Plausible causes of seed preferences and diet composition in seed-eating passerines

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Abstract

This dataset contains data from two-part laboratory experiments described in the paper: “Marone, Luis; Cueto, Víctor R.; Lopez de Casenave, Javier; Zarco, Agustín; Camín, Sergio R. (2021), Plausible causes of seed preferences and diet composition in seed-eating passerines. Journal of Avian Biology doi: 10.1111/jav.02875”.

The experiments investigate the effects of several ‘explanatory’ variables (seed size, seed handling time, seed-handling efficiency, and seed profitability on (a) seed- preferences and (b) field seed-diet composition of four abundant seed-eating birds of the central Monte desert, Argentina.

We measured the mass and energy content of the seeds from six herbaceous native plants in the Monte usually found in bird stomach contents (*Sporobolus cryptandrus*, *Pappophorum* spp., *Digitaria californica*, *Setaria leucopila*, *Chenopodium papulosum* and *Parthenium hysterophorus*), and then calculated seed-handling efficiency and profitability. The effects of all four variables on (a) seed preferences measured through controlled feeding experiments, and (b) seed-diet composition inferred from bird-gut contents were assessed.

Main results of the experiments are that (1) the four bird species preferred the larger seeds, and three of them also consumed more these seeds in the field; (2) the two intermediate sized birds preferred the most profitable seeds in the lab but one of them (an expanding specialist feeder with flexible feeding behaviour) avoided these seeds in nature; (3) different bird species had similar feeding efficiencies when were fed with small seeds and large seeds separately; (4) on average and in the long-time desert bird species could be consuming the most profitable seeds through the selection of the larger seeds of herbaceous plants.

Methods

The dataset was collected in the lab and in the field (Ñacuñán Reserve, central Monte desert, Argentina), and has been processed by a series of generalized linear mixed models with binomial distribution to produce a MS accepted for publication in Journal of Avian Biology.

Usage Notes

The readme file contains an explanation of each of the variables in the dataset together with the raw data for every variable. Information on their units and how the measurements were done can be found in the associated manuscript referenced above.

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