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CONTRIBUTIONS TO THE STUDY OF ORIBATID MITES (ACARI, ORIBATIDA) OF SRI LANKA

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An annotated check-list of the oribatid mite taxa of Sri Lanka is provided, including 144 species from 91 genera and 47 families. A new species of the genus *Galumna* (Galumnidae) is described. *Galumna paratetraporosa* sp. n. differs from *G. tetraporosa* Ermilov, Martens et Tolstikov 2014 in its smaller body size, the presence of a median pore and a sejugal suture, the localization of the aggenital setae, and the absence of a well-developed rostral point.

Keywords: Oriental region, Sri Lanka, Oribatida, fauna, systematics, morphology, Galumna

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Sri Lanka (total area 65.61 km^2) is an island country in South Asia, located in the Indian Ocean, southwest of the Bay of Bengal and southeast of the Arabian Sea. The island is geographically separated from the Indian subcontinent by the Gulf of Mannar and the Palk Strait.

Oribatid mites (Acari, Oribatida) of Sri Lanka are relatively poorly known (e.g., Oudemans, 1915; Balogh, 1970, 1988; Mahunka, 1973, 2001; Niedbała, 1991, 2000). At present, 98 species, 61 genera and 32 families have been recorded. Our work is based on material that was collected during a biological expedition to Sri Lanka in January, 2019.

The primary goal of our paper is to provide a list of the oribatid taxa known from this country, including primary and secondary data.

The second goal of our paper is to describe and illustrate one new species, belonging to the nominative subgenus *Galumna* Heyden 1826 (Galumnidae). *Galumna,* which comprises three subgenera and about 200 species (Ermilov, Klimov, 2017; Subías, 2004, updated 2018) has a cosmopolitan distribution. The generic and subgeneric diagnoses of *Galumna* have been previously presented by Ermilov and Klimov (2017). Identification keys to the species of *Galumna* from the Ethiopian, Neotropical, Oriental, and Australian regions have previously been published by Ermilov et al. (2015, 2018), and Ermilov and Starý (2017).

MATERIAL AND METHODS

M a t e r i a l. Sri Lanka, Sabaragamuwa Province, Polgampola, latitude 06°27′47.2″ N, longitude 080°12′38.8″ E, altitude 42 m a. s. l., litter in the mixed forest near the Thambadola Ella waterfall, 24.I.2019 (O. Joharchi, S.G. Ermilov, A.A. Khaustov). Three litter samples (1 kg each) were collected by hand method and extracted into 75% ethanol using Berlese's funnels (without electric lamps) during seven days in the laboratory.

M e t h o d s. Specimens were mounted in lactic acid on temporary cavity slides for measurement and illustration. Body length was measured in lateral view, from the tip of the rostrum to the posterior edge of the notogaster. Notogastral width refers to the maximum width of the notogaster in dorsal view. Lengths of body setae were measured in lateral aspect. All body measurements are presented in micrometers. Formulas for leg setation are given in parentheses according to the sequence trochanter–femur–genu–tibia–tarsus (famulus included). Formulas for leg solenidia are given in square brackets according to the sequence genu–tibia–tarsus.

Drawings were made with a camera lucida using a Leica transmission light microscope "Leica DM 2500".

Morphological terminology used in this paper follows that of F. Grandjean (see Ermilov and Klimov (2017) for review and application).

The following abbreviations are used: *L* – lamellar line; *S* – sublamellar line; *N* – prodorsal leg niche; *E*, *T* – lateral ridges of prodorsum; *ro*, *le*, *in*, *bs*, *ex* – rostral, lamellar, interlamellar, bothridial and exobothridial setae, respectively; *Ad* – sejugal porose area; *D* – dorsophragma; *P* – pleurophragma; *c*, *la*, *lm*, *lp*, *h*, *p* – notogastral setal alveoli; *Aal*, *Aam*, *Al*, *A2*, *A3* – notogastral porose areas; *mp* – median pore; *ia*, *im*, *ip*, *ih*, *ips* – notogastral lyrifissures; *gla* – opisthonotal gland opening; *h*, *m*, *a* – subcapitular setae; *or* – adoral seta; *sac* – axillary saccule; *Pd I*, *Pd II* – pedotecta I, II, respectively; *1b*, *3b*, *4a*, *4b* – epimeral setae; *dis* – discidium; *cp* – circumpedal carina; *g*, *ag*, *an*, *ad* – genital, aggenital, anal and adanal setae, respectively; *iad* – adanal lyrifissure; *Ap* – postanal porose area; *p.o.* – preanal organ; *Tr*, *Fe*, *Ge*, *Ti*, *Ta* – leg trochanter, femur, genu, tibia, tarsus, respectively; *p.a.* – porose area; ω, σ, φ – leg solenidia; ε – leg famulus.

FAUNA

During the taxonomic identification of oribatid mite material from Sri Lanka, we have registered 54 species (excluding unidentifiable species) from 45 genera and 28 families. Of these, 46 species, 30 genera and 15 families have been recorded in this country for the first time. That way, the up-to-date list of oribatid mites known from Sri Lanka now includes 144 species from 91 genera and 47 families (Table 1).

From all the Sri Lanka oribatid mites, 69 species (48%) were recorded only on this country (potential endemics); 10 species (7%) are distributed across the Oriental region; while 65 species (45%) have a wider geographical distribution. The latter category includes 14 (semi)cosmopolitan species.

