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A NEW CLADOCERAN, *SIMOCEPHALUS VAMANI SP. NOV.*, FROM JABALPUR, M. P., INDIA

By

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ABSTRACT

A new species of genus *Simocephalus* Schodler, 1858 (Cladocera, Crustacea) is described from Jabalpur, Madhya Pradesh, India and compared with related species. *Simocephalus vamani* sp. nov. is described here only from females.

INTRODUCTION

Freshwater cladocera of Madhya Pradesh have been dealt with in detail by the author (Rane, 1983 a, b, c ; 1984 a, b, c ; 1985 a, b). Other works on freshwater cladoceran of India are all restricted to Northern India and Gujrat (Brehm, 1936, 1950, 1953 ; Biswas 1964, 1965, 1966, 1971, 1980 ; Gurney 1906, 1907 and Petkovski 1966). Earliar, the author described two other new species namely *Simocephalus vidyae* and *S. surekhae* from Jabalpur, India (Rane, 1983, 1985b). The present communication deals with yet another species of this genus. This study forms a part of research project on Taxonomy and Ecology of cladoceran fauna of Madhya Pradesh, approved by Director, Zoological Survey of India, Calcutta.

SYSTEMATIC ACCOUNT

Class	—	CRUSTACEA
Super Order	—	DIPLOSTRACA
Order	—	CLADOCERA
Sub Order	—	EUCLADOCERA
Super Family	—	CHYDOROIDAE
Family	—	DAPHNIIDAE
Genus	—	*Simocephalus* Schodler, 1858.

Simocephalus vamani sp. nov.*

(Figs. A—G)

(a) *Material* :

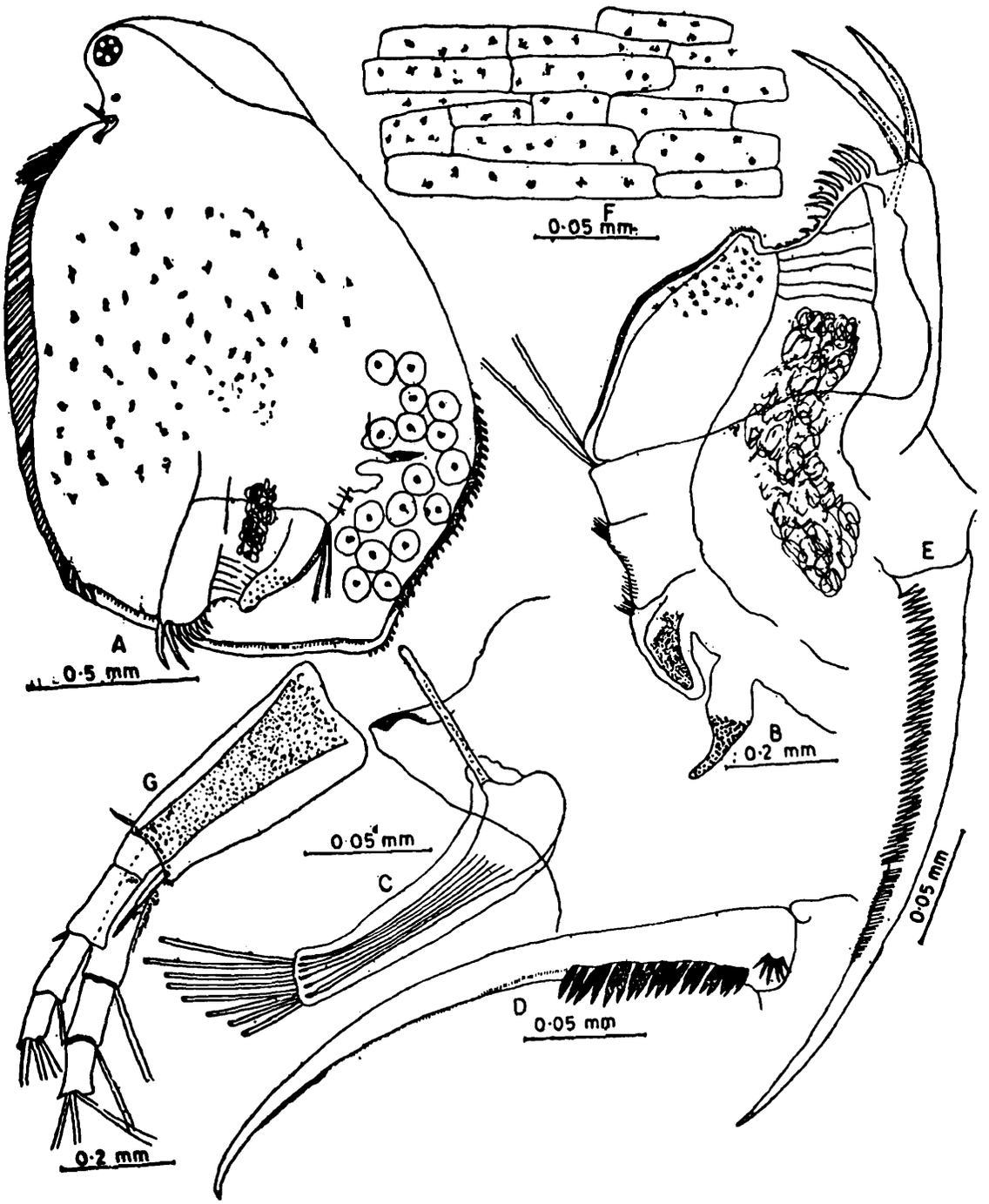
One glass bottle with several examples, preserved in formalin from Deotal tank, Nagpur Road, Jabalpur district, Madhya Pradesh, India, ***P. D. Rane*** Coll., 1980 and

* *Etymology* : Named after Sri Vaman Gajre.

present in the collection of Zoological Survey of India, Central Regional Station, Jabalpur (Field No. Cr 729).

