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Reproductive and trophic ecology of *Ansonia minuta* (Amphibia: Bufonidae)

YOLANDE DIREP[1], INDRANEIL DAS[1,2] AND ALEXANDER HAAS[3]

Reproductive and dietary ecology of *Ansonia minuta* was studied at Kubah National Park, Sarawak. A total of 22 individuals (12 males and 10 females) were examined to determine sexual size dimorphism, and dietary and reproductive characteristics. In this species, body size was not correlated with diet (as expressed in terms of stomach content weight or quantity of food ingested) or reproductive output (clutch size, egg size or clutch weight) in females. Males, however, showed a relationship between body size and stomach weight. Sexual size dimorphism was found to be significant in the species, with females being the larger of the sexes. *Ansonia minuta* is an ant-specialist, rarely consuming non-ant food resources.

Keywords. *Ansonia minuta*, ecology, Kubah National Park, Sarawak, Borneo.

INTRODUCTION

The life history of an organism is influenced by a set of coevolved traits that shape growth, survival and reproductive potential, from birth, through reproduction, to death (Campbell and Reece 2002, Lauck 2005). Life histories also involve a set of strategies in energy allocation decision and how this maximises fitness (Roff 1992, Stearns, 1992). From some easily measurable traits, Zug et al. (2001) suggested that life history can be viewed quantitatively (e.g. age-specific survivorship, offspring size) and qualitatively (e.g. seasonal versus aseasonal, semelparity versus iteroparity).

Amphibian life history strategies typically mirror local environmental conditions or ecological processes (Lauck 2005). However, as organisms have a finite amount of energy, a trade-off between life history traits may occur to maximise the organism's overall fitness. For instance, there should be a trade-off with respect to the time and energy allotted to reproduction, versus the time and energy directed toward growth, survival, and future reproduction (Castellano et al. 2004). The trade-off may vary within species, either with high reproductive effort, early sexual maturity and short lifespan or low reproductive effort with late sexual maturity and long lifespan (Zug et al. 2001).

This study looks at aspects of reproduction and diet of *Ansonia minuta*, a stream-breeding toad, and their potential consequences on reproduction, based on observations on reproductive output, such as clutch weight, number of eggs, relative to diet and morphological characteristics (snout-vent-length and weight).

[1] *Institute of Biodiversity and Environmental Conservation, Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia.*

[3] *Biozentrum Grindel und Zoologisches Museum, Universität Hamburg, Martin-Luther-King-Platz 3, 20146 Hamburg, Germany*

[2] *Corresponding author. E-mail: idas@ibec.unimas.my.*

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