

GULNARA RAKHMATULLAeva and ISKANDAR MIRABDULLAYEV

Institute of Zoology, Tashkent, 700095 Uzbekistan

Record of the Tropical *Simocephalus mesorostris* ORLOVA-BIENKOWSKAJA, 1995 (Crustacea, Cladocera) in Central Asia and First Description of Its Male

key words: zoogeography, Cladocera, *Simocephalus*, new records, male

Abstract

Simocephalus mesorostris ORLOVA-BIENKOWSKAJA, 1995, previously recorded only in tropical regions was found in waterbodies of Uzbekistan. A short description of the female, the first description of the male and data on variability and distribution in Uzbekistan are given.

1. Introduction

There are 4 species of the genus *Simocephalus* SCHODLER, 1858 previously recorded in Central Asia: *S. vetulus* (O. F. MÜLLER, 1775), *S. mixtus* SARS, 1903, *S. serrulatus* (KOCH, 1841) and *S. exspinosus* (DE QUEER, 1778) (IBRASHEVA and SMIRNOVA, 1983; MUKHAMEDIEV, 1986). In this note we describe the morphology and variability of *Simocephalus mesorostris* ORLOVA-BIENKOWSKAJA, 1995, a poorly known tropical species new to this region. We also describe the male, previously unknown for this species.

2. Materials and Methods

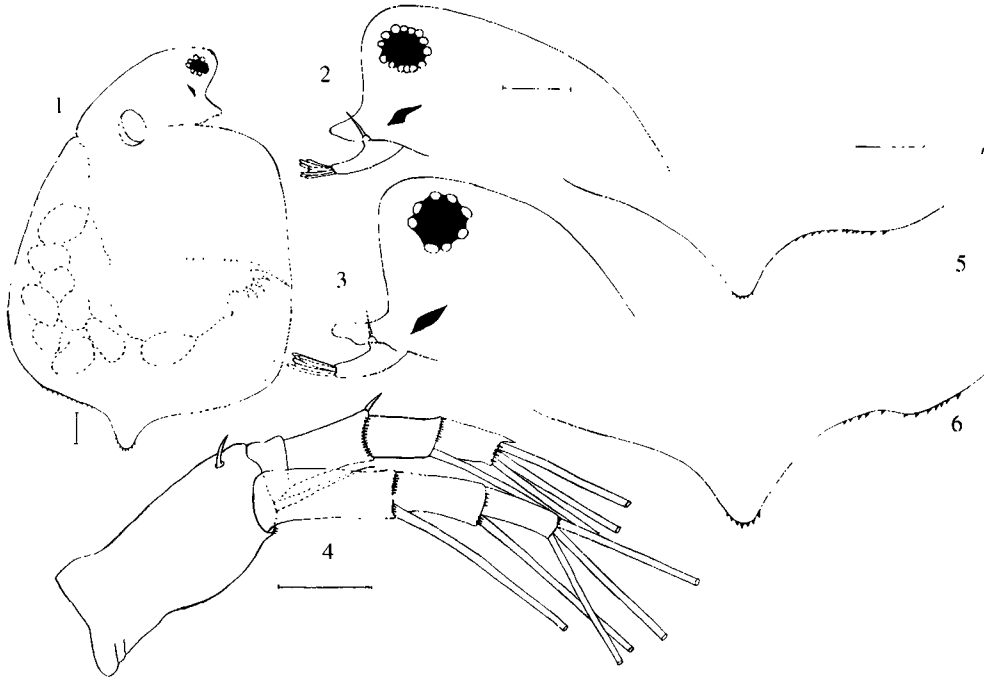
Simocephalus mesorostris was found in the following plankton samples:

- a fishpond of the Yangi-Yul Fishery Farm, Tashkent Region; July 1988; 12 females;
- a ditch in Yangi-Arik District, Khorezm Region; 28. 04. 1992; 1 female.
- a ricefield near Tashkent; August-September 1994; 20 females; September 1997; 50 females and 4 males.

All specimens were fixed in 4% formaldehyde and deposited at the Institute of Zoology (Tashkent) and at the Institute of Problems of Ecology and Evolution of Animals (Moscow).

