

30. REDESCRIPTION OF *SCHIZOMUS BUXTONI* GRAVELY FROM SRI LANKA ON THE BASIS OF SYNTYPES DEPOSITED IN THE ZOOLOGICAL SURVEY OF INDIA, CALCUTTA BY F.H. GRAVELY 1915

(With sixteen text-figures)

Schizomids are minute arachnids difficult to see with the naked eye. They are nocturnal and secretive in habit, and a difficult group to collect and study. There are about 5-6 species described from India (Bastawade 1985, 1992), 8 from Sri Lanka and 3 from Myanmar in the Oriental region. In 1872, Pickard-Cambridge described *Schizomus crassicaudatus*, the first species known from Sri Lanka. Subsequently, Pocock (1900) described *S. suboculatus*, Gravelly (1911a, 1911b, 1912, 1915) described 5 species *S. buxtoni*, *S. greeni*, *S. peradensis*, *S. vittatus* and *S. perplexus*, and Fernando (1957) described *S. formicoides*.

The species described by Gravelly (1911-1915) were from his own collections of several male and female specimens from various localities in Sri Lanka. He designated these collections as SYNTYPES and deposited them at the Zoological Survey of India, Calcutta (=Kolkata).

I had the opportunity to study a few specimens of *S. buxtoni* Gravelly and to prepare redescrptions and illustrations, which would facilitate future studies on this small, but most interesting invertebrate.

Schizomus buxtoni Gravelly (Figs 1-16)

1915. *Schizomus (Trithyreus) buxtoni*, Gravelly, *Rec. Indian Mus.* 11: 383-6.

General: Body colour yellowish-brown, darker on pedipalps and cheliceral fingers, but pale on distal digits of legs; sometimes with a greenish tinge on larger specimens (Gravelly 1915). Dorsal body surface smooth on most of the anterior portions of propeltidium, but rough with microscopic suturous reticulation on

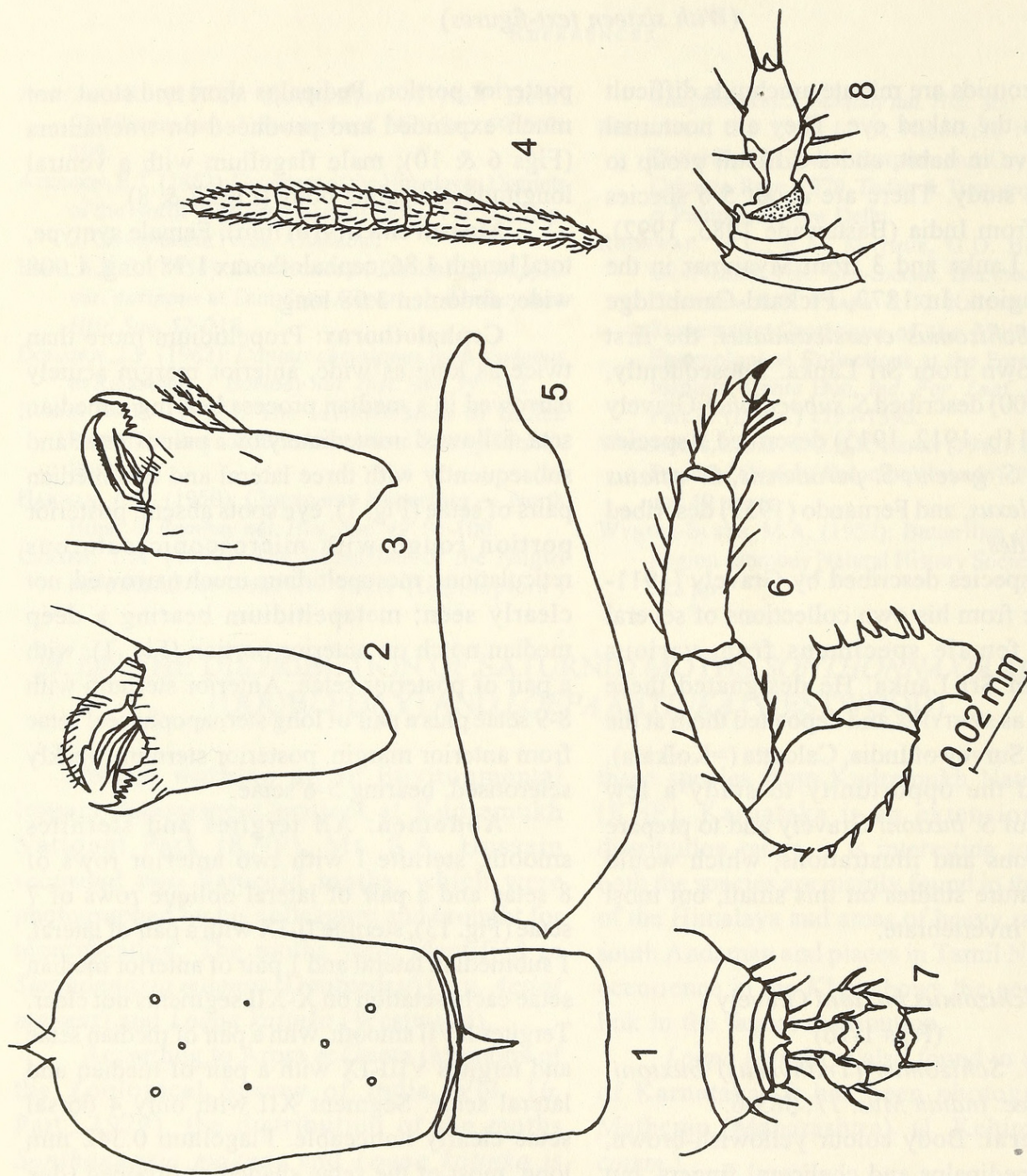
posterior portion. Pedipalps short and stout, not much expanded and produced on trochanters (Figs 6 & 10); male flagellum with a ventral longitudinal hyaline body (Figs 7 & 8).