SYSTEMATICS

Family Galumnidae

Genus ***Galumna*** Heyden 1826

Type species *Notaspis alatus* Hermann 1804

Galumna paratetraporosa Ermilov, Khaustov et Joharchi sp. n. (Figs 1–3)

M a t e r i a l. Holotype (♂) and 2 paratypes (1♀, 1♂): see "Material and methods" section for explanations.

The holotype (in ethanol with drop of glycerol) is deposited in the collection of the Senckenberg Museum of Natural History, Görlitz, Germany; 2 paratypes (in ethanol with drop of glycerol) are deposited in the collection of the Tyumen State University Museum of Zoology, Tyumen, Russia.

D i a g n o s i s. Body size: 531–564 × 415–431. Basal part of prodorsum, humeral regions of notogaster and lateral parts of epimeres I and II striate. Rostrum triangular, almost pointed. Lamellar and sublamellar lines slightly divergent distally. Rostral and lamellar setae of medium size, setiform, roughened. Interlamellar setae minute. Bothridial setae long, clavate, barbed. Dorsosejugal suture present. Notogaster with five pairs of rounded porose areas, *Aa* represented by two parts. Median pore present. Epimeral setal formula: 1–0–1–2. Circumpedal carinae directed to insertions of setal alveoli *3b*. Anogenital setae short, setiform, smooth. Aggenital setae equal distanced from genital and anal apertures. Postanal porose area rounded, present in female, absent in males. Leg famulus on tarsi I inserted between seta *ft*" and solenidion ω_2. Leg solenidion on tibiae IV inserted in anterior part of the segment.

D e s c r i p t i o n. *Measurements*. Body length: 564 (holotype), 531, 547 (paratypes); notogaster width: 415 (holotype), 415, 431 (paratypes).

Integument. Body color light brown to brown. Body surface (including subcapitular mentum and genital and anal plates) microgranulate (diameter of granules less than 1), slightly visible under high magnification; lateral parts of prodorsum (between bothridia and acetabula I–III with larger (up to 2) and distinct granules. Basal part of prodorsum, humeral regions of notogaster and lateral parts of epimeres I and II striate.

Prodorsum (Figs 1*a*, 1*b*). Rostrum triangular, almost pointed, but without clear point or tooth. Lamellar and sublamellar lines thin, parallel mediobasally and slightly divergent distally, *L* directed to lateral sides of prodorsum, *S* curving backwards at ventral ends. Prodorsal leg niches and lateral ridges of prodorsum well-developed. Rostral and lamellar setae of medium size (24–28), setiform, roughened. Interlamellar setae very short (1), hardly visible, thin, smooth. Bothridial setae (94–98) clavate, with long, smooth stalk and short, barbed head. Exobothridial setae represented by alveoli. Sejugal porose areas (8) rounded, located posterior to insertions of interlamellar setae. Dorsophragmata long.

Notogaster (Figs 1*a*–1*c*, 2*b*). Dorsosejugal suture present, slightly developed. With 10 pairs of setal alveoli and five pairs of rounded porose areas (*Aal*, 4–6; *Aam*, 4–6; *A1*, 12–16; *A2*, 8–12; *A3*, 10–16) rounded. Areas *Aa* represented by two parts, located anterior to setal alveoli *la*, close to pteromorphal hinges; areas *A1* and *A2* located very close to each other. Median pore present, located posterior to virtual line connected areas *A2*. Opisthonotal gland openings and all lyrifissures distinct, *im* and *gla* located close and anterolateral to *A1*, *ip* between p_2 and *A3*, *ih* and *ips* close to each other, anteromedial or medial to p_3. Circumgastric sigillar indistinctly developed.

Table 1. Annotated check-list of oribatid mites of Sri Lanka

Taxa	Distribution of species	Records in Sri Lanka	
		first record of species	PD
Brachychthoniidae*			
Liochthonius simplex (Forsslund 1942)**	Semicosmopolitan	New record	+
Sellnickochthonius gracilis (Chinone 1974)**	Japan, Iran, southern China	New record	+
Epilohmanniidae*			
Epilohmannia minuta pacifica Aoki 1965**	Tropical, Subtropical and southeastern Palaearctic regions	New record	+
Phthiracaridae			
Notophthiracarus extraordinarius Niedbała 2000	Sri Lanka	Niedbała, 2000	–
Notophthiracarus ignobilis Niedbała 2000	Sri Lanka	Niedbała, 2000	–
Notophthiracarus mirus Niedbała 2000	Sri Lanka	Niedbała, 2000	–
Notophthiracarus turgidus Niedbała 1991	Sri Lanka	Niedbała, 1991	–
Phthiracarus anonymus Grandjean 1933	Semicosmopolitan	Niedbała, 2000	–
Phthiracarus membranifer Parry 1979	Palaearctic region, Sri Lanka	Niedbała, 2000	–
Phthiracarus paratubulus Niedbała 1991	Sri Lanka	Niedbała, 1991	–
Phthiracarus pygmaeus Balogh 1958	Semicosmopolitan	Balogh, 1988	–
Plonaphacarus kaszabi (Balogh 1988)	Sri Lanka	Balogh, 1988	–
Plonaphacarus kugohi (Aoki 1959)	Semicosmopolitan	Niedbała, 2000	–
Euphthiracaridae			
Acrotritia ardua (C.L. Koch 1841)	Semicosmopolitan	Niedbała, 2000	–
Acrotritia curticephala (Jacot 1938)	Semicosmopolitan	Niedbała, 2000	–
Acrotritia hauseri (Mahunka 1991)	Oriental and Palaearctic regions	Niedbała, 2000	–
Acrotritia spiculifera Mahunka 1991	Australian, Ethiopian and Oriental regions	Niedbała, 2000	–
Oribotritiidae			
Austrotritia saraburiensis Aoki 1965	Australian, Oriental and Palaearctic regions	Niedbała, 2000	–
Indotritia javensis (Sellnick 1923)	Semicosmopolitan	Niedbała, 2000	–
Indotritia propinqua Niedbała 1991	Oriental and Palaearctic regions	Niedbała, 2000	–
Mesoplophoridae			
Apoplophora pantotrema (Berlese 1913)	Australian, Oriental and Palaearctic regions	Niedbała, 2000	–
Mesoplophora (*Parplophora*) *subtilis* Niedbała 1981	Australian, Neotropical and Oriental regions	Niedbała, 2000	–
Hypochthoniidae*			
Malacoangelia similis Sarkar et Subías 1982**	India	New record	+
Lohmanniidae*			
Javacarus kuehnelti Balogh 1961**	Australian and Oriental regions, Egypt	New record	+
Mixacarus quadrifasciatus Balakrishnan 1986**	India	New record	+
Trhypochthoniidae*			
Afronothrus incisivus Wallwork 1961**	Tropical and Subtropical regions	New record	+
Malaconothridae*			
Malaconothrus adilatatus Ermilov, Anichkin et Tolstikov 2014**	Vietnam	New record	+
Malaconothrus dorsofoveolatus Hammer 1979	Oriental region, Vanuatu	New record	+

