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Linyphiid spiders (Araneae, Linyphiidae) from Pakistan and India

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Linyphiid spiders (Araneae, Linyphiidae) from Pakistan and India. - 37 linyphiid species are recorded from Pakistan and India, 15 of which are described as new: *Acartauchenius himalayensis* sp. n., *Agyneta pakistanica* sp. n., *Anguliphantes nepalensoides* sp. n., *Gongylidioides keralaensis* sp. n., *G. pectinatus* sp. n., *Halorates concavus* sp. n., *Indophantes tonglu* sp. n., *Pelecopsis indus* sp. n., *Tapinocyboides bengalensis* sp. n., *Tchatkalophantes baltistan* sp. n., *Tiso incisus* sp. n., *T.* (?) *indianus* sp. n., *Walckenaeria saetigera* sp. n. A new genus, *Paracymboides* gen. n., is erected for *Paracymboides tibialis* sp. n. (the type species) and *P. aduncus* sp. n. One new synonym is established: *Walckenaeria nepalensis* Wunderlich, 1972 syn. n. = *W. martensi* Wunderlich, 1972. A distribution pattern is indicated for many species. Seven species, i.e., *Agyneta nigripes* (Simon, 1884), *Archaraeoncus prospiciens* (Thorell, 1875), *Ceratinella wideri* (Thorell, 1871), *Maso sundevalli* (Westring, 1851), *Microbathyphantes palmarius* (Marples, 1955), *Porrhomma pygmaeum* (Blackwall, 1834), and *Tenuiphantes tenuis* (Blackwall, 1852) are recorded from the Himalayas for the first time.

Keywords: Arachnida - new genus - new species - new record – Himalayas.

INTRODUCTION

The fauna of Pakistan and India is not only of interest in its own right but also because both lie in two zoogeographical regions: the northern, mountain territories, belong to the Palaearctic region, but the main territories lie in the Oriental region. All 29 linyphiid species known from Pakistan were described or recorded from the Palaearctic part, the Karakorum mountain system (Caporiacco, 1934, 1935). The linyphiid fauna of India amounts to 38 species; 20 of them known from the Palaearctic part, mainly from Kashmir (Thaler, 1987, Tanasevitch, 1987), another 20 species are known from the Oriental part, mainly from Sri Lanka (see Simon, 1894, Helsdingen 1985, etc.); among them only two species, *Indophantes bengalensis* Saaristo & Tanasevitch, 2003 and *Neriene birmanica* (Thorell, 1887), are common to the Palaearctic and Oriental parts of the county.

The material on which this paper is based was collected mainly in the Himalayas of Pakistan and India; a small material comes from northern localities in West Bengal (at the foot of the Himalayas), and from the southern part of India, Kerala and Tamil Nadu.

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MATERIAL AND METHODS

This paper deals with linyphiids collected in Pakistan and India and kept at the Muséum d'histoire naturelle, Geneva, Switzerland (MHNG). A small additional material was also available from the Museo Civico di Storia Naturale di Verona, Italy. Unless otherwise stated, all material is deposited in the MHNG. Some paratypes and non-type specimens are in the collection of the Zoological Museum of the Moscow State University, Moscow, Russia. Sample numbers are given in square brackets.

The chaetotaxy of Erigoninae is given in a formula (e.g., 2.2.1.1) which refers to the number of dorsal spines on tibiae I-IV. In Micronetinae, the chaetotaxy is given in a different formula, e.g., Ti I: 2-1-1-2(1), which means that tibia I has two dorsal spines, one pro-, one retrolateral spine, and two or one ventral spine (the apical spines are disregarded). The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given in mm. All scale lines in the figures correspond to 0.1 mm.

The terminology of genitalic structures in Micronetinae follows that of Saaristo & Tanasevitch (1996); in Erigoninae it mainly follows that of Tanasevitch (1998) and Hormiga (2000). The systematic nomenclature follows Platnick (2011), except for the generic concepts of *Agyneta* Hull, 1911 and *Halorates* Hull, 1911.

ABBREVIATIONS

C	Convector (according to Tanasevitch, 1998: 423)
CAT	Personal collection of Andrei Tanasevitch
D	Duct
DE	Duct entrance
DSA	Distal suprategular apophysis
E	Embolus
ED	Embolic division
EP	Embolus proper
L	Lamella characteristica
MED	Membrane of embolic division
MHNG	Muséum d'histoire naturelle, Geneva, Switzerland
MM	Median membrane
MSNV	Museo Civico di Storia Naturale di Verona, Italy
MT	Membranous tissue
PS	Proscape
PMP	Posterior median plate
R	Radix
S	Suprategulum
SMF	Senckenberg Museum, Frankfurt a. M., Germany
TA	Terminal apophysis
Th	Thumb of embolus
ZMMU	Zoological Museum of the Moscow State University, Moscow, Russia

RESULTS

Acartauchenius himalayensis sp. n. Figs 1-8

HOLOTYPE: ♂ (MSNV), PAKISTAN, Northern Areas, Gilgit District, Bagrot Valley, 2500 m a.s.l.; 20.VI.2008; leg. L. Latella.

ETYMOLOGY: The new species is named after the mountain system where it occurs; Latin adjective.

DIAGNOSIS: *A. himalayensis* sp. n. is characterized by the peculiar shape of the male carapace and palpal tibia.

DESCRIPTION: Male. Total length 1.58. Carapace 0.70 long, 0.55 wide, pale orange-brown, modified as shown in Figs 1-2. Head elevation carrying several strong curved spines directed backward. Chelicerae 0.25 long, stridulatory fields clear. Legs pale brown. Leg I 2.08 long (0.60+0.18+0.50+0.42+0.38), IV 2.10 long (0.60+0.15+0.60+0.45+0.30). Chaetotaxy 2.2.1.1, spines weak, their length about same as diameter of segment. TmI 0.35. Metatarsus IV without trichobothrium. Palp (Figs 3-8): Tibia with an oblong prolateral outgrowth and a small tooth apically. Paracymbium small, hook-shaped. Distal suprategular apophysis developed as a long flat stripe curved distally. Embolus fusiform, widened distally, with a sharp distinct tooth before widening. Abdomen 0.95 long, 0.60 wide, dark grey.

Female unknown.

TAXONOMIC REMARKS: The new species is similar to *A. asiaticus* (Tanasevitch, 1989) and *A. monoceros* (Tanasevitch, 1989) known from Turkmenistan and Uzbekistan, respectively (Tanasevitch, 1989), but it differs clearly by the the peculiar shape of the male carapace and palpal tibia.

DISTRIBUTION: Known from the type locality only.

Agyneta nigripes (Simon, 1884) Figs 9-15

MATERIAL: 2 ♂, 4 ♀ (MSNV), PAKISTAN, Northern Areas, Gilgit District, Passu, Passu Glacier (in the glacier), 2635 m a.s.l.; 30.X.2008; leg. L. Latella.

COMPARATIVE MATERIAL EXAMINED: *Agyneta nigripes*, more than 100 ♂ & ♀, AUSTRIA, Mt Glockner, 1900-2580 m a.s.l.; 1978-1980; leg. K. Thaler. – 2 ♂, 3 ♀ (CAT), RUSSIA, Arkhangelsk Area, 30 km W of Tobseda Village, 4 km S of Lake Peschanka-To (68º42'N, 53º10'E); VII.1984; leg. A. Tanasevitch. – 1 ♂ (CAT), Murmansk Area, Kola Peninsula, Dal'niye Zelentsy (69°07'N, 36°04'E); 4.-26.VII.2009; leg. A. Babenko. – 8 ♂, 10 ♀ (ZMMU), Taymyrskiy Autonomous Region, Efremova River, meadow; 7.VII.-1.VIII.2004; leg. D. Osipov. – 2 ♂, 2 ♀ (ZMMU), Magadan Area, upper reaches of Kolyma River, near Sibit-Tyellakh, Aborigen Field Station; 4.-14.VI.1982; leg. S. Bukkhalo.

