Grammatoptila striata</i>	omnivore	year-round resident
<i>Gyps himalayensis</i>	carnivore	year-round resident

<i>Heterophasia capistratus</i>	omnivore	altitudinal migrant
<i>Heterophasia pulchella</i>	omnivore	year-round resident
<i>Hypsipetes leucocephalus</i>	omnivore	altitudinal migrant
<i>Ictinaetus malayensis</i>	carnivore	year-round resident
<i>Ixos maclellandii</i>	omnivore	year-round resident
<i>Lanius schach</i>	carnivore	altitudinal migrant
<i>Leiopicus auriceps</i>	insectivore	year-round resident
<i>Leiothrix lutea</i>	omnivore	altitudinal migrant
<i>Lioparus chrysotis</i>	insectivore	year-round resident
<i>Lophura leucomelanos</i>	omnivore	altitudinal migrant
<i>Machlolophus spilonotus</i>	insectivore	year-round resident
<i>Macropygia unchall</i>	frugivore	year-round resident
<i>Minla ignotincta</i>	omnivore	altitudinal migrant
<i>Minla strigula</i>	omnivore	altitudinal migrant
<i>Monticola rufiventris</i>	omnivore	altitudinal migrant
<i>Oriolus traillii</i>	omnivore	altitudinal migrant
<i>Parus monticolus</i>	insectivore	altitudinal migrant
<i>Passer rutilans</i>	omnivore	altitudinal migrant
<i>Pericrocotus solaris</i>	insectivore	year-round resident
<i>Periparus melanolophus</i>	insectivore	year-round resident
<i>Phoenicurus caeruleocephala</i>	insectivore	altitudinal migrant
<i>Phoenicurus frontalis</i>	insectivore	altitudinal migrant
<i>Phylloscopus chloronotus</i>	insectivore	altitudinal migrant
<i>Phylloscopus humei</i>	insectivore	altitudinal migrant
<i>Phylloscopus maculipennis</i>	insectivore	altitudinal migrant
<i>Phylloscopus pulcher</i>	insectivore	altitudinal migrant
<i>Phylloscopus reguloides</i>	insectivore	altitudinal migrant
<i>Phylloscopus xanthoschistos</i>	insectivore	altitudinal migrant
<i>Picus squamatus</i>	insectivore	year-round resident
<i>Pnoepyga albiventer</i>	insectivore	altitudinal migrant
<i>Pomatorhinus erythrogeus</i>	insectivore	year-round resident
<i>Pomatorhinus ruficollis</i>	insectivore	year-round resident
<i>Pomatorhinus superciliaris</i>	insectivore	altitudinal migrant
<i>Prinia atrogularis</i>	insectivore	altitudinal migrant
<i>Prinia crinigera</i>	insectivore	altitudinal migrant
<i>Prunella immaculata</i>	granivore	altitudinal migrant
<i>Prunella strophiatea</i>	granivore	altitudinal migrant
<i>Psilopogon franklinii</i>	frugivore	year-round resident
<i>Psilopogon virens</i>	frugivore	year-round resident
<i>Psittiparus bakeri</i>	insectivore	year-round resident
<i>Pycnonotus leucogenys</i>	omnivore	year-round resident
<i>Pycnonotus striatus</i>	insectivore	year-round resident
<i>Pyrrhula erythaca</i>	granivore	year-round resident
<i>Pyrrhula nipalensis</i>	granivore	year-round resident
<i>Rhipidura albicollis</i>	insectivore	altitudinal migrant
<i>Rhipidura hypoxantha</i>	insectivore	altitudinal migrant
<i>Saxicola ferreus</i>	insectivore	altitudinal migrant
<i>Schoeniparus castaniceps</i>	insectivore	year-round resident
<i>Schoeniparus cinereus</i>	insectivore	year-round resident
<i>Seicercus castaneiceps</i>	insectivore	altitudinal migrant
<i>Seicercus poliogenys</i>	insectivore	altitudinal migrant
<i>Sitta himalayensis</i>	insectivore	year-round resident