Table 1. (Contd.)

Taxa	Distribution of species	Records in Sri Lanka	
		first record of species	PD
Malaconothrus variosetosus Hammer 1971	Australian and Oriental regions	New record	+
Nanhermanniidae			
Cyrthermannia stellata Balogh 1970	New Guinea, Sri Lanka	Balogh, 1988	–
Dendrohermannia monstruosa (Aoki 1977)**	Australian and Oriental regions	New record	+
Masthermannia mammillaris (Berlese 1904)**	Tropical and Subtropical regions	New record	+
Hermanniidae			
Phyllhermannia tenuiseta Balogh 1988	Sri Lanka	Balogh, 1988	–
Plasmobatidae*			
Plasmobates asiaticus Aoki 1973**	Oriental region, Japan	New record	+
Neoliodidae*			
Neoliodes bataviensis Sellnick 1925**	Australian region, Java, Japan	New record	+
Plateremaeidae			
Paralopheremaeus legendrei (Balogh 1962)	Ethiopian region, Sri Lanka	Balogh, 1988	–
Plateremaeus latus Balogh 1988	Sri Lanka	Balogh, 1988	–
Damaeolidae*			
Fosseremus laciniatus (Berlese 1905)**	Cosmopolitan	New record	+
Oxyameridae*			
Oxyamerus polilloensis Corpuz-Raros et Lit 2005**	Philippines	New record	+
Eutegaeidae			
Dudichella membranigera Balogh 1970	Sri Lanka, Fiji	Balogh, 1970	–
Neseutegaeus denticulatus Balogh 1988	Sri Lanka	Balogh, 1988	–
Astegistidae			
Cultroribula bicuspidata Mahunka 1978	Ethiopian, Neotropical and Oriental regions	New record	+
Cultroribula diversa Oudemans 1915	Sri Lanka	Oudemans, 1915	–
Machadobelbidae			
Machadobelba ceylonica Balogh 1970	Sri Lanka	Balogh, 1970	–
Zetorchestidae			
Zetorchestes saltator Oudemans 1915	Oriental and Palaearctic region	Oudemans, 1915	+
Eremulidae*			
Eremulus densus Hammer 1979**	Java	New record	+
Eremulus spinosus Ermilov et Anichkin 2011	Vietnam	New record	+
Oppiidae			
Heteroppia globigera Balogh 1970	Sri Lanka	Balogh, 1970	+
Oppiella nova (Oudemans 1902)**	Cosmopolitan	New record	+
Oxyoppia (*Oxyoppiella*) *polynesia* (Hammer 1972)**	Australian, Neotropical and Oriental regions	New record	+
Pulchroppia pendula (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Porrhoppia crux Balogh 1970	Sri Lanka	Balogh, 1970	–
Striatoppia modesta Mahunka 1988**	Borneo	New record	+
Machuellidae*			
Machuella ventrisetosa Hammer 1961**	Tropical, Subtropical and Palaearctic regions	New record	+

Table 1. (Contd.)

