



## Article

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### ***Alona kotovi* sp. nov., a new species of Aloninae (Cladocera: Anomopoda: Chydoridae) from South Vietnam**

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#### **Abstract**

A new species of anomopod related to *Alona quadrangularis* (Cladocera: Anomopoda: Chydoridae) is described from streams in South Vietnam. *Alona kotovi* sp. nov. differs from the other species of *Alona* s. str. (the *quadrangularis*-group) by the morphology of its postabdomen, labrum and thoracic limbs. The presence of a short spine at the end of the male postabdominal claw is unique to the new species. *A. kotovi* sp. nov. is well-distinguished from two other Old World species, *A. quadrangularis* and *A. kolwezii*, yet shares numerous similarities with South American *A. yara*. This is one more case of connection between South American and Australasian faunas of Chydoridae.

**Key words:** cladocera, *Alona kotovi* sp. nov., morphology, South Vietnam

#### **Introduction.**

During the last decade, the Aloninae of Indochina have been intensively investigated (Kotov & Sanoamuang 2004; Kotov 2009; Maiphae et al. 2008; Sinev 2011; Sinev et al. 2007; Sinev & Kotov 2012; Sinev & Sanoamuang 2007, 2011). Detailed morphological studies clarified the status of numerous doubtful taxa and led to description of several new species. But the taxonomic status of many Aloninae still remains unclear.

One questionable taxon is *Alona quadrangularis* (O.F. Müller, 1776), reported from Thailand (see Maiphae et al. 2008) and Malaysia (Idris 1983). *A. quadrangularis* s. str. is Palearctic species. Recent studies of *quadrangularis*-complex (Van Damme & Dumont 2008; Sinev & Coronel 2006; Sinev & Elmoor-Loureiro 2010) revealed that in South America and Central Africa *A. quadrangularis* is substituted by sibling-species. These species are distinguished mostly by details of limb morphology and armament of postabdomen, as well as by size and body shape (see Sinev & Elmoor-Loureiro 2010). Status of populations, earlier identified as *A. quadrangularis* from North America, Australia and Tropical Asia, including Indochina, remains questionable (Sinev & Elmoor-Loureiro 2010). Description of Malaysian population provided by Idris (1983) deals only with outer morphology of specimens, and morphology of Thailand populations was never investigated.

The aim of present work is to study morphology of South Vietnam populations of *Alona* cf. *quadrangularis* and to clarify their taxonomic status.

#### **Material and methods**

Samples were collected with hand plankton net, and preserved in 75% ethanol or 3% formaldehyde. Animals were selected from the sample under a binocular stereoscopic microscope, placed on slides (in a drop of a glycerol-ethanol mixture), dissected and studied under an optical microscope. Measurements were conducted using an eyepiece-micrometer. Drawings were made by means of camera lucida.

**Abbreviations.** In the illustrations and text: I–V = thoracic limbs I–V; as = accessory seta of limb I; e1–3 = endites 1–3 of limb I; end = endopodite; ep = epipodite; ex = exopodite; gfp = gnathobase filter plates of limbs