(b) *Description* :

1. MALE : Unknown.
2. FEMALE : Carapace, seen laterally, sub-rhomboid in out line ; being only slightly expanded behind : dorsal margin almost straight in greater parts of its extent ; very small protuberance behind in the middle ; posterior dorsal margin evenly curved and situated just above the said protuberance (Fig. A). Posterior part of



Figs. A—G. *Simocephalus vamani* sp. nov.
A. Lateral view a female ; B. Postabdomen ; C. Anterior portion of head ; D. Outer view of claw ; E. Inner view of claw ; F. Marking on the valve ; G. Lateral view of Antenna.

the dorsal margin denticulate, the denticles being continued on terminal protuberance but not the hind edge of the valve. Posterior part of the ventral margin of valve also with very fine denticles at inner side. Anterior half of ventral margin with several feathered setae, 4 to 5 of them in the middle of ventral margin thickened and became tuft. Valve strongly punctate, marked with oblique striae, anastomosing irregularly and with cross-connection (Fig. F). Head comparatively small, though as usual having the fornix greatly expanded. Vertex rounded over. Rostrum projection small, pointed. Pair of antennules present below the rostrum with large lateral sensory papilla arise from knob like expansion ; 9 to 10 terminal sensary setae also present (Fig. C.). Antenna with very large basal segment. Outer ramus with four and inner ramus with 3 segments and several fine spinules present at the junction of these segments as in Fig. G. Setae formula $-\frac{0-0-1-3}{1-1-3}$. Eye comparatively large. Ocellus small, squarish or sometimes rounded in form. Tailpiece (Postabdomen) less broad, with supra-anal angle produced. Several grouped spines present near the supra-anal angle along with dorsal margin of postabdomen (Fig. B). Anal denticles about 7 to 9 on each side. Claw pectinate with teeth on both outer and inner margin. Outer margin of claw with two pectens. Distal pecten with large 17 to 18, widely spaced teeth ; proximal pecten, with 6 to 7 teeth, about 3/4 as long as longest teeth of distal comb, arranged in circle without separated at their bases. Fine denticles also present which extends from distal pecten to the terminal end of claw. Inner margin of claw with one pecten of 42 to 45 teeth, contiguous at their bases with teeth length decreasing distally. Teeth on the inner comb usually 1/2 to 2/3 as long as the longest teeth of distal comb at outer margin (Figs. D & E). Two abdominal process present situated not much far from each other. About 16 to 17 eggs present in the brood pouch. Length of female 2.17 mm.

(c) *Type specimens* : Holotype-female, from Deotal tank, in front of Hanuman mandir, Nagpur Road, Jabalpur, Madhya Pradesh, India, 7.vii.1980. coll. *P. D. Rane*. Deposited in the National Zoological Collection, Zoological Survey of India, Calcutta, (Reg. No. , in formalin, in a vial).

Paratypes : Station data as for holotype. Deposited as follows (i) 13 examples (♀ ♀), in the National Collection of Zoological Survey of India, Calcutta, (Reg. No. in formalin, in a vial) ; (ii) 20 examples (♀ ♀) in the collection of Zoological Survey of India, Central Regional Station, Jabalpur (Reg. No. A. 1454) in formaline, in a vial).

Type locality and geographical distribution : India : Deotal, Jabalpur, Madhya Pradesh.

(d) *Affinities* : The literature reveals that three pectinate species of *Simocephalus* known up to date, namely *S. exspinosus* (Koch), *S. vidyae* Rane, 1983 and *S. congener* Schodler having only one pecten, with number of teeth 8 to 12 ; 13 to 15 and 17 to 30 respectively. *S. vamani* sp. nov. can be separated from all-above species in having two pectens—proximal pecten with 6 to 7 teeth and distal with 17 to 18 teeth. *S. exspinosus* and *S. vidyae* also differs from new species by their large size (about 3 mm.) and very large rostrum respectively. *S. australiensis* (Dana) in general

appearance look like *S. vamani* sp. nov. but can be easily separated by its upturned rostrum. The other recently described *S. surekhae* Rane has teeth on both outer and inner side of claw. This species can be isolated from new species by absence of rostrum ; proximal set with 28 to 30 teeth, distal set with 45 to 50 teeth on outer margin of claw and antennules with 3 to 4 spines on the lateral margin. Teeth at inner margin of claw in *S. surekhae* which extends from base to the terminal part of the claw but in *S, vamani* they are only present up to middle of claw. Also the teeth size in both species differs considerably.

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