

Conserving one of the 100 amazing species: Beydaglari bush-cricket *Psorodonotus ebneri*

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Why to conserve *Psorodonotus ebneri*?

Priceless
or Worthless?



Why to conserve *Psorodonotus ebneri*?



Pomarea whitneyi
Fatuhiva monarch

Population size: 50 individuals
Range: Fatu Hiva, Marquesas Islands, French Polynesia
Primary threats: Predation by introduced species - *Rattus rattus* and feral cats
Actions required: Increase control of introduced species and consider translocation, either to another island or by creating another, larger controlled area in an accessible part of Fatu Hiva



© FAO
Pristis pristis
Common sawfish

Population size: Unknown
Range: Coastal tropical and subtropical waters of Indo-Pacific and Atlantic Oceans. Currently largely restricted to northern Australia
Primary threats: Exploitation - has removed the species from 95 per cent of its historical range
Action required: Further research required to understand current distribution and threats and ways of managing these



© Karol Schafar www.levisesmatels.com
Propithecus candidus
Silky sifaka

Population size: 100-1,000 individuals
Range: Maroantsetra to Andapa basin, and Marojeju Massif, Madagascar
Primary threats: Hunting and habitat disturbance
Action required: Continuation and expansion of efforts to end hunting and establishment of protected areas



© Atherton deVilliers
Psammobates geometricus
Geometric tortoise

Population size: Unknown
Range: Western Cape Province, South Africa
Primary threats: Habitat destruction and degradation, and predation
Action required: Establishment of additional reserves and management of fire regimes



© Loïc Ruelan
Psiadia cataractae

Population size: Unknown
Range: Mauritius
Primary threats: Habitat degradation and destruction due to development project and alien invasive plant species
Actions required: Effective protection of the area, continuous and effective control of invasive alien plants particularly grasses and replanting of hardened nursery grown plants



© Battal Ciplak and Sarp Kaya
Psorodonotus ebneri
Beydaglari bush-cricket

Population size: Unknown
Range: Beydaglari range, Antalya, Turkey
Primary threats: Climate change / habitat loss
Action required: Development of a bioacoustic monitoring scheme and strategic conservation action plan, establishment of a nature reserve, implementation of habitat management scheme, and research on population size, trends, distribution, and ecology



© Le Khac Quyet/ University of Colorado Boulder
Rhinopithecus avunculus
Tonkin snub-nosed monkey

Population size: < 200 individuals
Range: Northeastern Viet Nam
Primary threats: Habitat loss and hunting
Action required: Establishment of a conservation area for Khau Ca Conservation area in Ha Giang province and increase law enforcement to reduce hunting pressure



© Kingsley Dixon
Rhizanthella gardneri
West Australian underground orchid

Population size: < 100 individuals
Range: Western Australia, Australia
Primary threats: Land clearance for agriculture (96 per cent habitat cleared to date), climate change and salinisation
Action required: In-situ protection of the two supporting organisms, and protection of seed stocks and the fungus partner in a seed bank

Conservation status



Psorodonotus ebneri Beydaglari bush-cricket

Population size: Unknown

Range: Beydaglari range, Antalya, Turkey

Primary threats: Climate change / habitat loss

Action required: Development of a bioacoustic monitoring scheme and strategic conservation action plan, establishment of a nature reserve, implementation of habitat management scheme, and research on population size, trends, distribution, and ecology

Calbali Bush-cricket
Psorodonotus ebneri

ABSTRACT
Calbali Bush-cricket *Psorodonotus ebneri* has most recently been assessed for the IUCN Red List of Threatened Species in 2012. *Psorodonotus ebneri* is listed as Critically Endangered under criteria B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv).

THE RED LIST ASSESSMENT
Hochkirch, A. 2012. *Psorodonotus ebneri*. The IUCN Red List of Threatened Species 2012. e.T1500894415428933. [View it...](#)

LAST ASSESSED
05 April 2012

SCOPE OF ASSESSMENT
Global

Assessment in detail

POPULATION TRENDS
Unknown

NUMBER OF MATURE INDIVIDUALS
Population in detail

HABITAT AND ECOLOGY
Wetlands (inland)

Habitat and ecology in detail

GEOGRAPHIC RANGE
Distribution data is not mapped for this species.

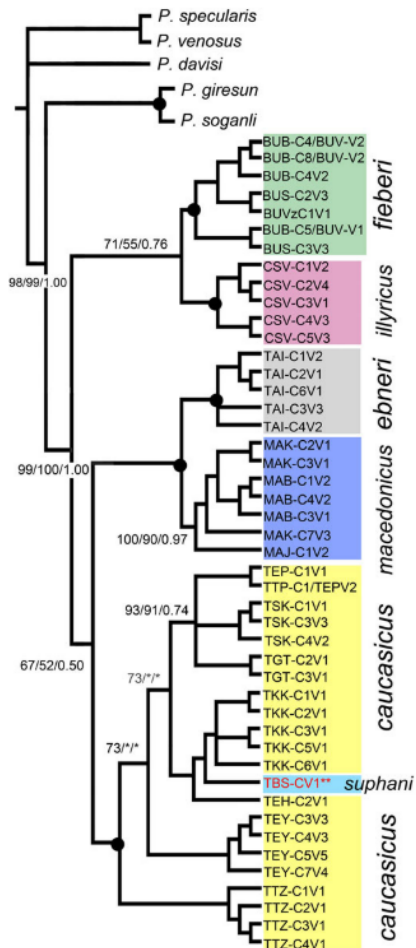
Taxonomy
Kingdom: **Animalia**
Phylum: **Arthropoda**
Class: **Insecta**
Order: **Orthoptera**
Family: **Tettigoniidae**
Genus: **Psorodonotus**

Assessment Information

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX
						CRITICALLY ENDANGERED		