Measurements (in mm): Female syntype, total length 4.86, cephalothorax 1.78 long, 1.008 wide; abdomen 3.08 long.

Cephalothorax: Propeltidium more than twice as long as wide, anterior margin acutely narrowed in a median process bearing a median seta, followed immediately by a pair of setae and subsequently with three lateral and two median pairs of setae (Fig. 1), eye spots absent, posterior portion rough with microscopic suturous reticulations; mesopeltidium much narrowed, not clearly seen; metapeltidium bearing a deep median notch on anterior portion (Fig. 1), with a pair of posterior setae. Anterior sternum with 8-9 setae plus a pair of long sternapophyseal setae from anterior margin, posterior sternum weakly sclerotised, bearing 5-6 setae.

Abdomen: All tergites and sternites smooth, sternite I with two anterior rows of 8 setae and a pair of lateral oblique rows of 7 setae (Fig. 13), sternite II-IX with a pair of lateral, 1 submedian lateral and 1 pair of anterior median setae each; setation on X-XII segments not clear. Tergites I-VII smooth, with a pair of median setae and tergites VIII-IX with a pair of median and lateral setae. Segment XII with only 4 dorsal setae clearly noticeable. Flagellum 0.342 mm long, most of the setae shaded or drooped (due to prolonged preservation) as in Fig. 14. Spermathecae with two pairs of spearheaded lobes, with undulating inner surface (Figs 15 & 16).

Chelicerae: Basal segment smooth, slightly depressed medially, fixed finger with



Figs 1-8: *Schizomus buxtoni* Gravely ♂.

1. Cephalothorax, dorsal aspect; 2. Chelicera, promarginal aspect; 3. Chelicera, retromarginal aspect;

4. Tarsus, metatarsus I, dorsal aspect; 5. Femur IV, lateral aspect; 6. Palp, dorsal aspect;

7. Abdominal Segments IX-XII with flagellum, ventral aspect; 8. Segments X-XII for flagellum, lateral aspect.

4 minute teeth between two large outer teeth (Figs 2 & 3), movable finger with smooth serrula, with 12-13 minute teeth ridge and a tooth on lateral anterior margin (Figs 2 & 3), types of setae present Type I-3, II-4, III-7, IV-4, V-3 and VI-1.

Pedipalps: Short and stout, trochanter produced, but not acutely, bearing 6-7 spinose setae, femora rounded and anteroventrally knobbed with spines on exterior surface, patellae without spur, but with long pilose setae on ventromesal margins, a pair of longer plumose setae on distal end, tibiae not rounded, but almost pentagonal with many setae on dorsal and mesal surfaces, with a long seta on ventromesal surface, tarsus-basitarsus with several short and some long plumose setae, spur about 0.6 and claws about 1.2 times dorsal length of tarsus-basitarsus.