3. Results

Female. Body length of parthenogenetic females 1270–2220 μm , body length of gamogenetic females 1220–1370 μm . Height 58–71% of length. Rostrum shorter than in *S. latirostris* STINGELIN, 1906, but longer than in *S. exspinosus* (DE QUEER, 1778). Rostrum length 3.7–5.1% of body length. Frons rounded, without denticles (Figs. 1–3). Length of antennules approximately equal to that of rostrum. Aesthetes significantly shorter than antennules. Insertion of antennules at base of rostrum. Valves produced in rounded prominence posteriorly. The prominence and dorsal edge of the brood pouche bear denticles (Figs. 5–6).



Figures 1–6. *Simocephalus mesorostris* ORLOVA-BIENKOWSKAJA, female. 1. habitus; 2. head; 3. head (another specimen); 4. antenna; 5. posterior part of shell; 6. same, other specimen. Scales: 0.1 mm.

Valves with dorsal keel. Inner rim of ventral edge of valves with different kinds of setae. First 7–14 setae of anterior part of valves are spiniform setae. Posteriorly from them 45–51 long feathered setae are situated, then 3–4 strong spiniform setae and 35–52 groups of very short setae (Figs. 7–9).

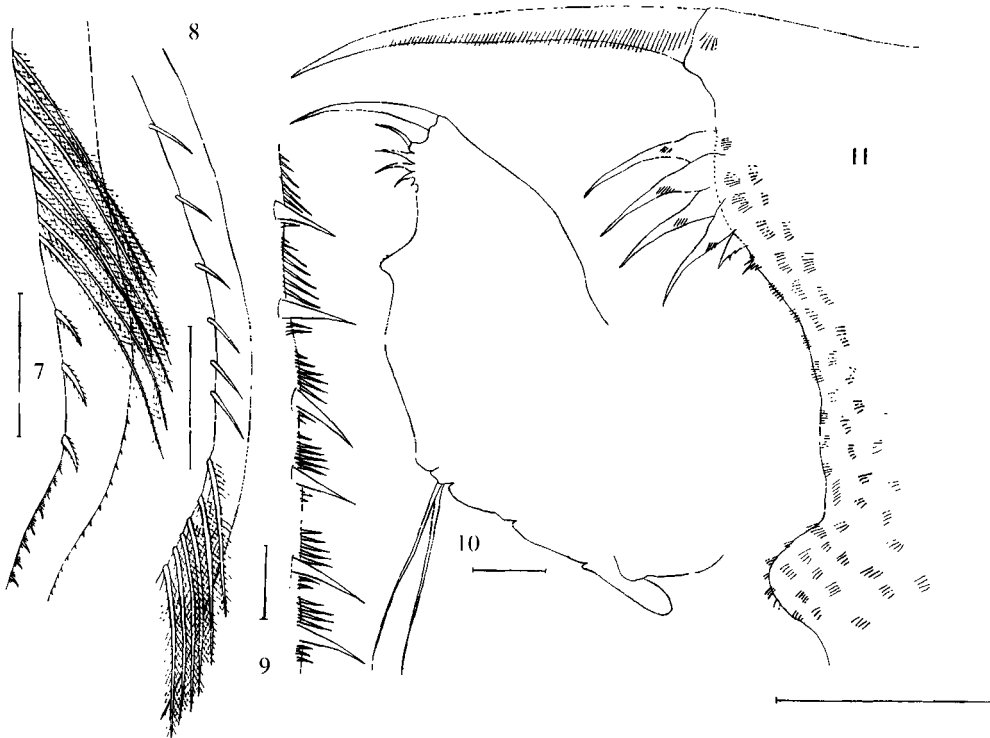
Postabdomen with 4 long and 1–2 short anal teeth (Fig. 10). Postabdominal claw lacking a basal pecten of elongated setules (Fig. 11). Anal corner forming a sharp angle.

Ephippium reticulated.

Male. Body length 670–720 μm . Valves produced posteriorly into a rounded prominence (Fig. 12). Sensor setae are situated in the middle part of antennula. Aesthetes of antennules of various length, some of them are as long as antennule (Fig. 13). Dorsal edge of postabdomen slightly concave (convex in female). Postabdomen with 3–4 anal teeth (Fig. 14). Abdominal outgrowths absent. Spermiduct opening at base of anal corner (Fig. 15, arrow).

