

Supplementary material

Trophic ecology of the Ringed Warbling-Finch (*Poospiza torquata*) in Neotropical semi-arid scrublands

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Description of the three study areas

Amanao is located in a plain dominated by *Larrea cuneifolia* shrubs, crossed by dry riverbeds where vegetation is diverse and structurally complex, including scattered trees of *Prosopis chilensis*, *Acacia aroma* and a shrub layer with a predominance of *Bulnesia retama*, *Senna aphylla* and *Cercidium praecox*. The herbaceous layer is poor due to heavy grazing; it is represented mainly by annual grasses such as *Bouteloua aristidoides* and *Aristida adscencionis*. Average annual rainfall is 195 mm (Ezcurra *et al.* 1991, data from 1910–1980). El Balde has two clearly distinguished environmental units, one is the shrub steppe dominated by *Larrea divaricata*, *Larrea cuneifolia* and *Bulnesia retama*, with rocky soil and widely scattered herbaceous plants; the other unit has a very dense shrub layer, with *Prosopis flexuosa*, *Lycium boerhaviaefolia*, and herbaceous annual and perennial grasses. Average annual rainfall is 90 mm (data from 1965 to 1979, Unidad de Información Hidrometeorológica 1988). The study site in Telteca was located in a system of sand dunes with scrublands dominated by *Larrea divaricata*, *Tricomaria usillo* and *Bulnesia retama*. Open woodlands of *Prosopis flexuosa* grow in lower lying areas between dunes. The herbaceous layer is dominated by grasses. Average annual rainfall is 163 mm (data from El Encón meteorological station of CRICYT Meteorology Program, Mendoza).

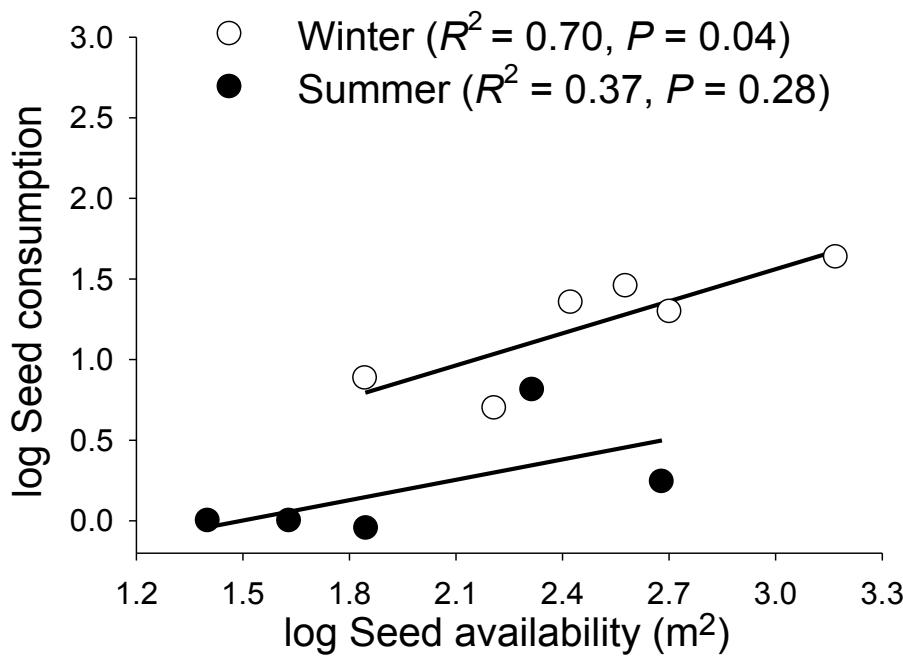


Fig. S1. Simple linear regression of mean number of seeds per stomach content of Ringed Warbling-Finch in relation to seed availability (m^2) in winter (white circles) and summer (black circles) at three sites of the Monte desert during 1995–1996.