TAXONOMIC REMARKS: The genitalia of *A. nigripes* from northern Pakistan are not significantly different from those of conspecific specimens from other parts of the distribution range (see Figs 9-15). Small variation in the number, shape and arrangement of teeth on the lamella characteristica exist even between the left and right palp of the same specimen.

REMARKS: This is the southernmost known locality of *A. nigripes*. The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: Holarctic arcto-alpine.

FIGS 1-8

Acartauchenius himalayensis sp. n., ♂ male holotype. (1-2) Carapace, lateral and dorsal views, respectively (not to scale). (3-5) Right palp, retrolateral, prolateral and proventral views, respectively. (6) Palpal tibia, dorsal view. (7) Distal suprategular apophysis and embolus. (8) Embolus.

Agyneta pakistanica sp. n. Figs 16-25

HOLOTYPE: ♂, PAKISTAN, Punjab, environs of Islamabad, ca 550 m a.s.l., Lake Rawal, on bank near water; 26.IV.1984; leg. S. Vit [PAK-84/25].

PARATYPE: 1 ♂, from same locality, collected together with the holotype.

FIGS 9-15

Agyneta nigripes (Simon, 1884), ♂ specimen from Passu Glacier, Pakistan. (9) Right palp, retrolateral view. (10) Cymbium , prolateral view. (11) Palpal tibia, dorsal view. (12) Palpal tibia and paracymbium, retrolateral view. (13) Embolic division. (14-15) Lamella characteristica, different aspects.

ETYMOLOGY: The specific name is an adjective taken from the type locality.

DIAGNOSIS: The new species is characterized by the peculiar shape of the palpal tibia and of the lamella characteristica.

DESCRIPTION: Male (holotype). Total length 1.63. Carapace 0.73 long, 0.50 wide, pale brown, with a darker margin. Chelicerae 0.28 long. Legs pale brown. Leg I 2.46 long (0.65+0.18+0.58+0.60+0.45), IV 2.46 long (0.68+0.18+0.59+0.63+0.38). Chaetotaxy: all tibiae with two dorsal spines. TmI 0.25. Metatarsus IV without

FIGS 16-25

Agyneta pakistanica sp. n., ♂ paratype. (16) Right palp , retrolateral view. (17) Cymbium, prolateral view. (18) Palpal tibia, dorsal view. (19-21) Palpal tibia and paracymbium, lateral view, different aspects. (22) Embolic division. (23) Embolus. (24-25) Lamella characteristica, different aspects.

trichobothrium. Palp (Figs 16-25): Tibia apically with two pointed teeth: one very small, the other elongated to a process. Cymbium without any posterior outgrowths. Lamella characteristica small, with a short L-shaped projection basally. Proximal part of lamella characteristica relatively wide; distal part very thin, awl-shaped. Embolus sigmoid, carrying a few very small teeth basally. Abdomen 0.85 long, 0.50 wide, pale grey.

Female unknown.

DISTRIBUTION: Known from the type locality only.

Anguliphantes nepalensis (Tanasevitch, 1987)

MATERIAL: 1 ♀, PAKISTAN, Hazara District, Kāghān Valley, 1450 m a.s.l., Malkandi Forest, near foot of rock; 29.VI.1985; leg. S. Vit [PAK-85/2]. – 1 ♂, INDIA, Uttar Pradesh, Garhwal, above Pauri, 1900 m a.s.l., dry *Quercus* forest on N slope, sifting leaf litter and moss; 28.X.1979; leg. I. Löbl [28]. – 1 ♀, West Bengal, Darjeeling District, Tiger Hill, 2500-2600 m a.s.l., near top, sifting litter in forest; 18.X.1978; leg. C. Besuchet & I. Löbl [19].

COMPARATIVE MATERIAL EXAMINED: 1 ♂, NEPAL, Goropani Forest between Kali Gandaki Valley and Pokhara Valley, Punhill near Goropani, 3050-3100 m a.s.l., edge of *Rhododendron* and *Abies* forest, sifting litter and mosses; 8.X.1983; leg. I. Löbl & A. Smetana [31] (new locality).

VARIABILITY: This species shows some variability in certain genital structures, such as size of the rounded swelling on the paracymbium, and shape and density of the fringed margin of the embolus (see Tanasevitch & Saaristo, 2006). Nevertheless the shape of the distal part of the lamella characteristica is consistent enough and is a good, well-visible character to distinguish this species.

REMARKS: *A. nepalensis* was previously known from numerous localities in Nepal (Tanasevitch, 1987; Tanasevitch & Saaristo, 2006). The species is here recorded from Pakistan and India for the first time.

RANGE: Himalayan.

Anguliphantes nepalensoides sp. n. Figs 26-31

HOLOTYPE: ♂, INDIA, West Bengal, Darjeeling District, Tiger Hill, 2500-2600 m a.s.l., near top, sifting in forest; 18.X.1978; leg. C. Besuchet & I. Löbl [19].

ETYMOLOGY: The species name, an adjective, points out the similarity of the new species and *A. nepalensis* (Tanasevitch, 1987).

DIAGNOSIS: The new species is characterized by the peculiar shape of the lamella characteristica.

DESCRIPTION: Male. Total length 2.20. Carapace 0.98 long, 0.83 wide, pale brown, almost yellow, with a greyish margin. Chelicerae 0.43 long. Legs yellow. Legs or its distal segments mostly lost, FeI & II 1.23 long. Chaetotaxy unclear, but probably equal to that of *A. nepalensis*, i.e. Fe I: 0-1-0-0: Ti I: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; Mt I-III: 1-0-0-0. TmII 0.11. Metatarsus IV without trichobothrium. Palp (Figs 26-31): Tibia flattened distally. Cymbium with a small posterodorsal conical tubercle. Paracymbium with a rounded swelling in mesal part. Distal part of lamella characteristica fork-shaped, upper branch twice longer than lower one, with a small tooth between both branches. Upper edge of lamella characteristica carrying a spear-shaped outgrowth directed backward. Embolus fringed at margin. Abdomen 1.18 long, 0.88 wide, pale grey.

Female unknown.

TAXONOMIC REMARKS: The new species is very similar to *A. nepalensis*, but can be easily distinguished by the shape of the distal part of the lamella characteristica. See also above, under Remarks to *A. nepalensis*.

DISTRIBUTION: Known from the type locality only.

FIGS 26-31

Anguliphantes nepalensoides sp. n., ♂ holotype. (26) Right palp, retrolateral view. (27) Palpal tibia and paracymbium, dorsal view. (28) Embolic division. (30-31) Lamella characteristica, different aspects.

Archaraeoncus prospiciens (Thorell, 1875)

MATERIAL: 1 ♀ (MSNV), PAKISTAN, Northern Areas, Gilgit District, Bagrot Valley (36°01'36.7"N, 74°33'57.6"E), 2700 m a.s.l.; 18.VI.2008; leg. L. Latella & R. Ahmed. – 1 ♀ (MSNV), Gilgit District, Naltar Valley (36°12'34.4"N, 74°08'20.6"E), 3000 m a.s.l.; 1.XI.2008; leg. L. Latella.

REMARKS: The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: Ancient Mediterranean.