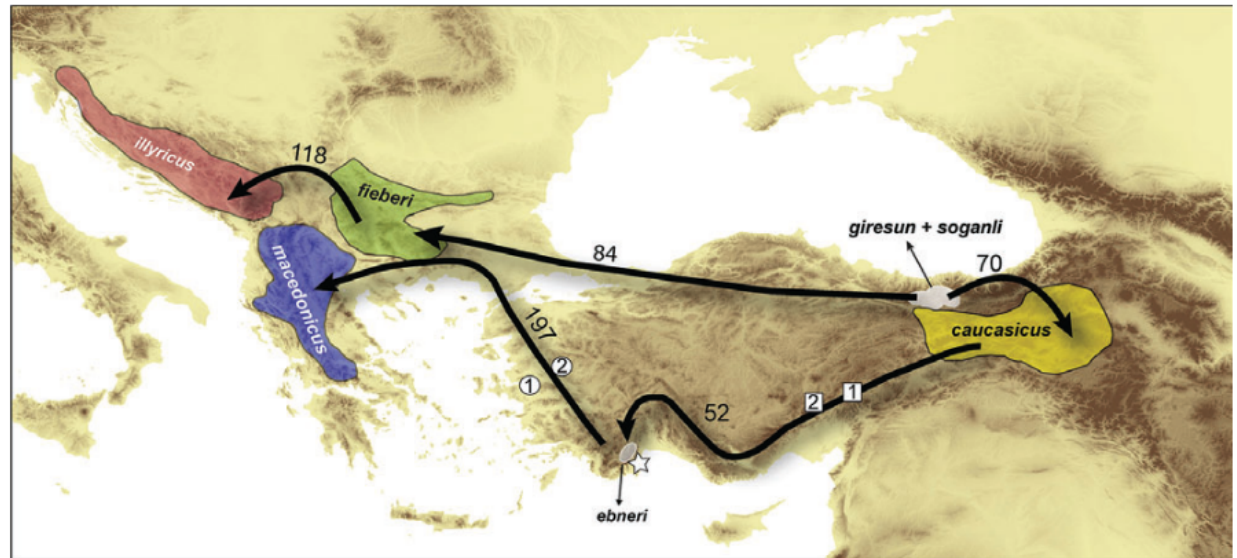
IUCN RED LIST CATEGORY AND CRITERIA
Critically Endangered B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv)

From phylogeny to conservation



Phylogeography and taxonomy of the *Psorodonotus caucasicus* (Orthoptera, Tettigoniidae) group: independent double invasion of the Balkans from the Caucasus

SARP KAYA¹ and BATTAL ÇIPLAK²



Montane biodiversity of Mediterranean basin

Biodiversity Hotspots in the Mediterranean Basin: Setting Global Conservation Priorities

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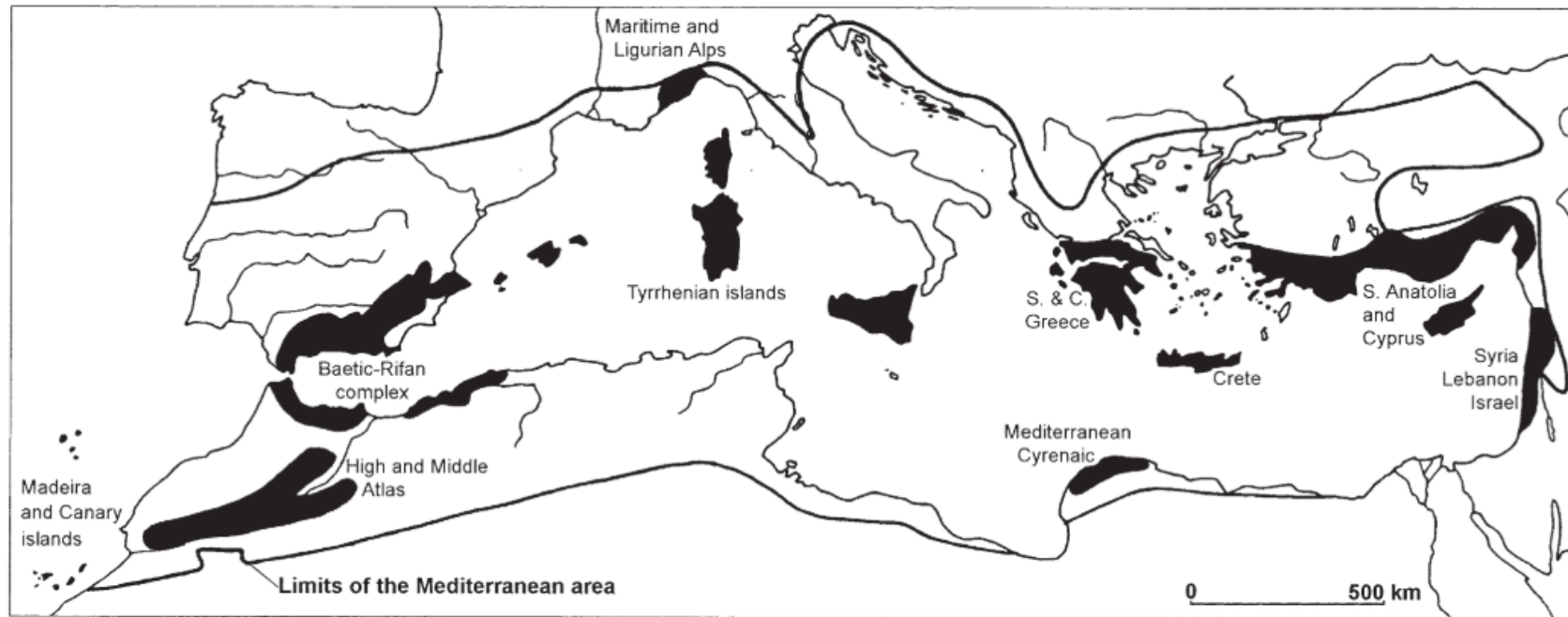



Figure 1. The 10 Mediterranean Basin hotspots based on plant endemism and richness, according to Médail and Quézel (1997, modified).

