

ABSTRACTS FOR CONDOR 104(1) FEBRUARY 2002 C.E.

FEATURE ARTICLES

DOES SEED PACKAGING INFLUENCE FRUIT CONSUMPTION AND SEED PASSAGE IN AN AVIAN FRUGIVORE?

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Abstract Seed packaging is one fruit characteristic that may influence post-ingestional fruit processing in avian frugivores. We tested the response of a facultative frugivore, the Silvereye (*Zosterops lateralis*), to fruit containing different forms of seed packaging. Wild-caught, captive Silvereyes were presented with artificial fruit containing either one large seed or three small seeds of equivalent total volume, and their consumption rates were recorded over 90 min. In a second experiment, the seed transit times (ingestion to excretion) for similar large-seeded and small-seeded fruit consumed by Silvereyes were recorded. Silvereyes consumed significantly more large-seeded fruit than small-seeded fruit. The transit time of seeds was also significantly shorter for large-seeded (mean = 22 min) than for small-seeded fruit (mean = 29 min). Thus seed packaging had a significant influence on the rate at which fruit were processed. Silvereyes were able to consume more large-seeded than small-seeded fruit because the seeds in large-seeded fruit were defecated faster than those in small-seeded fruit. It is likely that Silvereyes can compensate for the costs of seed ingestion through having a rapid gut passage rate and hence an increased fruit consumption rate. The gut of Silvereyes showed morphological characters intermediate between insectivores and specialist frugivores. The dimensions of the intestine and gizzard were like those of insectivores and the gizzard was substantially larger than those of specialist frugivores. Facultative frugivores appear to have few morphological adaptations to frugivory and we argue that this facilitates plasticity in the diet and the processing of insects when fruit is not available.

Key words: frugivory, gut morphology, seed processing, seed transit time, Silvereyes, *Zosterops lateralis*.

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