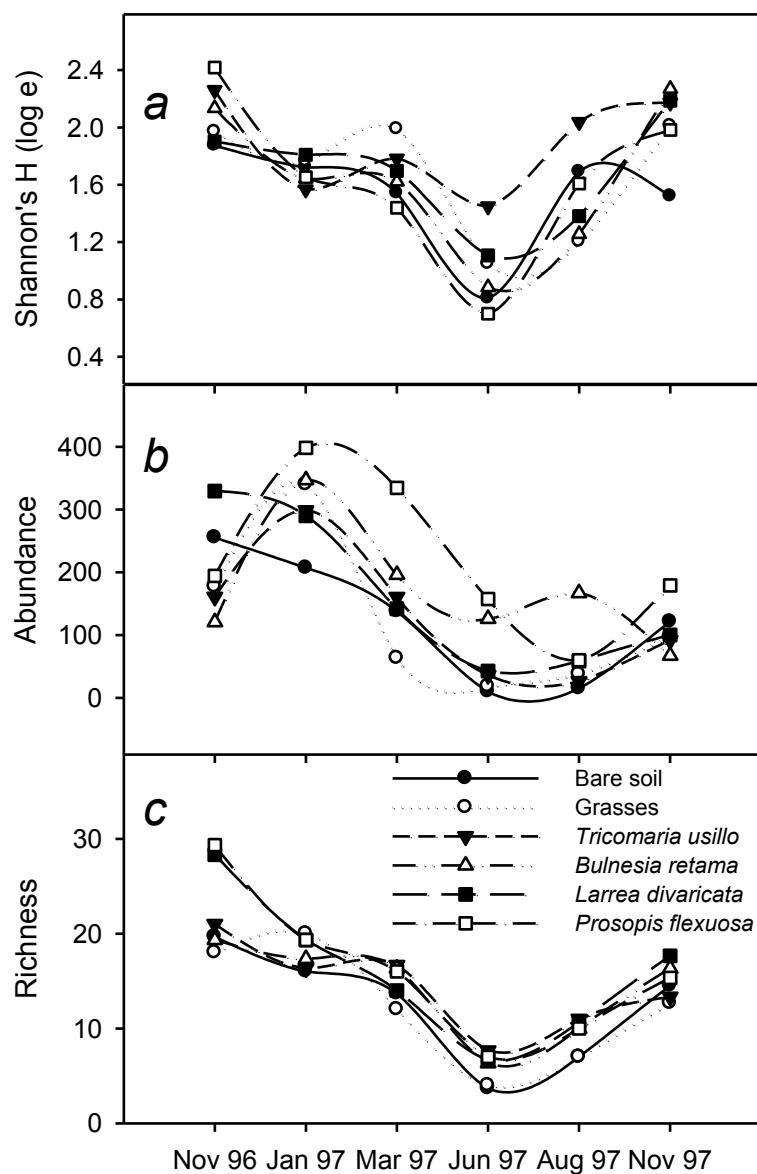


Fig. S2. Seasonal fluctuation in diversity (a), abundance (b) and richness (c) of ground-dwelling arthropods recorded by pit-fall trapping during one year at different microhabitats in Telteca Reserve, Monte desert, Argentina. All figures are average of three replicates of each microhabitat. Source: Guillermo O. Debandi and Pedro G. Blendinger, unpubl. data.

Table S1. Seed species consumed by the Ringed Warbling-Finch in three localities of the Monte desert during (a) summer and (b) winter

Values are observed frequencies (range 0–50) per stomach content

	Amanao		El Balde		Telteca	
	Mean	s.d.	Mean	s.d.	Mean	s.d.
(a) Seed species consumed in summer						
<i>Amaranthus</i> sp.	0.20	0.77	—	—	0.29	0.76
<i>Aristida</i> spp.	0.13	0.52	0.18	0.73	2.29	3.40
<i>Bouteloua aristidoides</i>	0.27	1.03	—	—	—	—
<i>Munroa mendocina</i>	—	—	0.41	1.70	—	—
<i>Paphophorum philippianum</i>	—	—	—	—	0.14	0.38
<i>Paphophorum caespitosum</i>	—	—	—	—	0.14	0.38
<i>Trichloris crinita</i>	—	—	0.41	1.70	2.71	7.18
(b) Seed species consumed in winter						
<i>Amaranthus</i> sp.	—	—	—	—	2.78	6.59
<i>Aristida</i> spp.	0.25	0.71	—	—	10.33	14.38
<i>Bouteloua aristidoides</i>	11.75	13.02	—	—	—	—
<i>Bouteloua barbata</i>	6.25	12.01	—	—	—	—
<i>Cottea pappophoroides</i>	—	—	—	—	2.22	6.30
<i>Chloris castilloniana</i>	—	—	—	—	0.56	0.88
<i>Chloris</i> sp.	—	—	0.08	0.29	—	—
<i>Eragrostis ciliaris</i>	2.50	7.07	—	—	—	—
<i>Paphophorum philippianum</i>	—	—	—	—	0.11	0.33
<i>Setaria</i> spp.	—	—	—	—	0.33	0.50
<i>Suaeda divaricata</i>	—	—	—	—	0.22	0.67
<i>Trichloris crinita</i>	—	—	19.67	18.08	13.89	20.73

References

- Ezcurra, E., Montaña, C., and Arizaga, S. (1991). Architecture, light interception, and distribution of *Larrea* species in the Monte desert, Argentina. *Ecology* **72**, 23–34. [doi:10.2307/1938899](https://doi.org/10.2307/1938899)
- Unidad de Información Hidrometeorológica (1988). 'Publicación 5.' (Instituto de Investigaciones Hidráulicas, Universidad Nacional de San Juan: San Juan, Argentina.)