Montane biodiversity of Mediterranean basin

 *Biodiversity and Conservation* 12: 47–64, 2003.
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Ecology Letters, (2005) 8: 461–467

doi: 10.1111/j.1461-0248.2005.00739.x

IDEAS AND PERSPECTIVES

Conserving biodiversity under climate change: the rear edge matters

Distribution of Tettigoniinae (Orthoptera, Tettigoniidae) bush-crickets in Turkey: the importance of the Anatolian Taurus Mountains in biodiversity and implications for conservation

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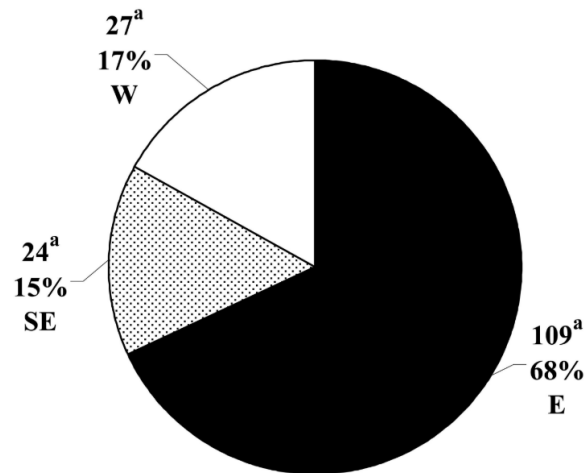


Figure 2. Species number (^a) and percentage of endemic (E), semi-endemic (SE) and widespread (W) species recorded from Turkey.

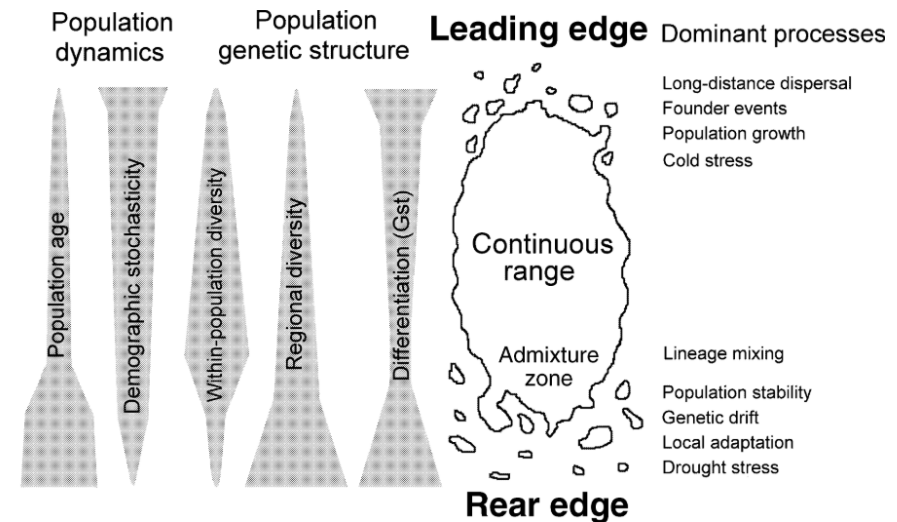


Figure 1 Population features and relevant processes at the leading and the rear edge of species ranges. The width of grey bars shown on the left hand indicates the quantity of features at the corresponding position within the range.

Biodiversity of Mediterranean basin



Names - common, scientific, regions etc...



