



Overview of Sididae (Crustacea: Cladocera: Ctenopoda) of Northeast and East Thailand, with description of a new species of the genus *Diaphanosoma*

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Abstract

The investigation of an extensive collection of zooplankton samples from Northeast and East Thailand has revealed 10 species of the family Sididae, members of which often were mostly frequently distributed and abundant among Cladocera. Of seven species of the genus *Diaphanosoma*, one is new to science (*D. elongatum* sp. nov.) and two others, *D. senegal* and *D. macrophthalma*, new to Thailand. The genus *Pseudosida* is represented by *P. szalayi* instead of *P. bidentata* incorrectly recorded previously. Eleven species of Sididae are now known from Northeast Thailand and 12 from the whole country. The highest frequency occurrence and abundance were observed in *D. excisum*, *D. dubium*, *Latonopsis australis*, and *P. szalayi* while other species were more infrequent (*D. sarsi*) or rare. Sididae species were often observed co-occurring in different combinations, among them up to three-four species of *Diaphanosoma*. The rare species *D. senegal* frequently co-occurred with large Branchiopoda. Most Sididae of Northeast Thailand are of tropical origin while others (*D. dubium*, *D. macrophthalma*, *Sida crystallina*) have penetrated here from more northern latitudes.

Key words: Cladocera, Sididae, fauna, Northeast and East Thailand, *Diaphanosoma*, new species

Introduction

Stingelin (1905) probably described the first representative of the cladoceran family Sididae, *Diaphanosoma sarsi* var. *volzi* Stingelin (now *D. volzi* Stingelin), from Thailand. Then followed a hiatus until the 1970s, when two other species were recorded — *D. excisum* Sars and *D. sarsi* Richard (Mizuno & Mori 1970; Bricker *et al.* 1978; Fernando, 1980a). Then, Boonsom (1984) published the first species list of local Sididae which included seven taxa of species rank (Table 1). Later, this list for Northeast Thailand was revised by Sanoamuang (1998) (Table 1). At the same time, a few samples were used for the taxonomic revisions of selected *Diaphanosoma* species: *D. volzi*, *D. tropicum* Korovchinsky, and *D. dubium* Manuilova (Korovchinsky 1995, 1998, 2000). Recently, these data were supplemented by new studies in Northeast and South Thailand from which two additional species were recorded — *Sida crystallina* O. F. Müller and *Sarsilatona serricauda* Sars (Saeng-aroon & Sanoamuang 2002; Sa-Ardrit 2002; Maiphae *et al.* 2005). As a result, 12 species of the family is now known in Thailand, 11 of them, excluding *S. serricauda*, from the northeast of the country (Table 1). At the same time, data on these species remain limited and partly unpublished, not one of them has been investigated in detail, which prevents evaluation of their identity. Only *D. dubium* has been examined in more detail (see Korovchinsky 2000).

The main aim of present work is to revise the species composition of Sididae of Northeast and East Thailand studying more abundant material from the regions, and to provide a preliminary evaluation of their role in local cladoceran communities.