4. Discussion

Simocephalus mesorostris is a poorly studied species previously reported exclusively from tropical regions: northern Australia, tropical Africa, India, Sri Lanka, Vietnam, Indonesia and the Philippines (DUMONT *et al.*, 1981; IDRIS and FERNANDO, 1981; ORLOVA-BIENKOW-



Figures 7–11. *Simocephalus mesorostris* ORLOVA-BIENKOWSKAJA, female. 7. central part of ventral edge of valve; 8. anterior part of ventral edge of valve; 9. posterior part of ventral edge of valve; 10. postabdomen; 11. distal part of postabdomen. Scales: 0.1 m (7, 8, 10, 11); 0.01 mm (9).

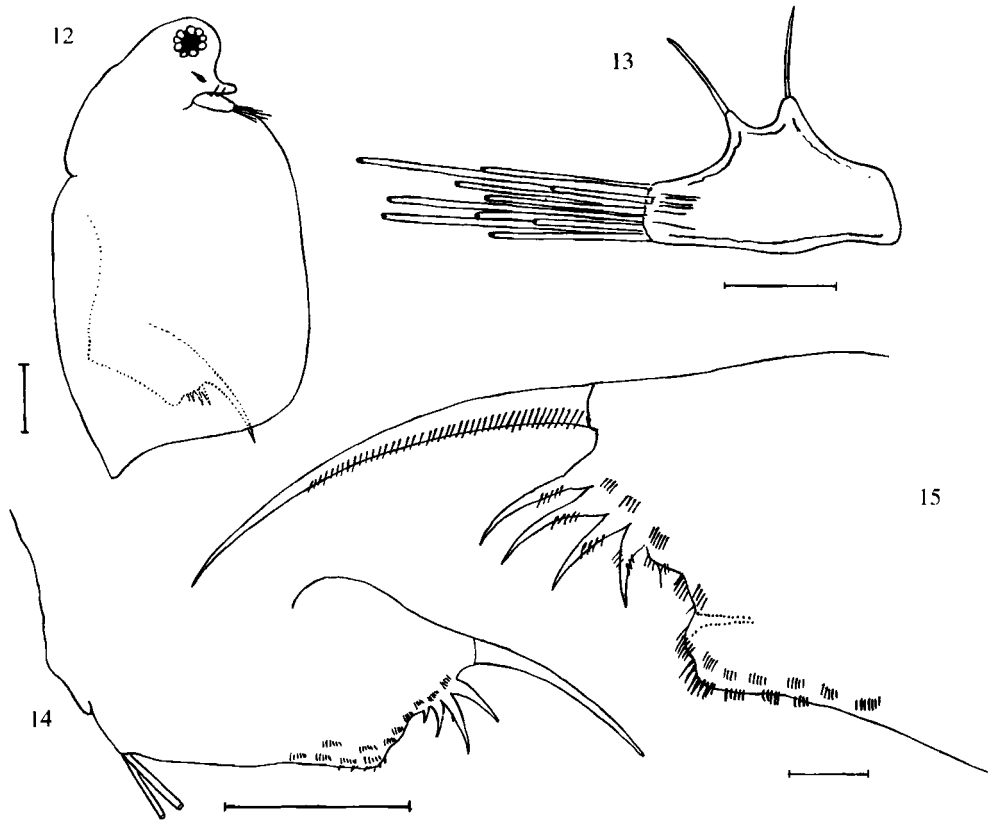
SKAJA, 1995; BISWAS, 1971). The records of this species in waterbodies of Central Asia, which are the northernmost ones, are of significant zoogeographic interest. The records of *S. mesorostris* in Uzbekistan are 1900 km farther north than the previous northernmost record in Rajasthan, India (BISWAS, 1971).

In studying males of *S. mesorostris* for the first time, we found additional features useful in distinguishing it from *S. latirostris*:

- fewer anal teeth of postabdomen in *Simocephalus mesorostris* (3–4), than in *S. latirostris* (5–7) (ORLOVA-BIENKOWSKAJA, 1995);
- sensor setae are situated on the middle part of the antennules in *S. mesorostris* whereas in the proximal part in *S. latirostris* (ORLOVA-BIENKOWSKAJA, 1995);
- aesthetes of antennula are of various lengths and longer than in *S. latirostris*.

5. Acknowledgement

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Figures 12–15. *Simocephalus mesorostris* ORLOVA-BIENKOWSKAJA, male. 12. habitus; 13. antennule; 14. postabdomen; 15. distal part of postabdomen. Scales: 0.1 mm (12, 14); 0.02 mm (13, 15).

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