Advanced

About

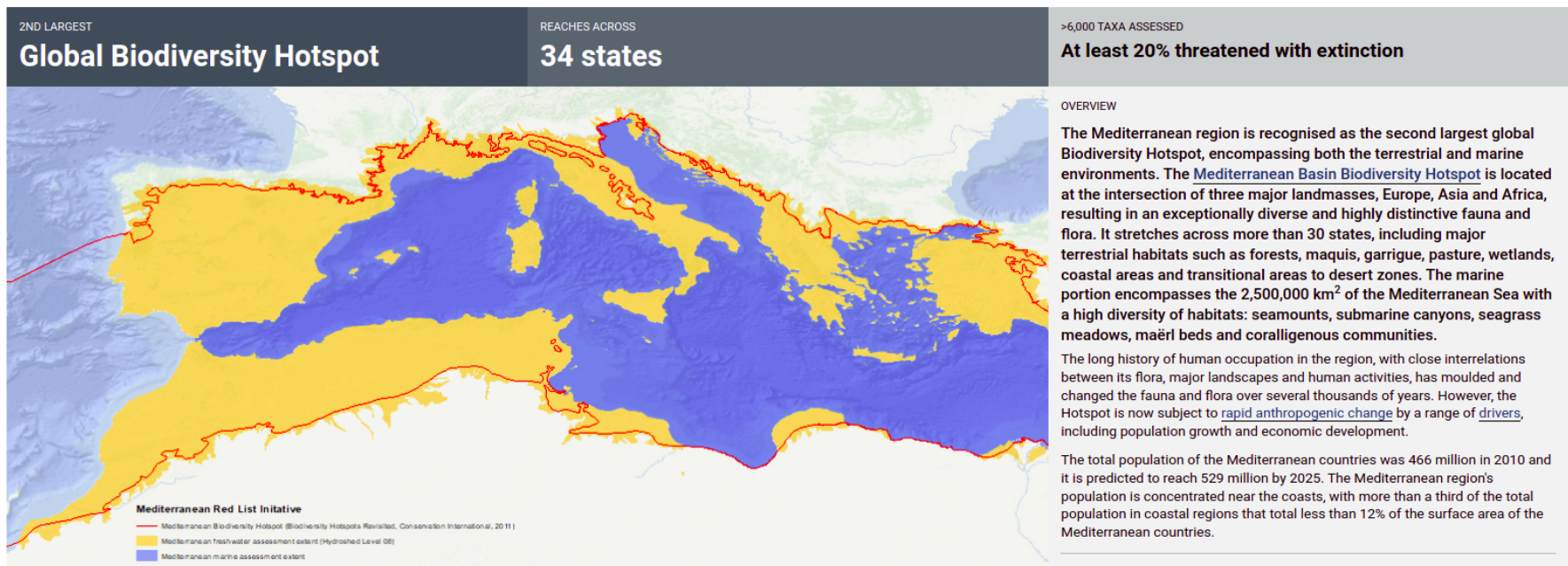
Assessment process

Resources & Publications

Support us

Mediterranean

The Mediterranean Red List of Species



Mittermeier et. al., 2004

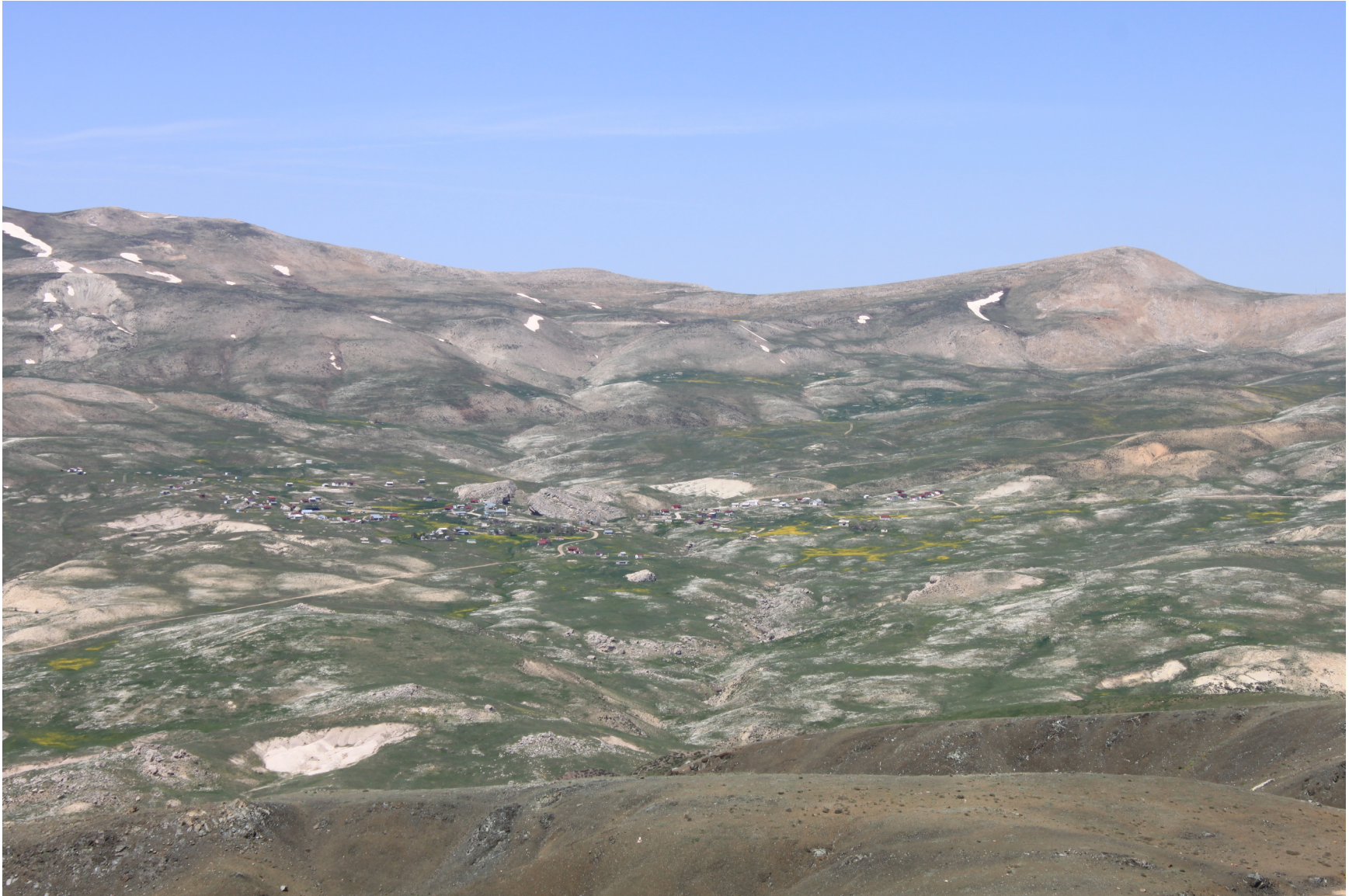
Beydaglari bush cricket

Psorodonotus ebneri

- Tettigoniidae, Pholidopterini
- Oligophagous & Cannibalism(rare)
- Univoltine
- Sexually dimorphic