Caviphantes pseudosaxetorum Wunderlich, 1979

MATERIAL: 1 ♀, PAKISTAN, Hazara District, Kāghān Valley, 2000 m a.s.l., Ghnwool Valley, Makhair Forest, litter under *Viburnum*; 30.VI.1985; leg. S. Vit [PAK-85/4]. – 1 ♀, Punjab, environs of Islamabad, Lake Rawal, ca 550 m a.s.l., forest, dry litter; 24.IV.1984; leg. S. Vit [PAK-84/24]. – 1 ♀, N of Lake Rawal, 3.IV.1986, leg. S. Vit. – 1 ♀ (ZMMU), Ghnwool Valley, Malkandi Forest, 1600 m a.s.l., near water, among stones; 30.VI.1985; leg. S. Vit [PAK85/7]. – 1 ♂, Swat District, Malam Jabba, 2500-2600 m a.s.l., *Abies* forest, sifting leaf litter

and moss; 18.V.1983; leg. C. Besuchet & I. Löbl [17b]. – 1 ♀, S of Saidu Sharif, Murghazar, sifting leaf litter under *Platanus*, 1300 m a.s.l.; 8.V.1983; leg. C. Besuchet & I. Löbl [2b]. – 1 ♀, above Miandam, 2400-2500 m a.s.l., *Abies* forest, sifting leaf litter and moss; 17.V.1983; leg. C. Besuchet & I. Löbl [15b]. –1 ♂, INDIA, Himachal Pradesh, Kulu Valley, Chijoga (S of Manali), 1900 m a.s.l., from rodent burrow; 14.X.1988; leg. S. Vit [22]. – 3 ♀, Uttar Pradesh, Garhwal, 4 km S of Bhatwari, 1400 m a.s.l.; 23.X.1979; leg. I. Löbl [1979/22]. – 4 ♂, 2 ♀, Madras (= Chennai), Palni Hills, 10 km W of Kodaikanal, 2300 m a.s.l., timberline, degraded forest, sifting moss under fern; 13.XI.1972; leg. C. Besuchet & I. Löbl [1972/25a]. – 1 ♂, 3 ♀, Palni Hills, 10 km NW of Kodaikanal, 2150 m a.s.l., edge of *Rhododendron* forest with fern, sifting litter near river; 15.XI.1972; leg. C. Besuchet & I. Löbl [1972/27]. – 2 ♂, 7 ♀ (ZMMU), Kodaikanal, 2100 m a.s.l., forest below town, sifting litter; 11.XI.1972; leg. C. Besuchet & I. Löbl [1972/22]. – 2 ♂, 5 ♀, 10 km W of Kodaikanal, 2350 m a.s.l., degraded forest, under stones; 13.XI.1972; leg. C. Besuchet & I. Löbl [1972/25b]. – 1 ♂, 1 ♀, 23 km W of Kodaikanal, Lake Berijam, 2150 m a.s.l., *Rhododendron* forest, sifting litter; 14.XI.1972; leg. C. Besuchet & I. Löbl [1972/26]. – 1 ♀, Nilgiri, Ootacamund, 2150 m a.s.l., sifting litter under bushes in ravine; 21.XI.1972; leg. C. Besuchet & I. Löbl [1972/41a]. – 1 ♀, Meghalaya, Khasi Hills, Mawphlang, 1800 m a.s.l., forest, sifting litter; 28.X.1978; leg. C. Besuchet & I. Löbl [1978/32b]. – 5 ♀, Kerala, Cardamom Hills, near Munnar, Muttapatti, 1700 m a.s.l, forest with fern, sifting litter; 24.XI.1972; leg. C. Besuchet & I. Löbl [48].

COMPARATIVE MATERIAL EXAMINED: *Caviphantes pseudosaxetorum*, SMF 29677, 1 ♀ paratype, NEPAL, Thakkhola, from Kali Gandaki Valley to main Himalayan Mt. Ridge, Chadziou Khola Valley near Ghasa, 2330 m a.s.l., 31.X.1969, leg. J. Martens.

DISTRIBUTION: The species was originally described from the Nepal Himalayas (Wunderlich, 1979). Later, it was found in Japan (Ono *et al*., 1991), China (Gao *et al*., 1992), and just recently in Lebanon (Tanasevitch, 2011). The species is here recorded from Pakistan and India for the first time.

RANGE: South Palaearctic-Oriental.

Ceratinella wideri (Thorell, 1871)

MATERIAL: 1 ♂, PAKISTAN, Hazara District, Kāghān Valley, Naran, Lake Saiful Muluk, 3100 m a.s.l., litter under Saxifraga; 4.-5.VII.1985; leg. S. Vit [PAK-85/20]. – 1 ♂, Swat District, above Utrot, 2500 m a.s.l., *Abies* & *Cedrus* forest, moss and leaf litter among fallen trunks; 13.V.1983; leg. C. Besuchet & I. Löbl [11e]. – 1 ♀, Malam Jabba, 2500-2600 m a.s.l., *Abies* forest, sifting leaf litter and moss; 18.V.1983; leg. C. Besuchet & I. Löbl [17b].

REMARKS: The discovery of both sexes of this species in the Pakistan Himalayas makes its determination reliable. The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: Palaearctic.

Erigone dentipalpis (Wider, 1834)

MATERIAL: 1 ♂ (MSNV), PAKISTAN, Karakorum, Baltistan, Shalabot, 1700 m a.s.l.; 15.VIII.1976; leg. G. Osella. – 2 ♀ (MSNV), Katzaran, 2200 m a.s.l.; 23.VII.1976; leg. G. Osella. – 2 ♀ (MSNV), Northern Areas, Gilgit District, Ghangche, Kaplu Ghwari; 27.VI.2008; leg. L. Latella. – 2 ♀ (MSNV), Skardu District, 2300 m a.s.l.; 27.VI.2008; leg. G. Osella. – 1 ♂ (MSNV), Skardu, Pakova, 2300 m a.s.l.; 1.VII.1976; leg. G. Osella. – 1 ♂ (MSNV), Naltar Valley (36°12'34.4"N, 74°08'20.6"E), 3000 m a.s.l.; 1.XI.2008; leg. L. Latella. – 1 ♀, Swat District, Saidu Sharif, 1000 m a.s.l., river bank, under stones and cow-dungs; 11.V.1983; leg. C. Besuchet & I. Löbl [1983/8].

REMARKS: In the Himalayas this species was hitherto known only from Kashmir (Cambridge, 1885) and Karakorum (Caporiacco, 1935).

RANGE: Holarctic.

Erigone prominens Bösenberg & Strand, 1906

MATERIAL: 2 ♂, PAKISTAN, Punjab, environs of Islamabad, Lake Rawal, ca 550 m a.s.l., on bank near water; 26.IV.1984; leg. S. Vit [PAK-84/25].

REMARKS: In the Himalayas the species was hitherto known only from Nepal (Wunderlich, 1983) and it is here recorded from Pakistan for the first time.

Gongylidiellum confusum Thaler, 1987

TYPE MATERIAL EXAMINED: *Gongylidiellum confusum*, SMF 33728, 4 ♀ paratypes, INDIA, Kashmir, Pahalgam, coniferous forest, 2400 m a.s.l.; 14.V.1976; leg. J. Martens. – SMF 33730, 2 ♂ paratypes, Sonamarg, Nichinai-Tal, 3100-3200 m a.s.l.; 9.VI.1976; leg. J. Martens.

OTHER MATERIAL: 4 ♀ (ZMMU), PAKISTAN, Hazara District, Ghnwool Valley, Malkandi Forest, 1600 m a.s.l., near water, among stones; 30.VI.1985; leg. S. Vit [PAK-85/7]. – 1 ♂, 1 ♀, Swat District, above Utrot, 2500 m a.s.l., *Abies & Cedrus* forest, sifting moss and leaf litter among fallen trunks; 13.V.1983; leg. C. Besuchet & I. Löbl [11e]. – 1 ♀, same, 2500-2600 m a.s.l., sifting rotten *Abies* wood; 14.VI.1983; leg. C. Besuchet & I. Löbl [12c]. – 1 ♀, same, 2600 m a.s.l., wet meadow, sifting mosses & rotten wood; 13.V.1983; leg. C. Besuchet & I. Löbl [11d]. – 1 ♀, Chitral, Madaglasht, 2700 m a.s.l., sifting under *Salix* near river; 26.V.1983; leg. C. Besuchet & I. Löbl [27b]. – 2 ♀, Chitral, above Bumburet, valley to Pass Ustui, 2700 m a.s.l., sifting leaf litter under *Viburnum*; 25.V.1983; leg. C. Besuchet & I. Löbl [25c]. – 1 ♀, INDIA, Uttar Pradesh, Garhwal, 2 km E of Dhanolti, northern slope, 2250 m a.s.l., near source, sifting mosses and leaf litter under *Rhododendron* and *Abies*; 21.X.1979; leg. I. Löbl [19]. – 1 ♂, 2 ♀ (ZMMU), Garhwal, 10 km E of Dhanolti, 2450 m a.s.l., northern slope, *Quercus* forest, sifting litter; 21.X.1979; leg. I. Löbl [21b]. – 1 ♂ (ZMMU), Himachal Pradesh, 10 km W of Simla, Jutogh, 2000 m a.s.l., leaf litter near foot of rock; 29.X.1988; leg. S. Vit. [88/37].