Legs: Leg I-IV as in Table 1, basitarsal-tarsal proportions as 22:3:4:4:5:5:13 (Fig. 4). Femora IV about 3.3 times long as deep.

Measurements (in mm): Male syntype total length 3.96, cephalothorax 1.88 long, 1.00 wide; abdomen 2.08 long.

Cephalothorax: Propeltidium 1.28, almost same as in female syntype, except 2 median and 2 lateral setae; mesopeltidium not very clear and very narrow, thus invisible, transparent due to long preservation; metapeltidium deeply notched medially (Fig. 9).

Abdomen: Tergites I-V each with a pair of median setae, tergites VI-VIII each with a

median pair and a lateral pair of setae, tergite IX less than half the length of tergite VIII and with a pair of median and two lateral pairs of setae. Segments X-XII telescoped, X with one mediolateral, 2 pairs of lateral setae; XI with 6-8 ventral setae, dorsal setae not clear; XII with 2 pairs of strong dorsomedians, 2 pairs of short and stout laterals and 6 ventral setae. Male flagellum short, 0.414 long, and 0.27 wide, sphere shaped, knobbed with two lateral lobes, not much sclerotized and provided with a ventromedian, elongated along with ventral median line a semi-dumbbell shaped transparent hyaline piece (Figs 7 & 8), with 2d, 2dm, 2L and 3V setae. **Legs:** I-IV as in Table 2, basitarsal-tarsal proportions as 27:4:5:6:5:4:15 (Fig. 12), Femora IV 2.6 times as long as deep (Fig. 11), anterior sternum with 7 setae and a pair of long sternapophysial setae on anterior margin, posterior sternum with 5-6 setae.

Material examined: 1 ♀, 1 ♂, from the type series deposited at National Zoological Collections, Zoological Survey of India, Calcutta (=Kolkata).

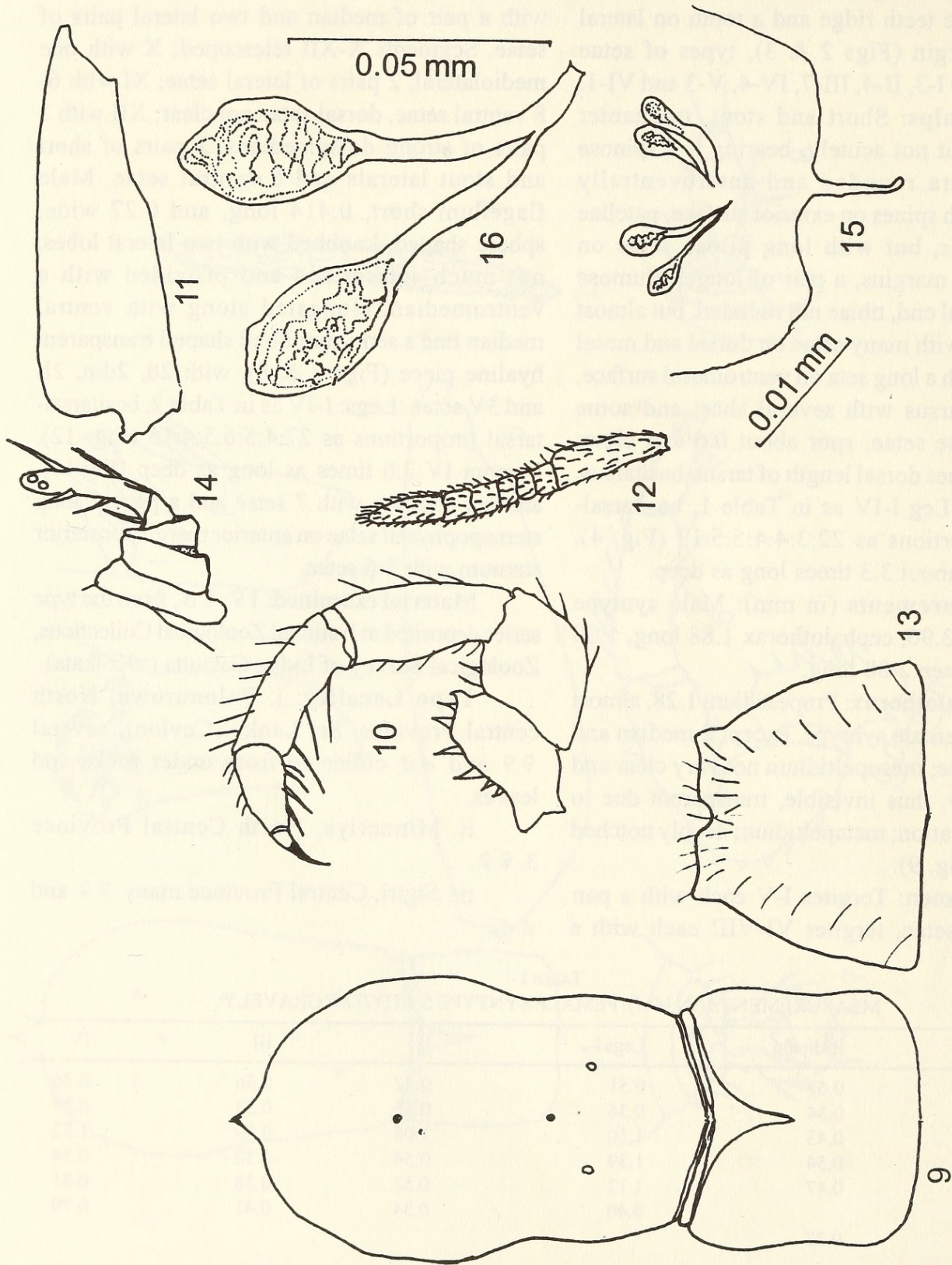
Type Locality: i. Polonuruwa, North central Province, Sri Lanka (Ceylon), several ♀♀ and ♂♂ collected from under rocks and leaves.