<i>Spelaornis caudatus</i>	insectivore	year-round resident
<i>Stachyridopsis chrysaea</i>	insectivore	year-round resident
<i>Stachyridopsis pyrrhops</i>	insectivore	year-round resident
<i>Stachyridopsis ruficeps</i>	insectivore	year-round resident
<i>Sylviparus modestus</i>	insectivore	altitudinal migrant
<i>Tarsiger chrysaeus</i>	insectivore	altitudinal migrant
<i>Tarsiger hyperythrus</i>	insectivore	altitudinal migrant
<i>Tarsiger rufilatus</i>	insectivore	altitudinal migrant
<i>Tickellia hodgsoni</i>	insectivore	year-round resident
<i>Treron sphenurus</i>	frugivore	year-round resident
<i>Trochalopteron erythrocephalum</i>	omnivore	year-round resident
<i>Trochalopteron imbricatum</i>	omnivore	year-round resident
<i>Trochalopteron lineatus</i>	omnivore	year-round resident
<i>Trochalopteron squamatum</i>	omnivore	year-round resident
<i>Trochalopteron subunicolor</i>	omnivore	year-round resident
<i>Trochalopteron variegatum</i>	omnivore	year-round resident
<i>Turdus atrogularis</i>	omnivore	altitudinal migrant
<i>Urocissa flavirostris</i>	omnivore	year-round resident
<i>Yuhina flavicollis</i>	omnivore	altitudinal migrant
<i>Yuhina gularis</i>	omnivore	altitudinal migrant
<i>Yuhina nigrimenta</i>	omnivore	altitudinal migrant
<i>Yuhina occipitalis</i>	omnivore	altitudinal migrant
<i>Zoothera dixonii</i>	insectivore	altitudinal migrant
<i>Zoothera mollissima</i>	insectivore	altitudinal migrant

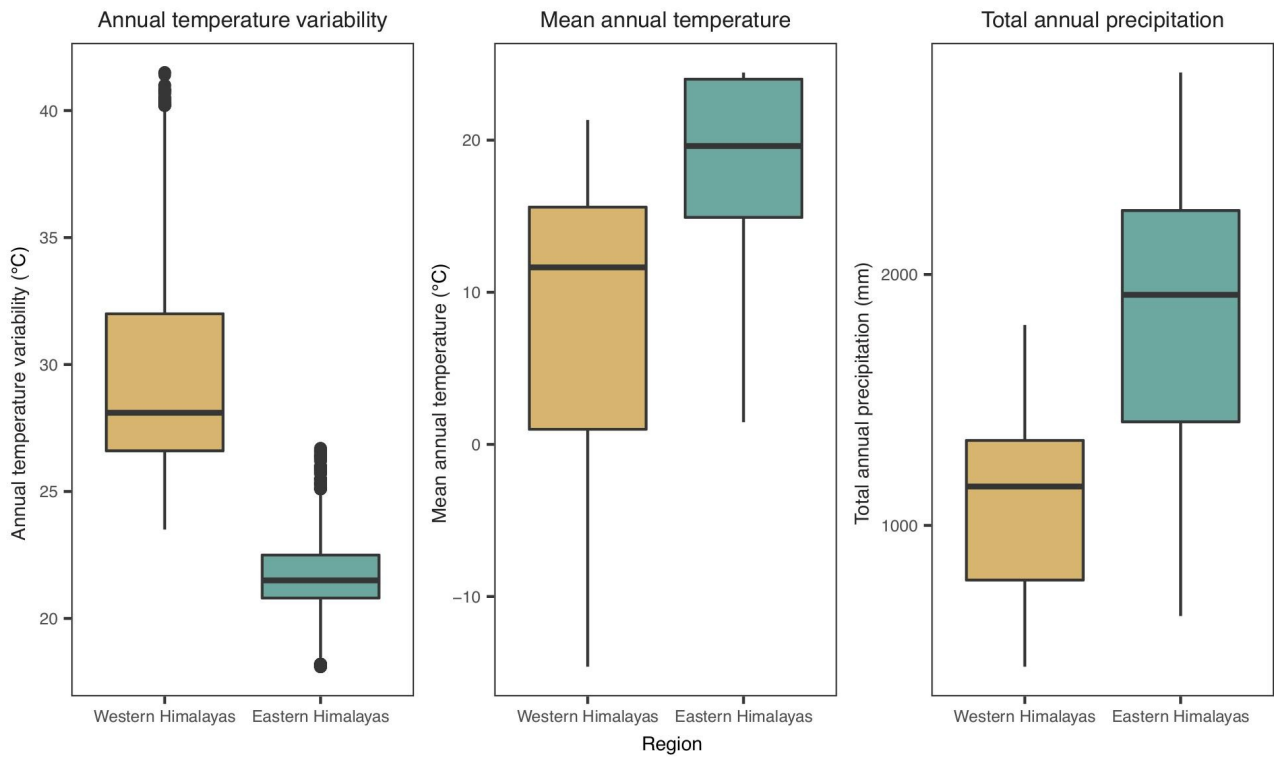


Figure A1. Boxplots summarizing gridded climate data for annual temperature variability (left panel), mean annual temperature (middle panel), and total annual precipitation (right panel) within 50 km buffers of survey regions. Data are from WorldClim 2.0 (Fick & Hijmans, 2017). See Figure 1 for maps showing each climate variable and the buffered study regions.