REMARKS: The species was hitherto known only from Kashmir (Thaler, 1987) and is here recorded from Pakistan for the first time.

RANGE: Himalayan.

Gongylidiellum nepalense Wunderlich, 1983

TYPE MATERIAL EXAMINED: *Gongylidiellum nepalense*, SMF 31701, 1 ♂, 2 ♀ paratypes, NEPAL, Thaksang above Tukche, coniferous forest, 3150-3400 m a.s.l.; 5.-10.VII.1970; leg. J. Martens.

OTHER MATERIAL: 8 ♀, INDIA, West Bengal, Darjeeling District, Tonglu, 3100 m a.s.l., near top, sifting in dwarf forest under brushes on pasture; 16.X.1978; leg. C. Besuchet & I. Löbl [16b]. – 1 ♂, 6 ♀, Tonglu, 3100 m a.s.l., near top, under stones; 16.X.1978; leg. C. Besuchet & I. Löbl [16a]. – 1 ♂, 2 ♀ (ZMMU), same, 3100 m a.s.l., near top, sifting in dwarf forest under brushes on pasture; 16.X.1978; leg. C. Besuchet & I. Löbl [16b]. – 1 ♂, 2 ♀ (ZMMU), same, 2700 m a.s.l., forest, sifting near litter; 16.X.1978; leg. C. Besuchet & I. Löbl [17].

REMARKS: The species was originally described from Nepal (Wunderlich, 1983) and is here recorded from India for the first time.

RANGE: Himalayan.

Gongylidioides keralaensis sp. n. Figs 32-38, 114

HOLOTYPE: ♂, INDIA, Kerala, Cardamom Hills, near Munnar, Muttapatti, 1700 m a.s.l, forest, sifting litter under tree ferns; 24.XI.1972; leg. C. Besuchet & I. Löbl [48].

PARATYPES: 2 ♀, from same locality, collected together with the holotype.

ETYMOLOGY: The species name, an adjective, refers to the Indian State where the new species was found.

FIGS 32-37

Gongylidioides keralaensis sp. n., ♂ holotype. (32-33) Right palp, retrolateral and prolateral views, respectively. (34) Palpal tibia, dorsal view. (35) Distal suprategular apophysis. (36-37) Embolic division, different aspects.

DIAGNOSIS: The new species is characterized by the peculiar shape of the male palpal tibia, as well as by the shape of the ventral epigynal plate.

DESCRIPTION: Male. Total length 2.35. Carapace 1.13 long, 0.85 wide, pale brown, unmodified, with blurred grey median stripe and dark margin. Chelicerae 0.50 long, unmodified, stridulatory area distinct. Legs pale brown. Leg I 4.18 long (1.13+0.30+1.10+1.00+0.65), IV 4.71 long (1.00+1.28+0.93+0.95+0.55). Chaetotaxy 2.2.1.1, spines long and stout. TmI 0.74. All metatarsi with a trichobothrium. Palp (Figs 32-37): Tibia with a large prolateral process basally bent at a right angle. Cymbium without posterodorsal outgrowth. Tegulum small, ending with rounded protegulum. Distal suprategular apophysis long and wide well protruding forward, membranous

FIGS 38-41

Gongylidioides keralaensis sp. n., ♀ paratype (38) and *G. pectinatus* sp. n., ♂ holotype (39-41). (38) Epigyne, ventral view. (39-41) Carapace, lateral, frontal and dorsal views, respectively. Not to scale.

distally. Radix very small, surrounded by membranous tissue. Embolus long, curved gradually. Convector (after Tanasevitch, 1998: 423) complicated in shape, it longest lobe long, narrow and accompanying the embolus for its protection. Abdomen 1.30 long, 0.88 wide, laterally pale, dorsally grey, with a pale median stripe and several transversal bands.

Female. Total length 2.65. Carapace 1.00 long, 0.80 wide, unmodified. Chelicerae 0.50 long, unmodified. Leg I 3.90 long (1.05+0.30+1.00+0.95+0.60), IV 4.01 long (1.13+0.30+1.00+1.03+0.55). TmI 0.80. Abdomen 1.68 long, 1.13 wide. Epigyne and vulva as shown in Figs 38, 114. Body and leg coloration, as well as chaetotaxy, as in male.

TAXONOMIC REMARKS: The new species seems to be most similar to *G. diellipticus* Song & Li, 2008 known from a female from Taiwan (Song & Li, 2008), but differs clearly by the shape of the ventral epigynal plate.

DISTRIBUTION: Known from the type locality only.

Gongylidioides pectinatus sp. n. Figs 39-46

HOLOTYPE: ♂, INDIA, Himachal Pradesh, 12 km E of Mandi, 750 m a.s.l., leaf litter; 25.X.1988; leg. S. Vit [35].

PARATYPE: 1 ♂, INDIA, Uttar Pradesh, Kumaon, environs of Bhim Tal, eastern slope, 1500 m a.s.l., edge of dry secondary forest; 4.X.1979; leg. I. Löbl [1].

ETYMOLOGY: The specific name is a Latin adjective meaning "with a comb", referring to the peculiar shape of the convector.

DIAGNOSIS: The new species is characterized by the peculiar shape of the palpal tibia, as well as by the presence of a fringed lobe in the embolic division.

DESCRIPTION: Male (holotype). Total length 1.50 (1.68 in paratype). Carapace 0.68 long, 0.53 wide, modified as shown in Figs 39-41, brown with blackish margin. Eyes relatively large. Chelicerae 0.23 long, unmodified. Legs pale brown. Leg I 2.25 long (0.60+0.18+0.60+0.50+0.37), IV 2.15 long (0.60+0.18+0.55+0.52+0.30). Chaetotaxy 2.2.1.1, length of spines about 1.5 diameter of segment. TmI 0.56 (0.38 in paratype). All metatarsi with a trichobothrium. Palp (Figs 42-46): Tibia conical, elongated, with two small denticles terminally. Paracymbium long and narrow, with several short spines proximally, and a few long spines distally. Distal suprategular apophysis very large, flat, distally pointed, well-protruded forward. Radical part of embolic division very small and membranous, embolus thin, long and curved. Convector relatively large and complicated in shape, with several lobes, one with a comb-like fringe. Abdomen 0.83 long, 0.55 wide, dark grey, with a pale median stripe.

Female unknown.

TAXONOMIC REMARKS: The new species is well distinguished from other congeners by the small body size, by the peculiar shape of the palpal tibia, as well as by the presence a lobe with a comb-like fringe on the convector.

DISTRIBUTION: Known from two localities in northern India.

Gorbothorax aff. ***ungibbus*** Tanasevitch, 1998 Figs 47-52

MATERIAL: 1 ♂, INDIA, Meghalaya, 15 km N of Darugiri, Garo-Hills, 400 m a.s.l., forest, sifting litter in ravine; 4.XI.1978; leg. C. Besuchet & I. Löbl [40b].

