

Folivory and seasonal changes in diet in *Rana hexadactyla* (Anura: Ranidae)

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(With 4 figures in the text)

The autecology of *Rana hexadactyla* (Lesson) was studied at a seasonal locality in south India. The herbivorous larva transforms into an insectivorous frog, and a second dietary switch from insectivory to folivory occurs in adults, with plants constituting 79.5% of the diet, by volume. A variety of invertebrates and small vertebrates is consumed, especially by the adult females before the reproductive season. Larger frogs take larger animal prey and more prey types. Monthly figures of prey diversity generally show high values during the wet months.

In *Rana hexadactyla*, the utilization of permanent waterbodies may help buffer the impact of the long dry seasons and, together with a supply of abundant food in the form of aquatic macrophytes, is thought to be linked to the capacity of the species to spawn three times a year.

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Introduction

Metamorphosed amphibians are in general insectivorous; only a few species grow large enough to take small vertebrate prey (Duellman & Trueb, 1986). For such a species-rich group, it was long thought to be remarkable that all known amphibians are carnivorous as adults (Reeder, 1964). In the last 25 years, three cases of herbivory in adult amphibians have been discovered, including *Siren lacertina*, which feeds on aquatic macrophytes (Ultsch, 1973), *Bufo marinus*, which takes vegetable scraps (Alexander, 1964) and *Hyla truncata*, which is frugivorous (da Silva *et al.*, 1989).

The Indian green frog, *Rana hexadactyla* Lesson, 1834 is a large anuran. Females reach 132.2 mm snout-vent length (hereafter SVL) and males reach 103.0 mm SVL. This species is distributed along both coasts of the Indian peninsula, ranging east and south to Bangladesh and Sri Lanka. The diet of adults has been documented from several localities on the west coast of India (Daniel, 1975; Andrews, 1979; Sarkar, 1984) and consists of a variety of invertebrates. A

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