ii. Minneriya, North Central Province 3 ♀♀.

iii. Sigiri, Central Province many ♀♀ and ♂♂.

TABLE I
MEASUREMENTS (IN MM): FEMALE SYNTYPE *S. BUXTONI* GRAVELY

	Pedipalp	Legs I	II	III	IV
Coxa	0.67	0.51	0.52	0.36	0.36
Trochanter	0.34	0.36	0.36	0.23	0.27
Femur	0.43	1.10	1.08	0.99	1.22
Patella	0.54	1.39	0.54	0.32	0.34
Tibia	0.47	1.12	0.52	0.38	0.81
Tarsus		0.40	0.34	0.41	0.79
	0.22				
Basitarsus		0.61	0.36	0.40	0.50
Total	2.67	3.09	3.45	3.09	4.29



Figs 9-16: *Schizomus buxtoni* Gravely ♀,
 9. Cephalothorax, dorsal aspect; 10. Palp, dorsal aspect; 11. Femur IV, lateral aspect; 12. Tarsus, metatarsus I, dorsal aspect;
 13. Sternite IV, ventral aspect; 14. Segments X-XII with flagellum, lateral aspect; 15. Spermathecae, dorsal aspect;
 16. Spermathecae (magnified), dorsal aspect.

MISCELLANEOUS NOTES

TABLE 2
MEASUREMENTS (IN MM): MALE SYNTYPE *S. BUXTONI* GRAVELY

	Pedipalp	Legs I	II	III	IV
Coxa	0.54	0.72	0.54	0.36	0.33
Trochanter	0.49	0.42	0.23	0.27	0.43
Femur	0.60	1.62	0.94	0.88	1.40
Patella	0.61	2.20	0.56	0.36	0.54
Tibia	0.54	1.55	0.65	0.4	1.10
Tarsus			0.56	0.52	1.00
Basitarsus	0.27	1.90			
			0.43	0.36	0.45
Total	3.05	8.41	3.91	3.15	5.25

Distribution: North Central and Central Provinces of Sri Lanka only.

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31. MORPHOLOGY OF *EURYCERCUS LAMELLATUS* (MULLER), CHYDORIDAE: CLADOCERA, FROM THE HIGH ALTITUDE WETLANDS OF SIKKIM, INDIA

(With thirteen text-figures)

Chydoridae is the largest family of the Order Cladocera, and is clearly defined morphologically and ecologically. Frey (1967)

examined the phylogenetic relationships amongst its members and established four subfamilies, namely Eurycercinae, Sayciinae,



Bastawade, D. B. 2001. "30. Redescription of *Schizomus Buxtoni* Gravelly from Sri Lanka on the Basis of Syntypes Deposited in the Zoological Survey of India, Calcutta by F.h. Gravelly 1915." *The journal of the Bombay Natural History Society* 98, 133–137.

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