DESCRIPTION: Male. Total length 1.63. Carapace 0.80 long, 0.63 wide, unmodified, yellow. Chelicerae 0.30 long, unmodified. Legs pale yellow. Leg I 2.92 long (0.75+0.25+0.75+0.70+0.47), IV 2.95 long (0.80+0.25+0.75+0.75+0.40). Chaetotaxy and trichobothriotaxy unclear: spines mostly lost, but should be 2.2.1.1, all metatarsi with a trichobothrium. Palp as shown in Figs 47-52. Abdomen 0.78 long, 0.53 wide, white with ambiguous pale grey pattern.

REMARKS: The male shows strong similarities to *G. ungibbus* Tanasevitch, 1998, described from Nepal (Tanasevitch, 1998), but differs by some small details of palp structure. Each form is known from a single male, so it is impossible to say now if the differences are due to variability of characters or if these males belong to distinct but closely related species.

DISTRIBUTION: Known from a single locality in northern India.

FIGS 42-46

Gongylidioides pectinatus sp. n., ♂ paratype. (42-43) Right palp, retrolateral and prolateral views, respectively. (44) Palpal tibia, prolateral view. (45) Palpal tibia and paracymbium, retrolateral view. (45) Embolic division.

Halorates concavus sp. n. Figs 53-57

HOLOTYPE: ♂, PAKISTAN, Swat District, above Utrot, 2600 m a.s.l., wet clearing in *Abies* & *Cedrus* forest, sifting mosses & rotten litter; 13.V.1983; leg. C. Besuchet & I. Löbl [11d].

PARATYPE: 1 ♂, Swat District, above Utrot, 2500-2600 m a.s.l., *Abies* & *Cedrus* forest, sifting rotten wood litter; 14.VI.1983; leg. C. Besuchet & I. Löbl [12c].

COMPARATIVE MATERIAL EXAMINED: *Collinsia japonica*, SMF 31674, 4 ♀, NEPAL, southern part of Annapurna Massive, Pass Gorapani, 2700-2800 m a.s.l.; 23.II.1974; leg J. Martens. – SMF 31670, 2 ♂, southern part of Dhaulagiri Massive, Dhorpatan, 3000 m a.s.l.;

FIGS 47-52

Gorbothorax aff. *ungibbus* Tanasevitch, 1998. (47-48) Right palp, retrolateral and prolateral views, respectively. (49-50) Palpal tibia, dorsal and prolateral views, respectively. (51) Distal suprategular apophysis and embolus. (52) Distal suprategular apophysis and embolic division.

24.V.1973; leg J. Martens. – SMF 31671, 1 ♀, vestern part of Dhaulagiri Massive, trail from Dhorpatan to Tarakot, 3100-3600 m a.s.l.; 30.V.1973; leg J. Martens. – SMF 31672, 2 ♀, northern part of Dhaulagiri Massive, Dolpo, Tal Valley above Barbung Khola, Charka, 4300 m a.s.l.; 24.-29.VI.1973; leg. J. Martens. – SMF 31673, 1 ♂, Thakkhola, Kali-Gandaki Valley, Chadziou-Khola Valley near Ghasa, 2600 m a.s.l.; IX.1969; leg J. Martens. All identified by J. Wunderlich in 1979.

ETYMOLOGY: The specific name is a Latin adjective meaning "concave", "cupped" referring to the shape of the embolus.

FIGS 53-57
Halorates concavus sp. n., ♂ holotype. (53-54) Right palp, retrolateral and ventral views, respectively. (55) Palpal tibia, dorsal view. (56) Distal suprategular apophysis. (57) Embolic division.

DIAGNOSIS: The new species is characterized by the peculiar shape of its embolus.

DESCRIPTION: Male (holotype). Total length 2.03. Carapace 1.00 long, 0.80 wide, unmodified, reddish brown. Chelicerae 0.35 long, with small pointed frontal tooth. Legs reddish brown. Leg I 2.54 long (0.70+0.25+0.58+0.58+0.43), IV 2.58 long (0.70+0.23+0.65+0.60+0.40). Chaetotaxy 2.2.2.1, spines weak, their length about 1-1.5 diameter of segment. TmI 0.44. Metatarsus IV without trichobothrium. Palp

(Figs 53-57): Tibia abruptly narrowed distally, ending with a tapering transparent membranous process. Posterodorsal cymbial outgrowth keel-shaped, with a shallow saddle. Distal suprategular apophysis flat, spatulate, with a narrow membrane distally. Radical part of embolic division with two serrate lobes and a strongly sclerotized tooth-shaped outgrowth; embolus flat and wide, with claw-shaped tip. Abdomen 1.13 long, 0.75 wide, dark grey.

Female unknown.

TAXONOMIC REMARKS: The new species appears to be most similar to *H. crassipalpis* (Caporiacco, 1935) known from the Karakorum (Caporiacco, 1935; Thaler, 1987), but differs well by the larger size and by the unequal posterodorsal outgrowth of the cymbium, as well as by the claw-like distal part of the embolus, and also by the shape of the serrated lobes of the radical part of the embolic division. The new species clearly differs from *H. japonica* (Oi, 1964) (see Wunderlich, 1983), the only congener that also occurs in the Himalayas, by the shorter and wider lobes of the embolic division.

VARIABILITY. Details of the both palps in both males examined look identical.

DISTRIBUTION: Known from the type locality only.

Indophantes tonglu sp. n. Figs 58-63

HOLOTYPE: ♂, India, West Bengal, Darjeeling District, Tiger Hill, 2500-2600 m a.s.l., forest near top, sifting litter; 18.X.1978; leg. C. Besuchet & I. Löbl [19].

PARATYPE: 1 ♂, West Bengal, Darjeeling District, Tonglu, northern slope, 2700 m a.s.l., forest, sifting litter; 16.X.1978; leg. C. Besuchet & I. Löbl [17].

ETYMOLOGY: The specific epithet is a name in apposition taken from one of two localities at which this species was found.

DIAGNOSIS: The new species can be easily distinguished by the peculiar shape of the lamella characteristica, and by the embolus with an expanded thumb carrying a well-sclerotized black tubercle.

DESCRIPTION: Male (holotype). Total length 1.75. Carapace 0.83 long, 0.68 wide, unmodified, pale brown, almost yellow, with a narrow grey margin. Chelicerae 0.43 long, unmodified. Legs pale yellow. FeI 0.95 long. Leg IV 3.38 long (0.93+0.20+0.80+0.90+0.55). Chaetotaxy: TiI: 2-1-1-0, TiII: 2-0-1-0, III-IV: 2-0-0-0, MtI-IV: 1-0-0-0. Metatarsus IV without trichobothrium. TmI 0.27. Palp (Figs 58-63): Cymbium with a keel-shaped posterodorsal outgrowth. Distal part of paracymbium with two tooth-like projections. Lamella characteristica relatively short, its upper branch thin, its lower one wide, bifurcated. Embolus large, its thumb highly expanded and carrying a well-sclerotized black tubercle.

Abdomen 0.85 long, 0.60 wide, grey.

Female unknown.

TAXONOMIC REMARKS: The new species seems to be similar to *I. agamus* Tanasevitch & Saaristo, 2006, known from Nepal (Tanasevitch & Saaristo, 2006). Both species can be easily distinguished by the shape of the lamella characteristica and embolus.

DISTRIBUTION: Known from two localities in northern India.

FIGS 58-63

Indophantes tonglu sp. n., ♂ holotype (58-59, 61-63) & ♂ paratype (60). (58) Right palp, retrolateral view. (59-60) Paracymbium, different aspects. (61) Embolic division. (62) Embolus. (63) Lamella characteristica.