Taxa	Distribution of species	Records in Sri Lanka	
		first record of species	PD
Teratoppiidae			
Granuloteratoppia annulata Balogh 1988	Sri Lanka	Balogh, 1988	–
Suctobelbidae			
Fenestrobelba annulata Balogh 1970	Sri Lanka	Balogh, 1970	–
Parasuctobelba complexa (Hammer 1958)**	Neotropical and Oriental regions	New record	+
Suctobelbella (*Flagrosuctobelba*) *insulana* (Hammer 1972)**	Australian and Oriental regions	New record	+
Suctobelbella (*Flagrosuctobelba*) *elegantula* (Hammer 1958)	Semicosmopolitan	New record	+
Suctobelbella (*Ussuribata*) *variosetosa* (Hammer 1961)	Tropical and Subtropical regions, Japan	New record	+
Suctobelbila baderi Mahunka 1988**	Borneo	New record	+
Rhynchoribatidae			
Eurhynchoribates (*Orinchobates*) *orientalis* (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Otocepheidae			
Dolicheremaeus alveolatus (Oudemans 1915)	Sri Lanka	Oudemans, 1915	–
Dolicheremaeus ceylonicus Balogh 1970	Sri Lanka	Balogh, 1970	–
Dolicheremaeus conjunctus Mahunka 1973	Sri Lanka	Mahunka, 1973	–
Dolicheremaeus densefoveolatus Balogh 1988	Sri Lanka	Balogh, 1988	–
Dolicheremaeus elisabethae Balogh 1970	Sri Lanka	Balogh, 1970	–
Dolicheremaeus furcula Balogh 1970	Sri Lanka	Balogh, 1970	–
Dolicheremaeus lineatus Balogh 1970	Sri Lanka	Balogh, 1970	–
Dolicheremaeus markusi Balogh 1970	Sri Lanka	Balogh, 1970	–
Dolicheremaeus pectinatus Balogh 1970	Sri Lanka	Balogh, 1970	–
Dolicheremaeus robustus Mahunka 1973	Sri Lanka	Mahunka, 1973	–
Dolicheremaeus trimucronatus Mahunka 1973	Sri Lanka	Mahunka, 1973	–
Pseudotocepheus amonstruosus Mahunka 1973	Ethiopian and Neotropical regions, Sri Lanka	Mahunka, 1973	–
Pseudotocepheus neonominatus Subías 2004	Sri Lanka	Mahunka, 1973	+
Eurostocepheus (*Cerostocepheus*) *trisetosus* Balogh 1970	Oriental region	Balogh, 1970	–
Megalotocepheus ceylonicus Balogh 1970	Sri Lanka	Balogh, 1970	–
Megalotocepheus loksai Balogh 1970	Sri Lanka	Balogh, 1970	–
Megalotocepheus mahunkarum J. Balogh et P. Balogh 2002	Sri Lanka	Mahunka, 1973	–
Otocepheus (*Acrotocepheus*) *besucheti* (Mahunka 1973)	Sri Lanka	Mahunka, 1973	–
Otocepheus (*Acrotocepheus*) *bucephalus* (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Otocepheus (*Acrotocepheus*) *consimilis* (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Otocepheus (*Acrotocepheus*) *grandis* (Mahunka 1973)	Sri Lanka	Mahunka, 1973	–
Otocepheus (*Acrotocepheus*) *loebli* (Mahunka 1973)	Sri Lanka	Mahunka, 1973	–

Table 1. (Contd.)

Taxa	Distribution of species	Records in Sri Lanka	
		first record of species	PD
Carabodidae			
Aokiella rotunda Hammer 1979	Oriental region	Balogh, 1988	
Austrocarabodes agalawatta Balogh 1988	Sri Lanka	Balogh, 1988	–
Austrocarabodes bellicosus Balogh 1988	Sri Lanka	Balogh, 1988	–
Austrocarabodes bituberculatus Aoki 2006	Japan, Philippines	New record	+
Austrocarabodes sphaerula Balogh 1970	Sri Lanka	Balogh, 1970	–
Carabodes (*Klapperiches*) *globiger* Balogh 1970	Sri Lanka		–
Ceylobodes capillatus (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Ceylobodes hettigei (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Machadocepheus taprobanicus Balogh 1970	Sri Lanka	Balogh, 1970	–
Yoshiobodes irmayi (Balogh et Mahunka 1969)	Neotropical and Oriental regions, southern U.S.A.	New record	+
Yoshiobodes plumosulus (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Yoshiobodes plumosus (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Tectocepheidae*			
Tectocepheus minor Berlese 1903**	Semicosmopolitan	New record	+
Tegeocranellidae			
Tegeocranellus laevis (Berlese 1905)	Mediterranean, Oriental region, Fiji	Balogh, 1988	–
Microtegeidae			
Microtegeus ceylonicus Balogh 1970	Sri Lanka	Balogh, 1970	–
Microtegeus cornutus Balogh 1970	Oriental region	Balogh, 1970	+
Microtegeus quadrisetosus Balogh et Mahunka 1977	Neotropical region, Sri Lanka, Congo	Balogh, 1988	–
Cymbaeremaeidae			
Scapheremaeus cyclops (Oudemans 1915)	Sri Lanka	Oudemans, 1915	–
Scapheremaeus fisheri Aoki 1966	Australian and Oriental regions	New record	+
Micreremidae			
Micreremus granulatus Balogh 1970	Sri Lanka	Balogh, 1970	–
Lamellareidae			
Tenuelamellarea taprobanae (Oudemans 1915)	Sri Lanka	Oudemans, 1915	–
Eremaeozetidae			
Seteremaeozetes obtectus (Balogh 1988)	Sri Lanka	Balogh, 1988	–
Idiozetidae*			
Idiozetes javensis Hammer 1979**	Oriental region	New record	+
Microzetidae			
Berlesezetes ornatissimus (Berlese 1913)**	Cosmopolitan	New record	+
Rhopalozetes canagaratnami Balogh 1970	Sri Lanka	Balogh, 1970	–
Rhopalozetes panabokkei Balogh 1970	Sri Lanka	Balogh, 1970	–
Tegoribatidae			
Plakoribates confluens Balogh 1970	Sri Lanka	Balogh, 1970	–
Punctoribatidae			
Allozetes pusillus (Berlese 1913)**	Oriental region, Peru	New record	+
Lamellobates molecula (Berlese 1916)**	Tropical and Subtropical regions	New record	+
Paralamellobates misella (Berlese 1910)	Tropical and Subtropical regions	Oudemans, 1915	–

Table 1. (Contd.)

