

## 7. Notes on two forms of *Microhyla rubra* at Luckunda Estate, Coorg

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A survey of the amphibian community around a lake at Lakunda Estate, a coffee plantation in Coorg, Southern Karnataka in August 1998 revealed the presence of two forms of *Microhyla rubra*.

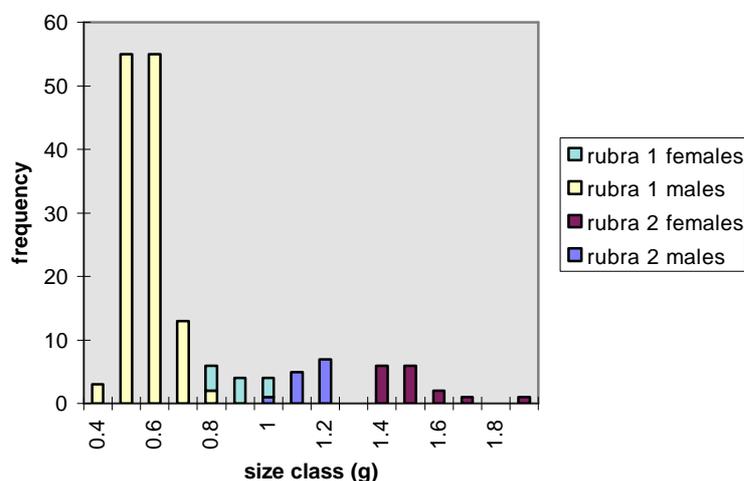
### Methods

Frogs were caught by placing a high sided 1m<sup>2</sup> quadrat at random around the edge of the lake. Microhylids within the quadrat were caught and put into individual plastic bags. Pairs found in amplexus were kept together in the same bag. Within three hours the frogs were weighed by one worker and then examined by two other workers independently and assigned to one of two forms; "A" or "B" based on their appearance. Calls from both forms of frog were recorded in the same area and analysed using Batsound (see Chapter 11).

### Results

Results are summarised in Figure 1. In total 166 microhylids were caught, including 9 pairs in amplexus. Both workers assigned 137 of the frogs to Type "A" and the remaining 29 to Type "B". Type A frogs had average mass of 1.32g (SD 0.212, range 1.0-1.85g), form B had average mass of 0.56g (SD 0.11g, range 0.35-1.0g). Of the frogs found in amplexus, five pairs were of Type B, three of Type A and one pair was mixed (female of Type A). Three Type A males had a mean mass of 1.06g (SD 0.076, range 1.0-1.15g), four Type A females had mean mass of 1.61g (SD 0.189, range 1.4 -1.85g). Four Type B males had mean mass of 0.46g (SD 0.063, range 0.4 - 0.55g) and three Type B females had mean mass of 0.85g (SD 0.1, range 0.75-0.95g).

**Weights of *Microhyla rubra* type frogs**



## **Discussion**

The two forms of this microhylid can be distinguished by their differing size, pattern and call frequencies. The larger form was not *M. ornata*, which was rare at the study site. The presence of a mixed pair in amplexus might be taken as evidence that the two forms do not represent different species, but the fact that both partners in the eight other pairs belonged to the same type suggests that the presence of a mixed pair might be due to an erroneous mate choice by the male frog. Additional evidence that the pair were unnaturally bonded is the large disparity between the size of the partners, relative weight of the male in the mixed pair was 0.29 compared with means of 0.66 for Type A pairs (SD 0.049, range 0.62- 0.71) and 0.57 for Type B pairs (SD 0.045, range 0.53 - 0.63).

**Note added in press:** A new species of *Microhyla* (*M. sholigari*) was recently described from Karnataka. At the time of printing the paper was not available.

Dutta, S.K. and P. Roy. 2000. *Microhyla sholigari*, a new species of microhylid frog from Karnataka, India. Hamadryad. 25:38-44.