Indophantes digitulus (Thaler, 1987)

MATERIAL: 2 ♀, PAKISTAN, Punjab, Murree, 1950 m a.s.l., leaf litter under *Quercus*; 23.IV.1984; leg. S. Vit [PAK-84/20]. – 1 ♀, Hazara District, Kāghān Valley, NW of Mahandri, Kamalban Forest, 1800 m a.s.l., fern litter; 3.VII.1985; leg. S. Vit [PAK-85/15]. – 2 ♂, Nathia Gali, 2300 m a.s.l., under stones; 17.IV.1984; leg. S.Vit [PAK-84/4]. – 1 ♀, INDIA, Himachal Pradesh, Kulu Valley, Chijoga (S of Manali), 1900 m a.s.l., in rotten stump of coniferous tree; 12.X.1988; leg. S. Vit [16]. – 1 ♀, Kulu Valley, Vashisht Baths (N of Manali), bank of Beas River, 1900 m a.s.l., fern litter; 13.X.1988; leg. S. Vit [20]. – 1 ♂, 3 ♀, Chijoga (S-Manali), 1900 m a.s.l., wet ravine, from rodent burrow; 14.X.1988; leg. S. Vit [22]. – 3 ♂, 2 ♀, Khajjiar, E of Dalhousie, 1950 m a.s.l., *Cedrus* forest, fern litter; 21.X.1988; leg. S. Vit [30/88].

REMARKS: The species was originally described from Kashmir, India (Thaler, 1987, under *Lepthyphantes* Menge, 1866) and later recorded from Nepal (Tanasevitch,

1987; Tanasevitch & Saaristo, 2006). The species is here recorded from Pakistan for the first time.

RANGE: Himalayan.

Maso sundevalli (Westring, 1851)

MATERIAL: 1 subad. ♂, 2 ♀, PAKISTAN, Punjab, Murree, 1950 m a.s.l., leaf litter under *Quercus*; 23.IV.1984; leg. S. Vit [PAK-84/20]. – 1 ♀, 3 subad. ♀, same, leaf litter under *Aesculus*; 23.IV.1984; leg. S. Vit [PAK-84/22]. – 1 ♀, Hazara District, Kāghān Valley, NW of Mahandri, Kamalban Forest, 2200 m a.s.l., leaf litter under *Viburnum*; 3.VII.1985; leg. S. Vit [PAK-85/18]. – 1 ♀, 3 subad. ♀, Dunga Gali, 2300 m a.s.l., leaf litter in scree; 22.IV.1984; leg. S. Vit [PAK-84/18].

REMARKS: The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: Holarctic.

Microbathyphantes palmarius (Marples, 1955)

MATERIAL: 1 ♂, INDIA, New Dehli, coll. Heimer. – 1 ♂, Uttar Pradesh, Kumaon, Bhim Tal, eastern slope, 1500 m a.s.l., edge of secondary forest, sifting, 4.X.1979, leg. I. Löbl.

REMARKS: The locality in Uttar Pradesh is the northernmost point of the known distribution of *M. palmarius*, lying just at the border between the Palaearctic and the Oriental regions. The species is here recorded from the Himalayas and India for the first time.

RANGE: Oriental-Pacific.

Microlinyphia pusilla (Sundevall, 1830)

MATERIAL: 1 ♀ (MSNV), PAKISTAN, Karakorum, Baltistan, Katzaran, 2200 m a.s.l., 23.VII.1976, leg. G. Osella. – 4 ♀ (MSNV), 2 ♀ (ZMMU), Northern Areas, Skardu District, Skardu, Pakova, 2300 m a.s.l., 27.VII.1976, leg. G. Osella.

REMARKS: In the Himalayas this species was hitherto known only from the Karakorum (Caporiacco, 1935; Helsdingen, 1970).

RANGE: Holarctic.

Oia sororia Wunderlich, 1973

MATERIAL: 1 ♂, INDIA, West Bengal, between Ghoom and Lopchu, 13 km from Ghoom, northern slope, 2000 m a.s.l., 14.X.1978, leg. C. Besuchet & I. Löbl [14].

REMARKS: This species was hitherto known only from Nepal (Wunderlich, 1973, 1983), and is here recorded from India for the first time.

RANGE: Himalayan.

Paracymboides gen. n.

TYPE SPECIES: *Paracymboides tibialis* sp. n.

ETYMOLOGY: The generic name refers to the peculiar shape of the paracymbium; gender masculine.

DIAGNOSIS: The new genus is characterized by the highly modified palpal tibia, the narrow, long and mammoth-tusk-like paracymbium, the simple embolic division with a long embolus, and the well-developed median membrane.

DESCRIPTION: Small-sized erigonines, total length 1.50-1.80 mm. Carapace unmodified, sulci absent, eyes normal. Chaetotaxy 1.1.1.1. TmI 0.30-0.36. Metatarsus IV without trichobothrium. Palpal tibia highly modified. Paracymbium narrow, very long and strong curved. Median membrane well developed and protruded forward. Embolic division very simple: radical part elongated, flat, without outgrowths or processes; embolus thin, very long and slightly curved distally. Epigyne without cavity, its ventral surface (= "ventral plate" sensu Millidge (1984)) hairy. Receptacles relatively large, complex.

TAXONOMIC REMARKS: It is difficult to say anything about the closest relatives of this genus at present. It is likely that they will be found among other SE-Asian erigonines.

SPECIES INCLUDED: *Paracymboides tibialis* sp. n. (the type species) and *P. aduncus* sp. n.

DISTRIBUTION: Southern India.

Paracymboides tibialis sp. n. Figs 64-67, 115

HOLOTYPE: ♂, INDIA, Tamil Nadu, Nilgiri Hills, Ootacamund, 2150 m a.s.l., sifting litter under bushes in ravine; 21.XI.1972; leg. C. Besuchet & I. Löbl [41].

PARATYPES: 2 ♂, 6 ♀; 2 ♂, 2 ♀ (ZMMU), from same locality, collected together with the holotype. – 1 ♂, 1 ♀, Tamil Nadu, Nilgiri Hills, Coonoor, 1600 m a.s.l., forest, sifting litter; 22.XI.1972; leg. C. Besuchet & I. Löbl [43]. – 3 ♀, same, 6 km E of Coonoor, forest, sifting litter; 22.XI.1972; leg. C. Besuchet & I. Löbl [42]. – 1 ♂, Kerala, NW of Anaimalai Hills, Nelliampathi Hills, Kaikatty, 900 m a.s.l., forest, sifting litter near brook; 30.XI.1972; leg. C. Besuchet & I. Löbl [58]. – 1 ♀, Madras (= Chennai), Cardamom Hills, 6 km NE of Kumily, 700 m a.s.l., forest, sifting litter; 3.XI.1972; leg. C. Besuchet & I. Löbl [7].

ETYMOLOGY: The species name, an adjective, refers to the peculiar shape of the male palpal tibia.

DIAGNOSIS: The new species can be easily recognized by the peculiar shape of the male palpal tibia.

DESCRIPTION: Male (paratype). Total length 1.63. Carapace 0.75 long, 0.63 wide, pale reddish brown, unmodified. Chelicerae 0.25 long, unmodified. Legs pale brown. Leg I 2.21 long (0.65+0.18+0.55+0.45+0.38), IV 2.19 long (0.65+0.18+0.58+0.45+0.33). Chaetotaxy 1.1.1.1, spines weak, their length about same as diameter of segment or a little longer. TmI 0.36. Metatarsus IV without trichobothrium. Palp (Figs 64-66): Tibia extended in dorso-ventral directions, with a narrow retrolateral outgrowth curved upward. Paracymbium very long, narrow, curved upward almost to a full circle. Distal suprategular apophysis massive, complex in shape. Median membrane very long, protruded forward and covering distal part of embolus. Radical part of embolic division elongated and lacking of outgrowths. Base of embolus wide, bent

FIGS 64-67

Paracymboides tibialis sp. n., ♂ & ♀ paratypes from Ootacamund, Tamil Nadu. (64-65) Right palp, retrolateral and ventral views, respectively. (66) Embolic division. (67) Epigyne, ventral view.