Taxa	Distribution of species	Records in Sri Lanka	
		first record of species	PD
Caloppiidae			
Brassiella neonominata Subías 2004	Oriental region, New Guinea	Oudemans, 1915	
Mochlozetidae*			
Unguizetes asiaticus Ermilov et Anichkin 2012**	Vietnam	New record	+
Scheloribatidae			
Poroscheloribates incertus (Balogh 1970)	Oriental region	Balogh, 1970	–
Scheloribates indicus (Oudemans 1915)	Oriental region, Pacific islands	Oudemans, 1915	–
Scheloribates praeincisus (Berlese 1910)	Tropical and Subtropical regions	Oudemans, 1915	+
Topobates multisetosus (Balogh 1970)	Sri Lanka	Balogh, 1970	+
Tuberemaeus similis (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Oripodidae			
Brachyoripoda foveolata Balogh 1970	Oriental region	Balogh, 1970	–
Oripoda canagaratnami (Balogh 1970)	Sri Lanka	Balogh, 1970	–
Oripoda parajosephineae Ermilov, Khaustov et Joharchi 2019	Sri Lanka	New record	+
Protoripoda elongata (Oudemans 1915)	Sri Lanka	Oudemans, 1915	–
Protoripoda insularis Balogh 1970	Sri Lanka	Balogh, 1970	–
Truncopes sinaraja Mahunka 2001	Sri Lanka	Mahunka, 2001	+
Haplozetidae			
Cribrozetes multiareolatus Balogh 1970	Oriental region	Balogh, 1970	–
Indoribates punctulatus (Sellnick 1925)	Oriental region	Balogh, 1970	
Magyaria pulcherrima Balogh 1970	Sri Lanka	Balogh, 1970	–
Protoribates duoseta (Hammer 1979)**	Oriental region, Vanuatu	New record	+
Protoribates paracapucinus (Mahunka 1988)	Semicosmopolitan	New record	+
Protoribates lankaensis Ermilov, Khaustov et Joharchi 2019	Sri Lanka	New record	+
Rostrozetes florens Balogh 1970	Sri Lanka	Balogh, 1970	+
Vilhenabates simplex Balogh 1970	Sri Lanka	Balogh, 1970	–
Parakalummidae			
Neoribates oceanicus (Oudemans 1915)	Sri Lanka	Oudemans, 1915	–
Galumnidae			
Flagellozetes porosus Balogh 1970	Sri Lanka	Balogh, 1970	–
Galumna colossus Oudemans 1915	Sri Lanka	Oudemans, 1915	–
Galumna flabellifera Hammer 1958	Tropical and Subtropical region	New record	+
Galumna granalata Aoki 1984	Oriental region	New record	+
Galumna paratetraporosa sp. n.	Sri Lanka	New record	+
Pergalumna bimaculata Hammer 1973	Oriental region, Tonga	New record	+
Pergalumna taprobanica Balogh 1988	Oriental region	Balogh, 1988	–
Trichogalumna nipponica (Aoki 1966)**	Semicosmopolitan	New record	+

The unidentified taxa are not included. Distribution: mostly from Subías (2004, updated 2018). Column "PD" designates primary data collected by the authors during the expedition to Sri Lanka (the plus sign marks the finding of a species). Single asterisk (*) marks the first record of a family in Sri Lanka; double asterisk (**) marks the first record of a genus in Sri Lanka.