Study area



Beydağları, Antalya, Turkey

Study area



Grazed meadows and rural settlement

Beydağları, Antalya, Turkey

Study area



Grazed meadows

Beydağları, Antalya, Turkey

Study area



Wet meadows

Beydağları, Antalya, Turkey

Insects of the Beydağları

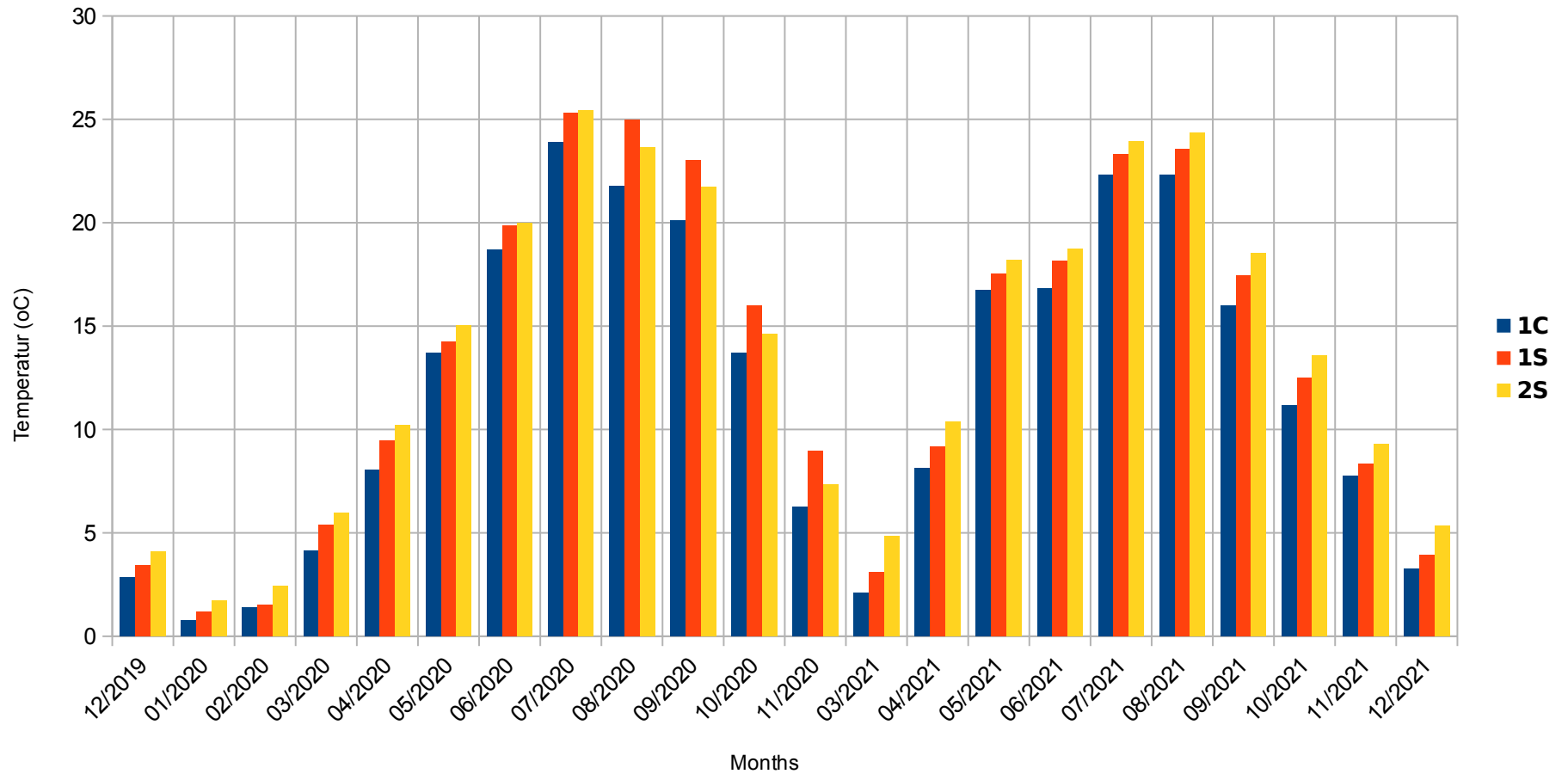


Methods

- Population size estimation
 - ~ Transect method
- Climate data collection
 - ~ 3 data-loggers (iButton,) placed in the study area (2 open air, 1 underground)
- Mapping different properties of study area
 - ~ Aspect, elevation, soil type, soil erosion and vegetation
- Documentation of main threats on the populations
 - ~ Regular field observations

