



## A basal phylogenetic placement for the salticid spider *Eupoa*, with descriptions of two new species (Araneae: Salticidae)

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### Abstract

The southeast Asian genus *Eupoa* includes small salticid spiders with unusual palpi. Two new species of the genus are described. Two morphological characters (presence of a median apophysis in the male palp and of a tarsal claw in the female palp) suggest it is excluded from the main clade of salticids (the Salticoida). Sequences of nuclear and mitochondrial gene regions (28S, 18S, 16S–ND1, CO1), analyzed by parsimony and Bayesian methods, agree that *Eupoa* is a basal (non-salticoid) salticid, but fail to find a clear placement. *Eupoa* may represent a deep-branching lineage long separate from the lyssomanines, spartaeines, and other basal groups.

**Key words:** Araneae, Salticidae, *Eupoa*, lapsiines, Spartaeinae, Lyssomaninae, Hispaninae, jumping spider, basal groups, phylogeny

### Introduction

Recent work on phylogeny of salticid spiders has shown that most species of this large group (> 5000 species) fall within a single large clade, the Salticoida (Wanless 1980, 1982, 1984; Rodrigo & Jackson 1992; Maddison 1988, 1996; Wijesinghe 1992, 1997; Maddison & Hedin 2003; Maddison & Needham 2006). The "basal" groups outside of the Salticoida are of particular value for interpreting the early evolution of salticids (Jackson & Pollard 1996; Blest *et al.* 1990; Maddison & Needham 2006). However, relatively few species (ca. 260 by Platnick 2006) of these basal groups survive. Long known to be basal are the lyssomanines, spartaeines, and the *Cocalodes* group (Wanless 1980, 1982, 1984; Rodrigo & Jackson 1992; Wijesinghe 1992, 1997), while recently demonstrated as basal are the lapsiines and hisponines (Maddison & Needham 2006). Here we present data from recently collected material showing that a little-known salticid, *Eupoa* Zabka, is also among the basal groups. Because of its atypical size and ecology, *Eupoa* will provide an interesting challenge for any interpretation of ancestral salticid behaviour.

### Material and methods

**Morphology.** Specimens were examined under both dissecting microscopes and a compound microscope with reflected light. Drawings were made with a drawing tube on a Nikon ME600L compound microscope.