180º, embolus very long, narrow, slightly curved distally. Abdomen 1.00 long, 0.65 wide, grey.

Female. Total length 1.75. Carapace 0.73 long, 0.60 wide, unmodified. Chelicerae 0.30 long, unmodified. Leg I 2.14 long (0.58+0.20+0.53+0.45+0.38), IV 1.71 long (0.48+0.20+0.38+0.35+0.30). TmI 0.34. Abdomen 1.20 long, 0.90 wide. Epigyne and vulva as shown in Figs 67, 115. Body and leg coloration, as well as chaetotaxy, as in male.

TAXONOMIC REMARKS: *Paracymboides tibialis* sp. n. is similar to *P. aduncus* sp. n.: their embolic division is almost identical. These species can be easily distin-

FIGS 68-72

Paracymboides aduncus sp. n., ♂ holotype, ♀ paratype from Cardamom Hills, Muttapatti. (68-69) Right palp, retrolateral and prolateral views, respectively. (70-71) Palpal tibia, dorsal and prolateral views, respectively. (72) Epigyne, ventral view.

guished by the shape of the palpal tibia and of the distal suprategular apophysis. The female *P. tibialis* sp. n. differs from that of *P. aduncus* sp. n. by the absence of the two-humped outgrowth on the posterior side of the epigyne.

DISTRIBUTION: Southern India.

Paracymboides aduncus sp. n. Figs 68-72, 116

HOLOTYPE: ♂, INDIA, Tamil Nadu, Palni Hills, 23 km W of Kodaikanal, Lake Berijam, 2150 m a.s.l., *Rhododendron* forest, sifting litter; 14.X1.1972; leg. C. Besuchet & I. Löbl [26].

PARATYPES: 1 ♂, 1 ♀, INDIA, Kerala, Cardamom Hills, 13 km NE of Munnar, 1900 m a.s.l., forest, sifting litter; 26.XI.1972; leg. C. Besuchet & I. Löbl [51]. – 1 ♀, Cardamom Hills,

near Munnar, Muttapatti, 1700 m a.s.l, forest, sifting litter under tree ferns; 24.XI.1972; leg. C. Besuchet & I. Löbl [1972/48].

ETYMOLOGY: The species name is a Latin adjective meaning "hook-shaped", referring to the shape of the palpal tibia outgrowth.

DIAGNOSIS: The new species can be easily recognizable by the peculiar shape of the male palpal tibia.

DESCRIPTION: Male (holotype). Total length 1.55. Carapace 0.68 long, 0.55 wide, unmodified, pale reddish brown, with a narrow black margin. Chelicerae 0.23 long, unmodified. Legs pale brown. Leg I 2.08 long (0.58+0.18+0.50+0.45+0.37), IV 2.13 long (0.60+0.20+0.55+0.43+0.35). Chaetotaxy 1.1.1.1, spines weak, their length a little more than diameter of segment. TmI 0.31. Metatarsus IV without trichobothrium. Palp (Figs 68-71): Palpal tibia with a long and narrow outgrowth starting at retrolateral side and running orthogonally of main palpal axis to prolateral side. Paracymbium very long, narrow, strongly curved. Distal suprategular apophysis short, wide and rounded. Median membrane very long, protruded forward and covering distal part of embolus. Radical part of embolic division elongate and lacking outgrowths. Base of embolus wide, bent 180º, embolus very long, narrow, slightly curved. Abdomen 0.90 long, 0.58 wide, dark grey.

Female. Total length 1.58. Carapace 0.63 long, 0.53 wide. Chelicerae 0.18 long, unmodified. Leg I 1.99 long (0.50+0.18+0.48+0.45+0.38), IV 2.17 long (0.63+0.20+0.58+0.43+0.33). TmI 0.32. Epigyne and vulvae as shown in Figs 72, 116. Body and leg coloration, as well as chaetotaxy, as in male.

TAXONOMIC REMARKS: *Paracymboides aduncus* sp. n. is similar to its only known congener, *P. tibialis* sp. n.; see above.

DISTRIBUTION: Southern India.

Paragongylidiellum caliginosum Wunderlich, 1973

MATERIAL: 4 ♂, 7 ♀; 2 ♂, 2 ♀ (ZMMU), India, Madras (= Chennai), Anaimalai Hills, 18 km N of Valparai, 1250 m a.s.l., forest, sifting litter; 18.XI.1972; leg. C. Besuchet & I. Löbl [35].

REMARKS: This species was hitherto known only from Nepal (Wunderlich, 1973, 1983), and is here recorded from India for the first time.

DISTRIBUTION: Nepal Himalayas and southern India.

Pelecopsis indus sp. n. Figs 73-80

HOLOTYPE: ♂, INDIA, Uttar Pradesh, Garhwal, above Pauri, northern slope, 1900 m a.s.l., *Quercus* dry forest, sifting leaf litter and moss; 28.X.1979; leg. I. Löbl [28].

PARATYPES: 1 ♂, 3 ♀, from same locality, collected together with the holotype. – 1 ♂, 4 ♀, Uttar Pradesh, Kumaon, Rangarh, 2000 m a.s.l., forest in ravine, sifting leaf litter; 9.X.1979; leg. I. Löbl [6b]. – 1 ♀, Garhwal, 2 km E of Dhanolti, northern slope, 2250 m a.s.l., near brook, *Abies* & *Rhododendron* forest, sifting leaf litter; 21.X.1979; leg. I. Löbl [19]. – 1 ♀, Kumaon, Naini Tal, 2000-2100 m a.s.l., forest in ravine, sifting leaf litter and moss; 8.X.1979; leg. I. Löbl [5b]. – 1 ♂, Himachal Pradesh, Kulu Valley, Naggar, 1850 m a.s.l., rotten stump of *Cedrus*, under bark; 16.X.1988; leg. S. Vit [25]. – 1 ♂, Kulu Valley, Vashisht Baths (N of Manali), 1900 m a.s.l.; 13.X.1988; leg. S. Vit [18]. – 1 ♀, PAKISTAN, Swat District, Kalam, 2100 m a.s.l., *Quercus* forest, sifting leaf litter; 12.V.1983; leg. C. Besuchet & I. Löbl [9b]. –

FIGS 73-80

Pelecopsis indus sp. n., ♂ & ♀ paratypes from Pauri, Uttar Pradesh. (73-74) Male carapace, lateral and dorsal views, respectively (not to scale). (75-76) Right palp, retrolateral and prolateral views, respectively. (77) Palpal tibia, dorsal view. (78-80) Epigyne and vulva, ventral, dorsal (inclined 90º) and anterodorsal views, respectively.

1 ♀, S of Saidu Sharif, Murghazar, leaf litter under *Platanus*, 1300 m a.s.l.; 8.V.1983; leg. C. Besuchet & I. Löbl [2b]. – 1 ♂, Ushu Valley, upper reaches of Kalam River, 2300 m a.s.l., *Cedrus* forest, sifting leaf litter under *Corylus*; 15.V.1983; leg. C. Besuchet & I. Löbl [13b]. –

1 ♀, Malam Jabba, 2300 m a.s.l., *Pinus* forest, sifting under *Pinus* and *Corylus*; 9.V.1983; leg. C. Besuchet & I. Löbl [4c].

COMPARATYVE MATERIAL EXAMINED: *Pelecopsis minor*, SMF 60195, 3 ♂, 2 ♀ paratypes, Dundgovi Aimak, 20 km S of Somon Delgertsogt, 1480 m a.s.l.; 9.VI.-13.VII.1967; leg. Z. Kaszab, det. J. Wunderlich.

ETYMOLOGY: The specific name, a noun in apposition, refers to an inhabitant of India.

DIAGNOSIS: The new species is characterized by the smooth surface of its carapace (without pits), by the shape of the male palpal tibia, as well as by the peculiar shape of the ventral plate of the epigyne.