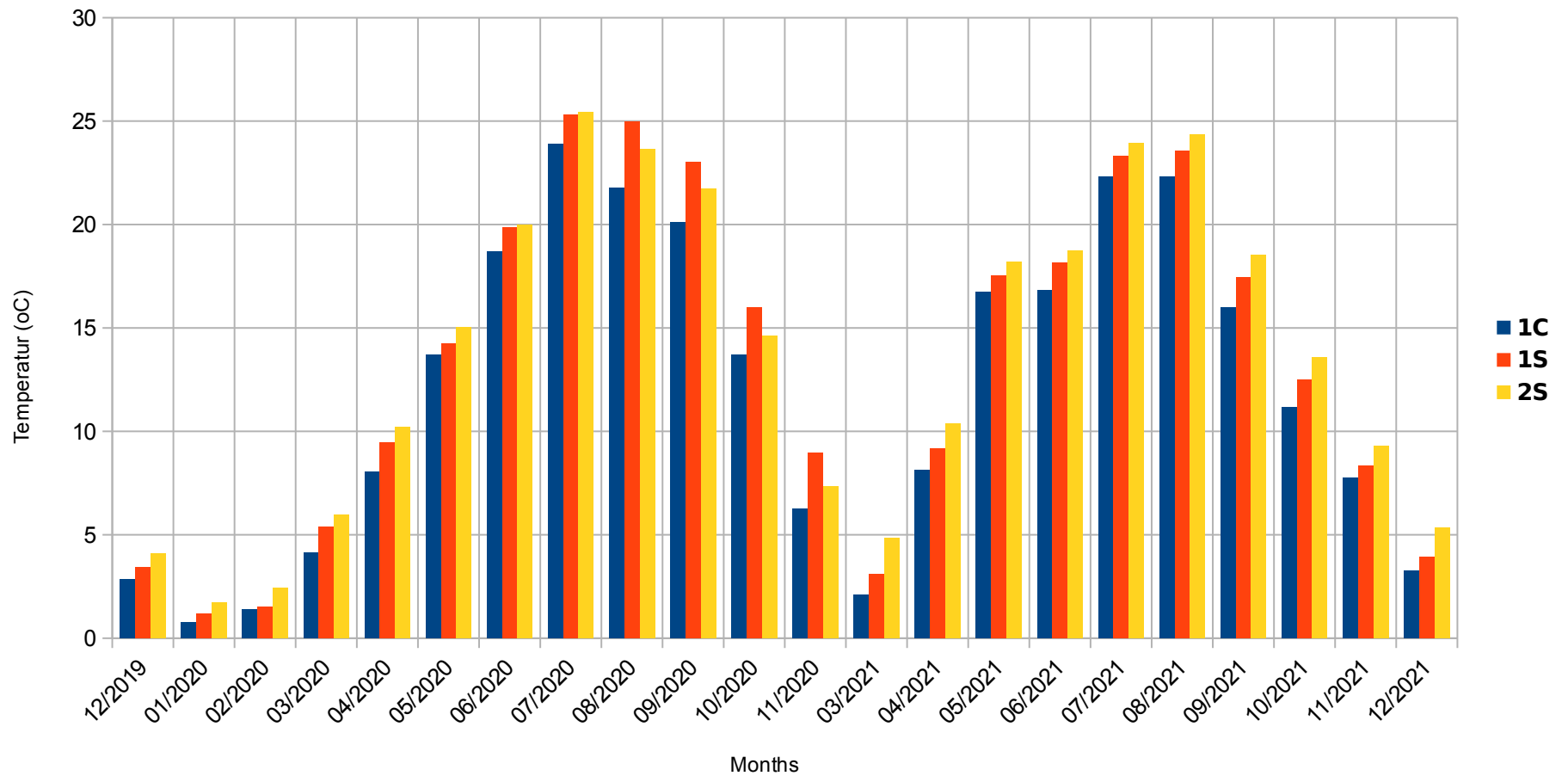
Results

Temperature



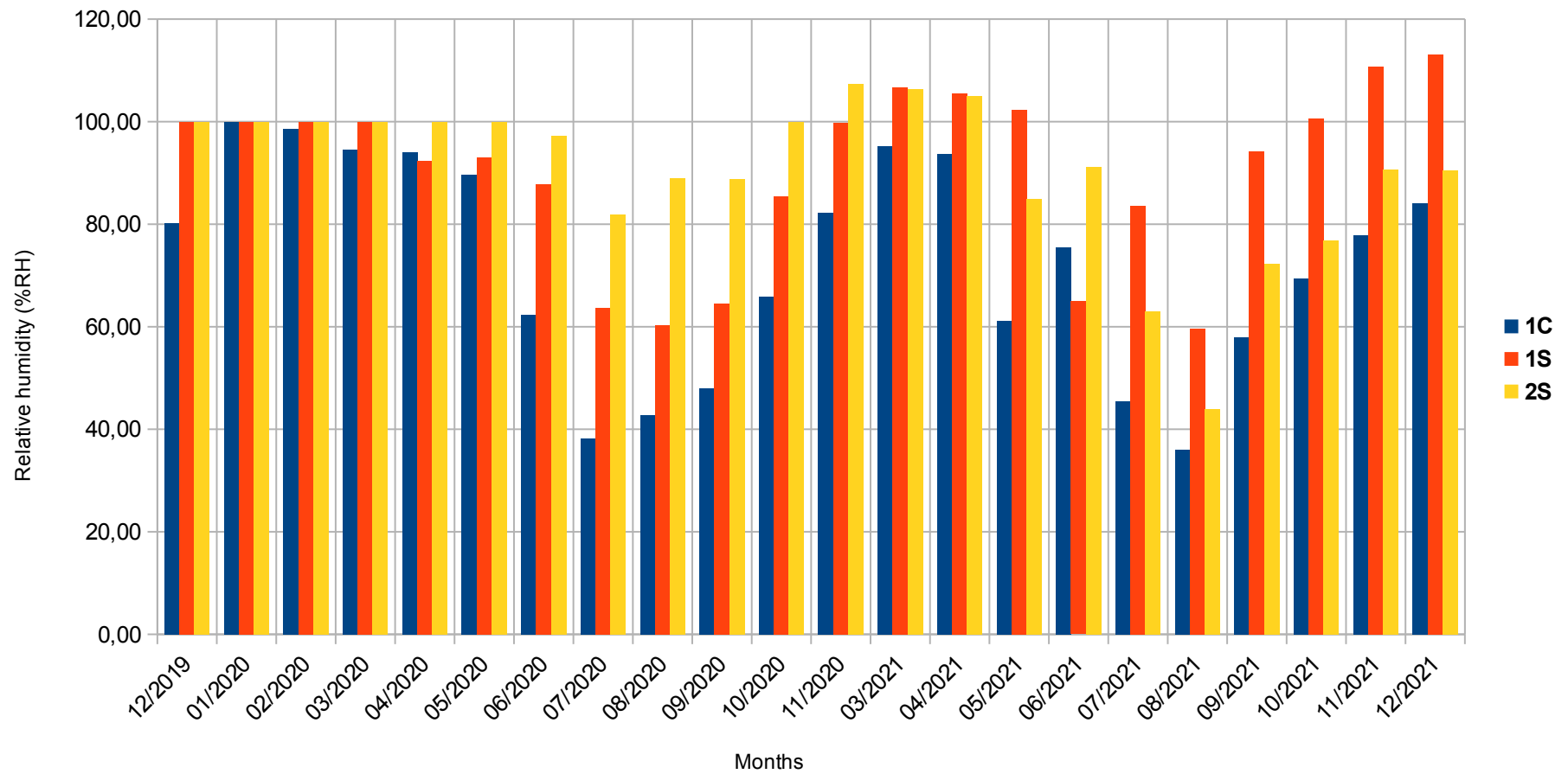
Climate data

Temperature

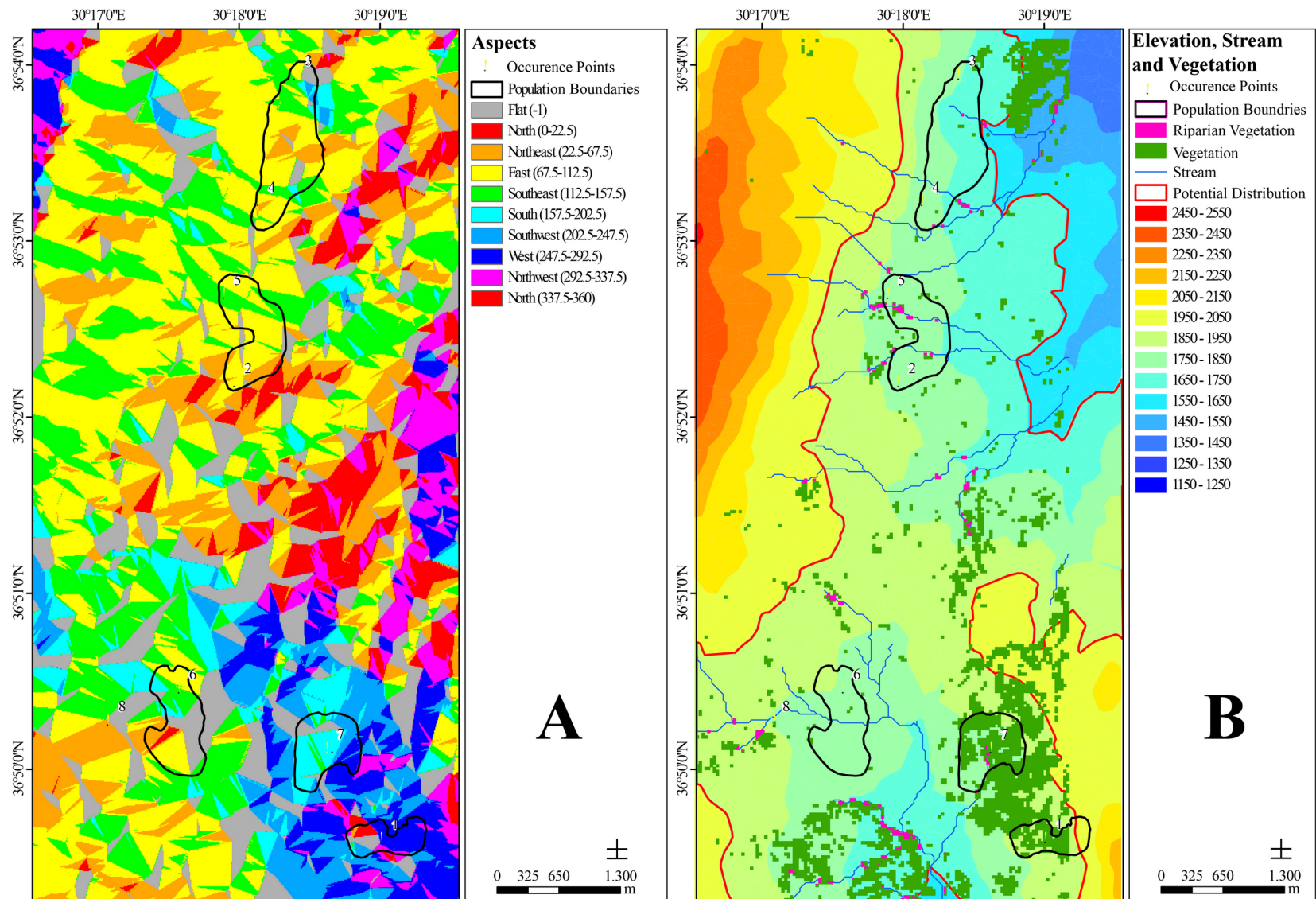


Climate data

Humidity

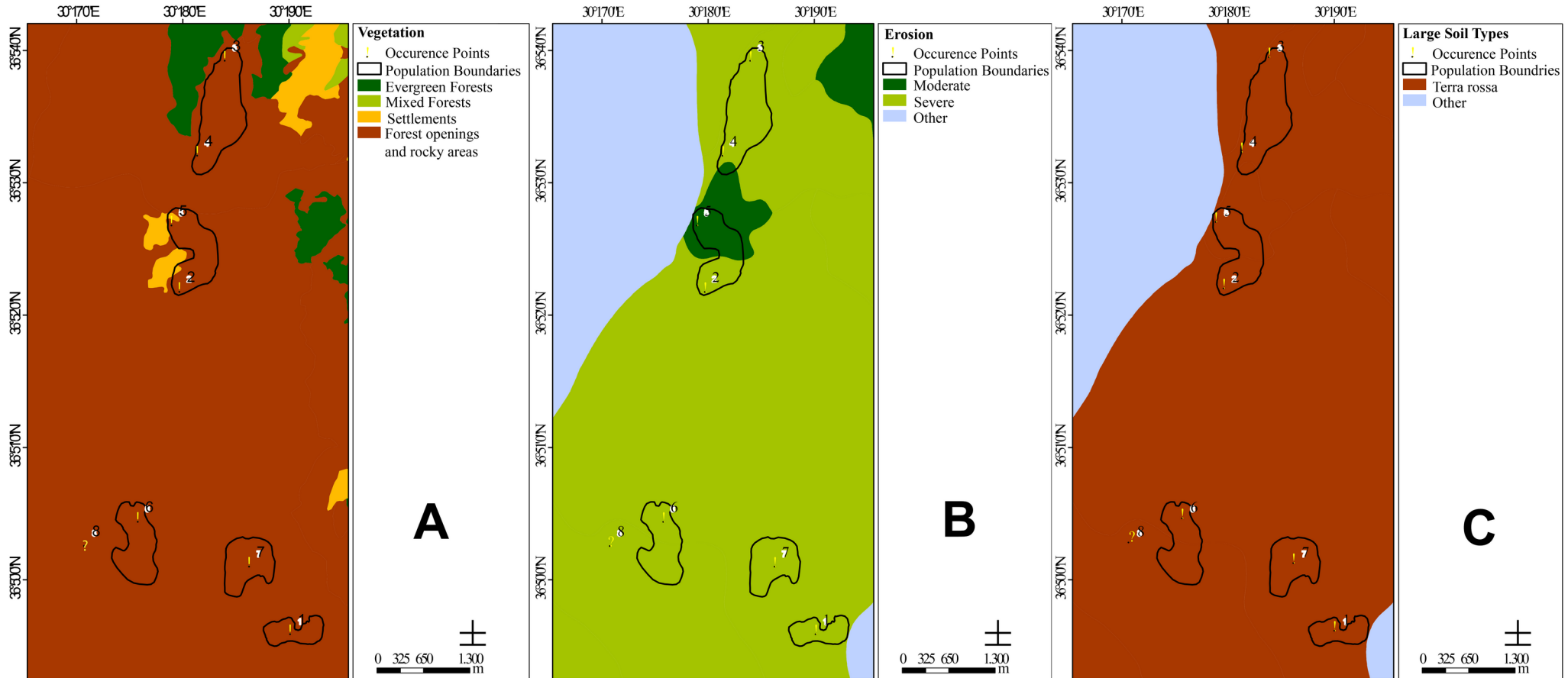


Maps of the study area



A. Aspects B. Elevation, stream and vegetation

Maps of the study area



A. Vegetation B. Erosion C. Soil type

Main threats on the populations



Outreach



Summary of findings

- 1750- 1950 m elevation
- High grass of mountain meadows in forest opening