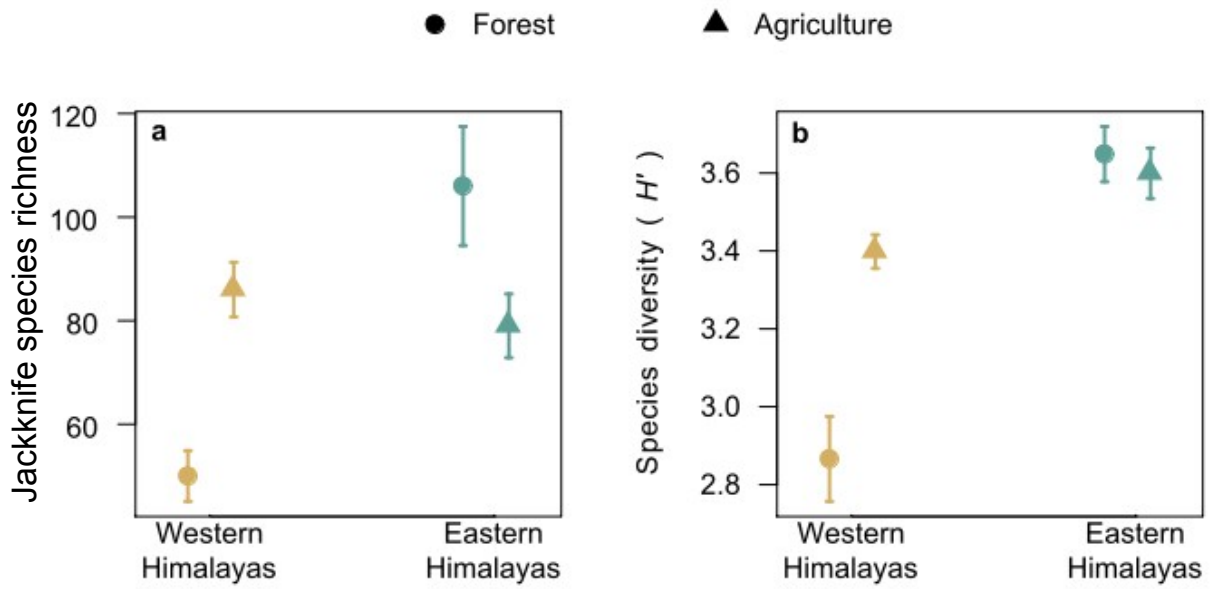


Figure A2. Species richness and diversity patterns in forest and agriculture in the western and eastern Himalayas with equal sampling effort in both regions (i.e., with the first three visits of transect data from the east, equivalent to sampling effort in the west).

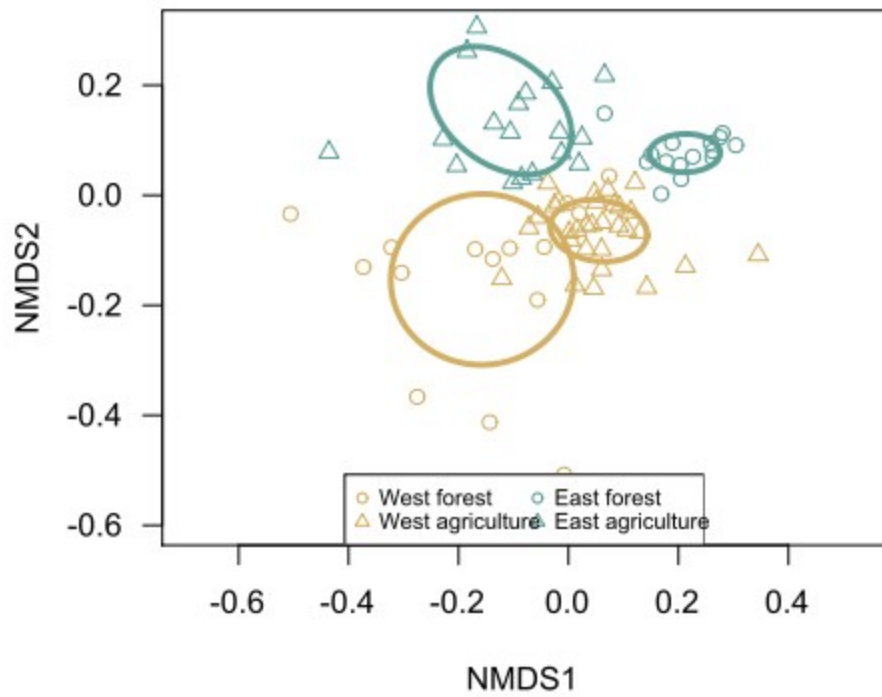


Figure A3. NMDS using the Bray-Curtis index on raw counts for every 50-m elevational band on our transects (stress = 0.12). Bird communities in agriculture and forest appear to be much more similar in the west than in the east.