

CNEMIDOPHORUS MURINUS RUTHVENI. (Bonaire Island Whiptail Lizard). **SEEDS IN DIET.** On Bonaire, Netherlands Antilles, 10–44% (depending on site) of the annual diet of *Cnemidophorus murinus* consists of fruit from a variety of plant species (Dearing and Schall 1992. Ecology 73:845–858). The fruit of the shrub, *Erithalis fruticosa* (Rubiaceae), is among the most commonly eaten. As *C. murinus* is exceptionally abundant on the island (Bennett and Gorman 1979. Oecologia 42:339–358), the whiptail lizards could play an important role in the dispersal of the seeds of *E. fruticosa*, provided the seeds can tolerate passage through the gut of the animals.

I compared the germination success of *E. fruticosa* seeds removed from mature fruits still on the shrubs to that of seeds extracted from feces found in the natural habitat of the lizards. In a single morning in January, I visited the Karpata site of Dearing and Schall (ibid). At this site, fully 60% of the diet of *C. murinus* consists of the fruits of *E. fruticosa* during the autumn and winter rainy season. I collected mature fruit from ten shrubs as well as sun-dried feces found lying on the ground surface and tops of rocks used as perches by the lizards. After extracting the seeds of *E. fruticosa* from both fruit and feces, the seeds were planted in a standard germination medium used in horticulture (1:1 vermiculite and perlite). The medium was kept moist and the flats were placed under full-spectrum Vitalites™ kept on 24 h per day in a room set at 28°C. I planted 150 seeds taken from feces in one 27 x 40 cm flat, and another 150 seeds from the fruits in another similar flat.

Seedlings emerged from the medium from 30 to 61 days after planting. No additional seedlings emerged during the next 30 days, after which the medium was discarded. Six seedlings emerged from seeds harvested directly from the fruits, and eight from those removed from feces (4 and 5% germination success). There was no significant difference in germination success for the two groups (G-test, $P > 0.05$).

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Although many taxa of animals have been identified as important seed dispersers, few data are available on potential seed dispersal by herbivorous lizards (Iverson 1985. *J. Herpetol.* 19:292–293). For example, little is known about the tolerance of seeds within the fruit for passage through the digestive tract of a lizard. Iverson (ibid.) found that seeds of *Coccoloba uvifera* (Polygonaceae) that passed through the gut of *Cyclura* had slightly higher germination success than control seeds removed from fruits; this suggests that being consumed by a lizard might actually facilitate germination of some seeds. The results presented here show that at least some of the seeds of *E. fruticosa* survive both passage through the gut of *C. murinus* as well as some unknown period of time lying on the surface of the ground and rocks on Bonaire island. Also, the results hint that passage through the lizards' alimentary tract does not facilitate germination because a similar percentage of seeds from the fruit and feces produced seedlings.

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