- East and southeast facing
- Terra rosa Mediterranean soil
- 0-10° C temperature for egg period and 15-20°C for live period & humidity of %RH 90-100
- Occurrence area constitutes app. 2.5 km² & estimated to be 960 individuals per year (*P. ebneri* well hide in the vegetation and may difficult to observe, thus the exact population size may be slightly larger)
- **Altogether prove that Beydağları bushcricket *P. ebneri* is a stenobiont insect demanding very narrow ecological conditions.**

Future directions

Modern Insect Extinctions, the Neglected Majority

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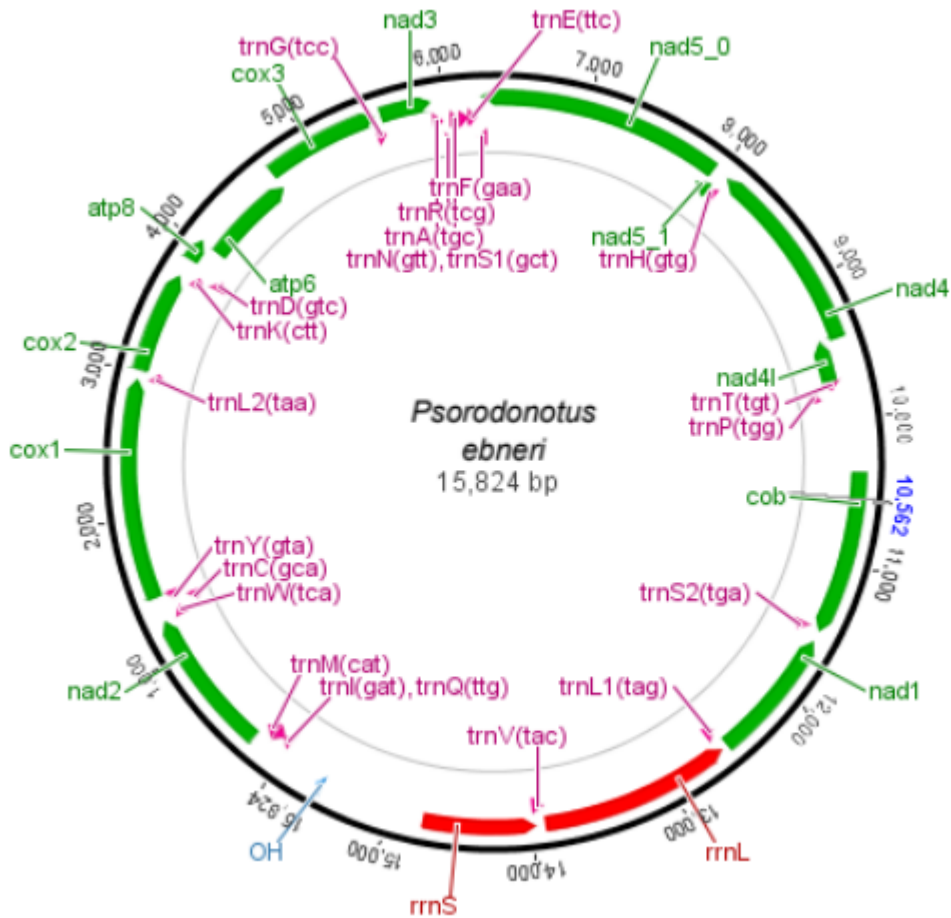
Comment

Insect Extinctions and Insect Survival

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Conservation genetics perspective



- High altitude adaptations
- Extinction vortex
- Habitat (climate) specificity

Team



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Team



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