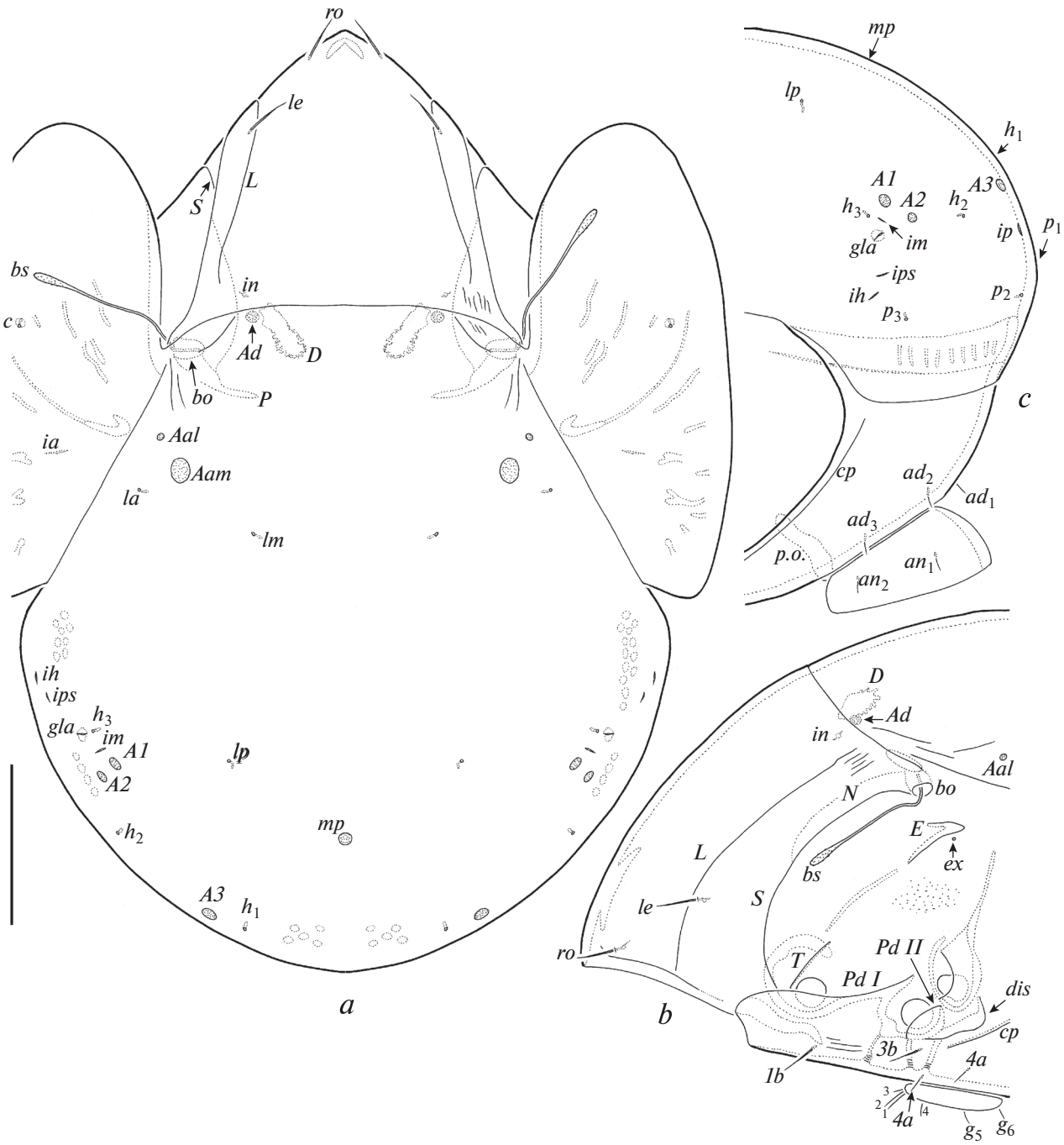

Fig. 1. *Galumna paratetraporosa* sp. n., adult: *a* – dorsal view (legs and part of left pteromorph not shown); *b* – anterior part of body, lateral view (gnathosoma, pteromorph and legs not shown); *c* – posterior part of body, lateral view. Scale bar 100 μm.

Gnathosoma (Fig. 2*c*). Subcapitulum size: 131–135 × × 118–123. Subcapitular setae setiform, roughened, *a* (20–24) longer and thicker than *m* and *h* (12–16). Adoral setae (12–16) setiform, heavily barbed. Length of palps: 94–102. Postpalpal setae (6) spiniform, smooth. Axillary saccules poorly visible. Length of chelicerae: 180–184. Cheliceral setae setiform, barbed, *cha* (57–61) longer than *chb* (32–36). Trägårdh's organ of chelicerae long, elongate triangular.

Epimeral and lateral podosomal regions (Figs 1*b*, 2*a*). Anterior tectum of epimere I smooth. Pedotecta I and II rounded in ventral view. Discidia triangular. Epimeral setal formula: 1–0–1–2. Epimeral setae setiform, smooth, *1b* and *3b* (20–24) longer than *4a* and *4b*

