



Egg-predation of *Hemidactylus frenatus*

Hemidactylus frenatus Duméril & Bibron, 1836 usually occur in pairs, is commonly found in human settlements and is thus known as a ‘house gecko’. It only rarely inhabits undisturbed forests in the wet zone though it is comparatively common in dry, intermediate and semi-arid forests in Sri Lanka (Deraniyagala, 1953). This nocturnal species spends daytime in crevices but feeding during daytime has been observed. Although it is not highly territorial, most individuals seem to occupy the same place for an extended period. Group behavior can also be observed, especially within human habitations in the dry zone (de Silva, 2006). This species can commonly be seen on lampposts where it waits for insect prey to be attracted to the light. In addition to the expected assortment of insect prey it also commonly feeds on rice, bread and other household food and hence has become a ‘pest’ in most houses. Habitual cannibalism is shown by some adults as they feed on juveniles (Wickramasinghe & Somaweera, 2008). Eggs as a part of a gecko’s diet, whether of their own species or those of another species, are recorded in captivity (Henkel & Schmidt, 1995). In this paper we describe the egg-feeding behavior of *H. frenatus* in the wild.

In the evening of 26 May 2011 at 17:10 h, we observed a single mature male individual of *H. frenatus* (estimated measurements: SVL, ~45mm, Tail, ~50mm) on an angled cement beam in the underside of the roof of a house about three meters above ground level at Baduragoda (Mirigama secretariat division, Gampaha District). Baduragoda is in the low country wet zone of Sri Lanka (07°28’–07°57’N, 80°37’–80°45’E). Twenty-eight people were gathered and talking loudly in the house. The egg of a gecko fell to the ground and broke and we noticed the *H. frenatus* gecko was now on a vertical surface of a cement beam under the roof and that it held another egg in its

mouth. After a few seconds it trounced the egg on the beam surface with an upward movement of its head whereupon the egg ruptured, and half of the shell with yolk also fell to the ground. The remaining parts of the yolk and shell were chewed several times and swallowed slowly (Fig. 1). We attempted to get closer to the animal but were unable to do so. We did, however, see several other broken eggshells in crevices, perhaps indicating previous instances of egg predation by the same individual although they could have been eggs that had hatched.



Figure 1: The gecko is swallowing the egg.

H. frenatus is a generalist predator and eats any insect or spider it can capture and swallow (Wilson, 2011). When in contact with other gecko species, *H. frenatus* tends to be aggressive (Bolger & Case, 1992). A study showed that *H. frenatus* could displace and attack two other gecko species, *H. garnotii* and *Lepidodactylus lugubris*. Male and female *H. frenatus* are known to eat juveniles of other gecko species as well as conspecifics (Bolger & Case, 1992). We have not found any published literature on instances of gecko egg predation by *Hemidactylus* species in the wild. Further observation is required to confirm the egg-predatory behavior of *H. frenatus*. On previous field excursions in different areas of Sri Lanka, we have observed *H. frenatus* preying on *Hemiphyllodactylus typus*, *Lepidodactylus lugubris*, *Gehyra mutilata*, *Hemidactylus parvimaclulatus*, *Cnemaspis* species, *Typhlops* species (also a first record in Sri Lanka) and cannibalism. Also they are known to eat curd, milk tea, boiled rice, cooked vegetables and

curries, flower parts, honey, coconut crush, fruit juices, peanut, green gram, yogurt and to predate on huntsman spiders, cockroaches, small centipedes, mole crickets, dragonflies, house flies, small black ants, mosquitoes, termites, butterflies and moths.

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Literature cited

Bolger, D. T. and T. J. Case, 1992. Intra- and interspecific interference behaviour among sexual and asexual geckos. *Animal Behaviour*, 44: 21–30.

Deraniyagala, P. E. P., 1953. *A Colored Atlas of Some Vertebrates from Ceylon. Tetrapod Reptilia II*. National Museums of Sri Lanka: 101.

de Silva, A., 2006. Current status of the Reptiles of Sri Lanka. Pp. 134–163, *In: Bambaradeniya, C. N. B. (Ed.). Fauna of Sri Lanka: Status of Taxonomy, Research and Conservation*. IUCN Sri Lanka.

Henkel, F. W. and W. Schmidt, 1995. *Geckoes: Biology, Husbandry and Reproduction*. Krieger Publishing Company, Malabar, Florida: 237.

Wickramasinghe, M. and R. Somaweera, 2008. Changes in the distribution ranges of the Sri Lankan *Hemidactylus* geckos. *Gekko*, 5: 44–60.

Wilson, S., 2011. *Asian House Geckos-A fact sheet, Queensland Museum learning*. www.qm.qld.gov.au/inquiry/factsheets/asian_house_geckos_20080709.pdf

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