

ABSTRACT

Contributions to the conservation of the Hellshire Hills Herpetofauna: analysis of mongoose diet, and radio-telemetry of head-started Jamaican Iguanas.

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In an attempt to make contributions to the conservation of the Hellshire Hills herpetofauna, the diet of the mongoose was investigated, and a six-month monitoring of translocated iguanas using radio telemetry was done.

Dietary analysis of 217 Indian mongoose (*Herpestes auropunctatus*) stomachs collected between 3 May 1997 and 24 July 2000 revealed numerous invertebrates, the recently re-discovered *Celestus duquesneyi* (Wilson and Vogel 2000), *Celestus cruscus*, *Mabuya bistrata* (Wilson and Vogel 2000), at least 2 *Anolis* species, bird feathers, rodents, and a few seeds. Invertebrates and reptiles were the main food items.

Radio-telemetry of head-started Jamaican Iguanas (*Cyclura collei*) was conducted from 18 November 1999 to 9 June 2000. Six individuals were released and monitored using GPS (Global Positioning System) readings to obtain their activity ranges. Released iguanas appeared competent to adjust to the new habitat, and survival was 100% over the 6-month period.

A continued exotic predator removal programme is needed in the Hellshire Hills. If this is done, the translocation program being undertaken will succeed. This success is achieved when there is an increase in the population of iguanas from improved juvenile recruitment and increased adult numbers. Although no evidence of mongoose predation on iguanas was found, the possibility of them being a threat to the iguanas cannot be ignored. If iguana eggs were taken, no evidence would be seen, and this is the likely case. The mongoose poses a serious threat to the herpetofauna of the Hellshire Hills as is evident by the presence, and abundance of extremely rare endemics in its diet.

Keywords: Delano St. Aubyn Lewis, biodiversity, dietary analysis, Indian Mongoose, *Herpestes auropunctatus*, radio-telemetry, Jamaican Iguana, *Cyclura collei*, head-started, activity ranges, translocation, Hellshire Hills, herpetofauna.