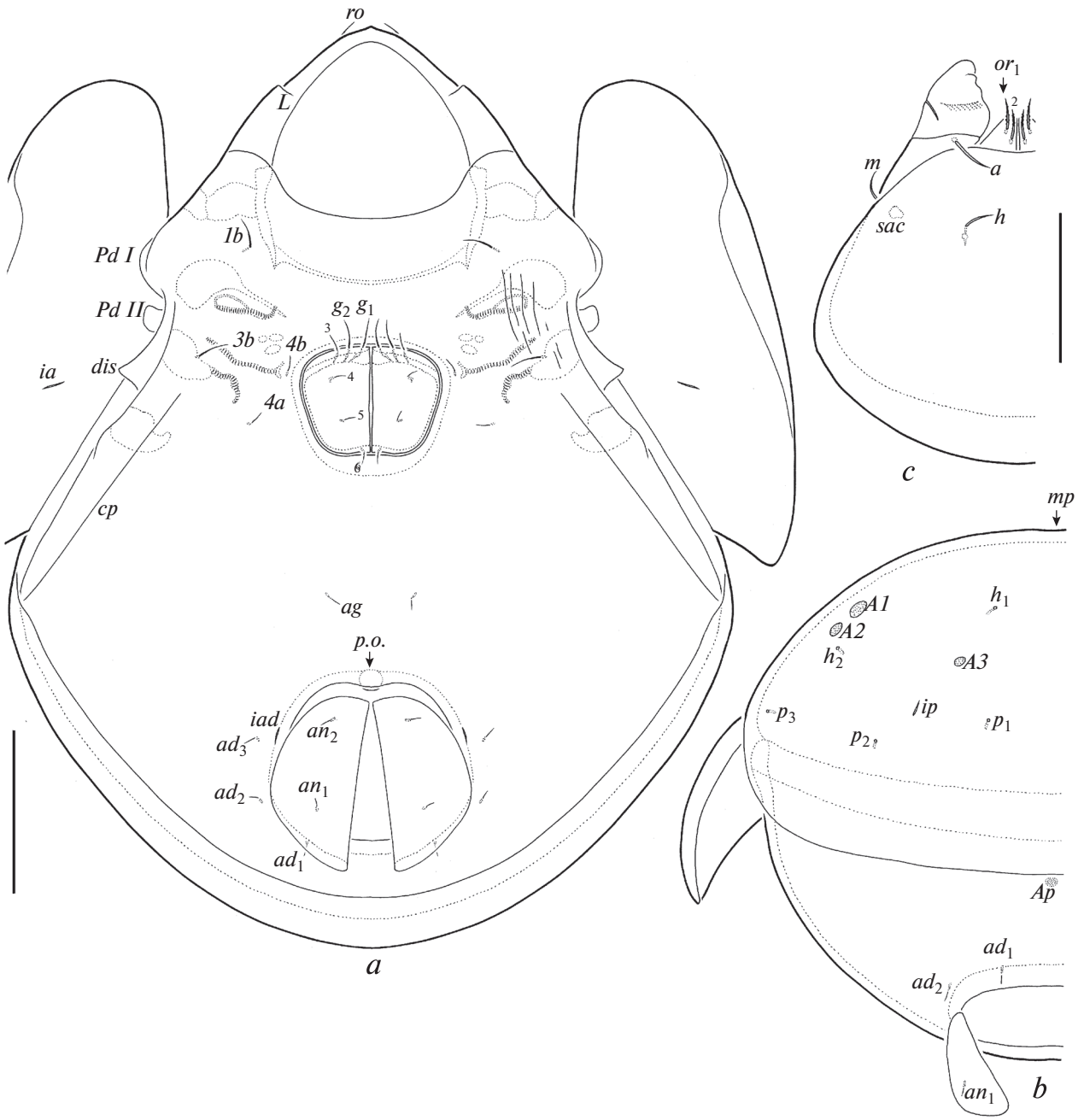

Fig. 2. *Galumna paratetraporosa* sp. n., adult: *a* – ventral view (gnathosoma, legs and part of right pteromorph not shown); *b* – posterior view (right half not shown); *c* – subcapitulum, ventral view (left half not shown). Scale bar (μm): *a, b* – 100; *c* – 50.

(12–16). Circumpedal carinae of medium size, thin, directed to insertions of setal alveoli *3b*, but not reaching them.

Anogenital region (Figs 1*b*, 1*c*, 2*a*, 2*b*). Six pairs of genital (g_1, g_2, 12–16; others 8), one pair of aggenital (8), two pairs of anal (8) and three pairs of adanal (8) setae setiform, smooth. Anterior edge of genital plates with three setae. Aggenital setae located between genital and anal apertures, equal distanced from them. Adanal setae ad_1 posterior, ad_2 posterolateral, ad_3 lateral to anal aperture. Distance ad_1–ad_2 equal to ad_2–ad_3. Adanal lyrifissures located close and parallel to anal plates. Postanal porose area rounded (8) present only in female, absent in males.

Legs (Figs 3*a*–3*d*). Median claw slightly thicker than laterals, all slightly barbed on dorsal side. Dorso-

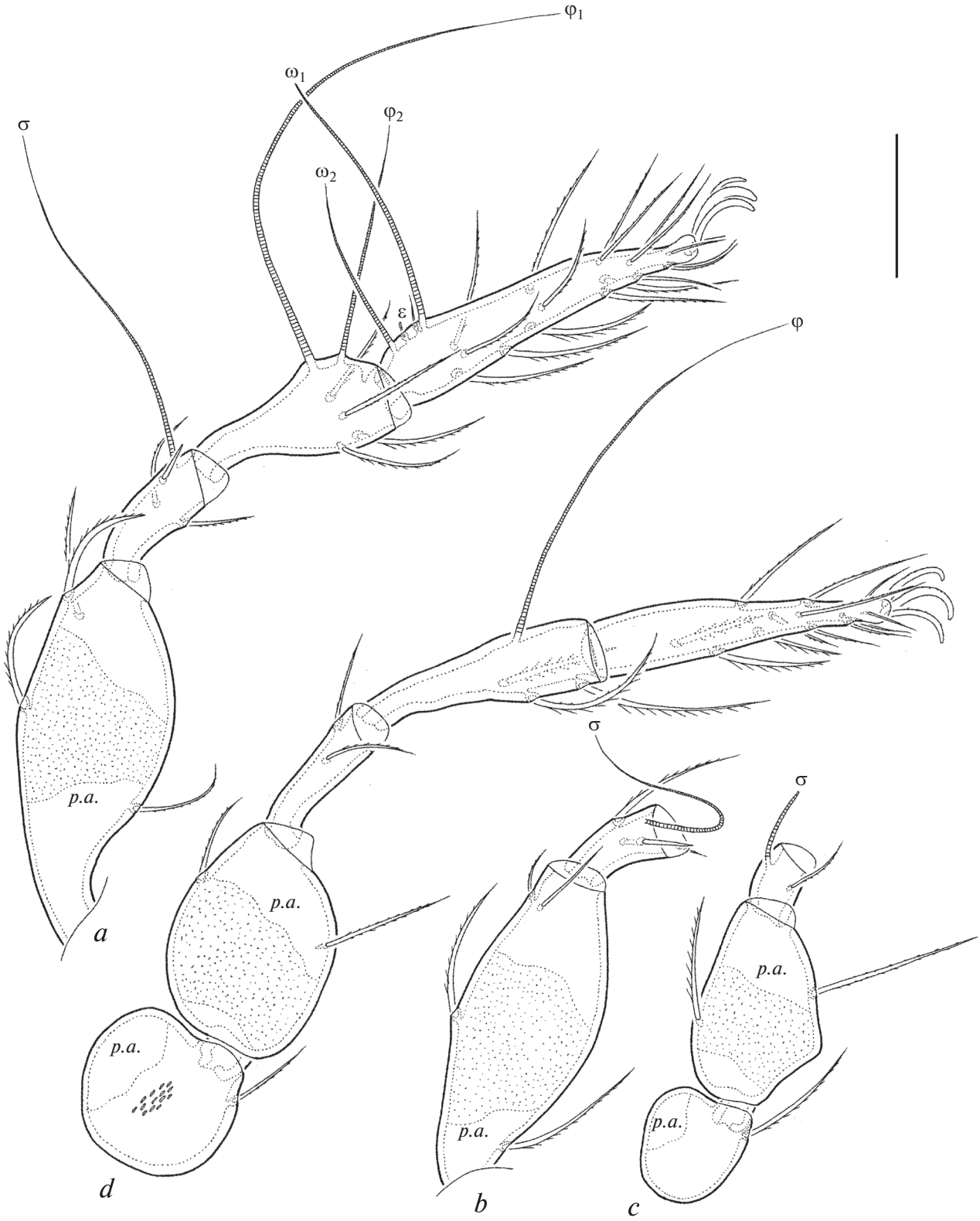

Fig. 3. *Galumna paratetraporosa* sp. n., adult: *a* – leg I, without trochanter, right, antiaxial view; *b* – femur and genu of leg II, right, antiaxial view; *c* – trochanter, femur and genu of leg III, left, antiaxial view; *d* – leg IV, left, antiaxial view. Scale bar 50 μm.

Table 2. Leg setation and solenidia of adult *Galumna paratetraporosa* sp. n.

Leg	*Tr*	*Fe*	*Ge*	*Ti*	*Ta*
I	*v*'	*d*, (*l*), *bv*"	(*l*), *v*', σ	(*l*), (*v*), φ_1, φ_2	(*ft*), (*tc*), (*it*), (*p*), (*u*), (*a*), *s*, (*pv*), *v*', (*pl*), *l*", ε, ω_1, ω_2
II	*v*'	*d*, (*l*), *bv*"	(*l*), *v*', σ	(*l*), (*v*), φ	(*ft*), (*tc*), (*it*), (*p*), (*u*), (*a*), *s*, (*pv*), ω_1, ω_2
III	*v*'	*d*, *ev*'	*l*', σ	*l*', (*v*), φ	(*ft*), (*tc*), (*it*), (*p*), (*u*), (*a*), *s*, (*pv*)
IV	*v*'	*d*, *ev*'	*d*, *l*'	*l*', (*v*), φ	*ft*", (*tc*), (*p*), (*u*), (*a*), *s*, (*pv*)

Roman letters refer to normal setae, Greek letters to solenidia (except ε = famulus). Single prime (') marks setae on the anterior and double prime (") setae on the posterior side of a given leg segment. Parentheses refer to a pair of setae.

antiaxial porose areas on all femora and dorsoparaxial porose areas on trochanters III and IV well visible. Formulas of leg setation and solenidia: I (1–4–3–4–20) [1–2–2], II (1–4–3–4–15) [1–1–2], III (1–2–1–3–15) [1–1–0], IV (1–2–2–3–12) [0–1–0]; homologies of setae and solenidia indicated in Table 2. Famulus on tarsi I inserted between seta *ft*" and solenidion ω_2. Solenidion on tibiae IV inserted in anterior part of the segment.

Remarks. *Galumna paratetraporosa* sp. n. is morphologically most similar to *Galumna tetraporosa* Ermilov, Martens et Tolstikov 2014 (see Ermilov et al., 2014) from Nepal in having the following features: clavate bothridial setae, five pairs of rounded notogastral porose areas (*Aa* represented by two parts), rostral and lamellar setae of medium size, lamellar and sublamellar lines divergent distally. The new species differs from *G. tetraporosa* in its smaller body size (531–564 × × 415–431 versus 913–979 × 730–763); the presence (versus absence) of a median pore and a sejugal suture; the absence of a well-developed rostral point (versus rostrum having a distinct point, which forms a tooth). Also, the aggenital setae in *G. paratetraporosa* sp. n. is equally-distanced from the genital and the anal apertures (versus aggenital setae being located clearly closer to the genital aperture in *G. tetraporosa*).

Etymology. The specific name *paratetraporosa* refers to the similarity between the new species and *Galumna tetraporosa* Ermilov, Martens et Tolstikov 2014.

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К ИЗУЧЕНИЮ ПАНЦИРНЫХ КЛЕЩЕЙ (ACARI, ORIBATIDA) ШРИ-ЛАНКИ

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Представлен перечень таксонов панцирных клещей Шри-Ланки, включающий 144 вида из 91 рода и 47 семейств. Описан новый вид рода *Galumna* (Galumnidae); *G. paratetraporosa* sp. n. отличается от *G. tetraporosa* Ermilov, Martens et Tolstikov 2014 меньшим размером тела, присутствием медиальной поры и сеюгальной борозды, расположением аггенитальных щетинок и отсутствием хорошо развитого рострального острия.

Ключевые слова: Ориентальная область, Шри-Ланка, Oribatida, фауна, систематика, морфология, *Galumna*