DESCRIPTION: Male (paratype). Total length 1.65. Carapace 0.78 long, 0.58 wide, modified as shown in Figs 73-74; pale brown, with indistinct grey radial stripes. Surface of carapace smooth, without pits. Chelicerae 0.33 long, unmodified. Legs yellow. Leg I 2.16 long (0.60+0.20+0.50+0.48+0.38), IV 2.22 long (0.63+0.20+0.58+0.48+0.33). Chaetotaxy 0.0.0.0. TmI 0.39. All metatarsi with trichobothrium. Palp (Figs 75-77): Tibia with a long, narrow, prolateral process. Cymbium without posterodorsal outgrowth. Distal suprategular apophysis relatively short, wedge-shaped. Embolic division fusiform, with a narrow, long and curved membranous process starting near base of embolus, running forward and covering end of embolus. Abdomen 0.90 long, 0.63 wide, grey, scutum absent.

Female. Total length 1.75. Carapace 0.88 long, 0.63 wide, unmodified. Chelicerae 0.38 long, unmodified. Leg I 2.18 long (0.65+0.20+0.55+0.45+0.33), IV 2.31 long (0.70+0.20+0.63+0.45+0.33). Chaetotaxy 0.0.0.0. TmI 0.44. Abdomen 1.00 long, 0.75 wide. Epigyne and vulva as in Figs 78-80. Body and leg coloration, as well as chaetotaxy, as in male.

TAXONOMIC REMARKS: The new species is similar to the Mongolian *P. minor* Wunderlich, 1995, but differs by bigger body size of both sexes, by the presence a trichobothrium on metatarsus IV, by the smooth carapace surface without pits, as well as by some details of the genitalia.

RANGE: Himalayan.

Piniphantes himalayensis (Tanasevitch, 1987)

MATERIAL: 1 ♀, PAKISTAN, Swat District, above Utrot, 2800 m a.s.l., *Abies* & *Cedrus* forest, sifting rotten coniferous litter; 13.V.1983; leg. C. Besuchet & I. Löbl [11c].

REMARKS: This species was hitherto known from Kashmir (Thaler, 1987) and from numerous localities in Nepal (Tanasevitch, 1987).

RANGE: Himalayan.

Porrhomma pygmaeum (Blackwall, 1834) Fig. 117

MATERIAL: 1 ♀ (MSNV), PAKISTAN, Northern Areas, Ghangche District, Ghangche, Kaplu Ghwari, 2480 m a.s.l.; 26.VI.2008; leg. L. Latella.

REMARKS: The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: Palaearctic.

Prinerigone vagans (Audouin, 1826)

MATERIAL: 1 ♂ (MSNV), PAKISTAN, Karakorum, Baltistan, Shalabot, 1700 m a.s.l.; 15.VIII.1976; leg. G. Osella. – 1 ♂ (MSNV), Northern Areas, Skardu District, Skardu, Pakova, 2300 m a.s.l.; 27.VII.1976; leg. G. Osella. – 1 ♂ (MSNV), Skardu, Lake Satpara, 2700 m a.s.l.; 1.VII.1976; leg. G. Osella. – 3 ♂ (MSNV), Ghangche District, Khaplu, Sciaiak Channel, 2400 m a.s.l.; 10.VII.1976; leg. G. Osella.

REMARKS: The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: Old World.

Scotargus pilosus Simon, 1913

MATERIAL: 1 ♀, PAKISTAN, Hazara District, Kāghān Valley, 1450 m a.s.l., Malkandi Forest, rotten coniferous stub; 29.VI.1985; leg. S. Vit [PAK-85/3]. – 4 ♂, 8 ♀, INDIA, Himachal Pradesh, Kulu Valley, Naggar, 1850 m a.s.l., litter; 16.X.1988; leg. S. Vit [24]. – 3 ♀, Uttar Pradesh, Kumaon, Chaubattia near Ranikhet, 1800 m a.s.l., forest, sifting leaf litter and moss under fern; 12.-13.X.1979; leg. I. Löbl [10]. – 2 ♂, 1 ♀ (ZMMU), Garhwal, 10 km E of Dhanolti, 2450 m a.s.l., northern slope, *Quercus* forest, sifting litter; 21.X.1979; leg. I. Löbl [21b]. – 2 ♀, Garhwal, 10 km W of Chamba, 2200 m a.s.l., sifting mosses under bushes; 20.X.1979; leg. I. Löbl [17]. – 1 ♂, 4 ♀ (ZMMU), Garhwal, 4 km S of Bhatwari, 1400 m a.s.l., timberline, degraded forest, sifting moss and fern litter; 23.X.1979; leg. I. Löbl [22]. – 1 ♂, Garhwal, above Pauri, northern slope, 1900 m a.s.l., *Quercus* dry forest, sifting leaf litter and moss; 28.X.1979; leg. I. Löbl [28]. – 1 ♂, Garhwal, 2 km E of Dhanolti, northern slope, 2250 m a.s.l., near brook, *Abies* & *Rhododendron* forest, sifting leaf litter; 21.X.1979; leg. I. Löbl [19].

REMARKS: In the Himalayas this species was hitherto known only from Kashmir (Thaler, 1987).

RANGE: European-Ancient Mediterranean.

Tapinocyboides bengalensis sp. n. Figs 81-85

HOLOTYPE: ♂, INDIA, West Bengal, Darjeeling District, Tonglu, 3100 m a.s.l., near top, under stones; 16.X.1978; leg. C. Besuchet & I. Löbl [16a].

ETYMOLOGY: The species name, an adjective, refers to the Indian State where the new species was found.

DIAGNOSIS: The new species is characterized by the peculiar shape of the split palpal tibia.

DESCRIPTION: Male. Total length 1.40. Carapace 0.63 long, 0.53 wide, unmodified, pale brown, sulci absent. Chelicerae 0.25 long, unmodified. Legs yellow. Leg I 1.73 long (0.50+0.15+0.38+0.37+0.33), IV 1.72 long (0.52+0.17+0.43+0.35+0.25). Chaetotaxy 1.1.1.1, length of spines about same as diameter of segment or a little longer. TmI 0.32. Metatarsus IV without trichobothrium. Palp (Figs 81-85): Tibia dorsally deeply divided by a narrow cleft into two parts. Paracymbium simple, U-shaped. Distal suprategular apophysis weakly sclerotized, relatively short, wide and rounded, with a pale thin tooth near it base. Median membrane well developed, protruded forward, distally extended. Radical part of embolic division flat, elongated. Embolus thin, long and coiled, with a narrow membranous edge. Abdomen 0.80 long, 0.55 wide, grey.

Female unknown.

FIGS 81-85

Tapinocyboides bengalensis sp. n., ♂ holotype. (81-83) Right palp, retrolateral, prolateral and dorso-prolateral views, respectively. (84) Palpal tibia, dorsal view. (85) Distal suprategular apophysis and median membrane.

TAXONOMIC REMARKS: This new species is probably not congeneric with the type species *Tapinocyboides pygmaeus* (Menge, 1869) because it has no "lamella" sensu Merrett (1963) in the embolic division and no sulci on the male carapace. Therefore so it is assigned to this genus only provisionally. In the absence of a female, and/or other possible congeners, the taxonomic position of this species is unclear.

DISTRIBUTION: Known from the type locality only.

Tchatkalophantes baltistan sp. n. Figs 86-88

HOLOTYPE: 1 ♀ (MSNV), PAKISTAN, Karakorum, Baltistan, Shalabot, 1700 m a.s.l.; 15.VIII.1976; leg. G. Osella.

FIGS 86-88
Tchatkalophantes baltistan sp. n., ♀ holotype. (86-88) Epigyne, ventral, dorsal (upside down) and lateral views, respectively.

ETYMOLOGY: The specific name is taken from the name of the country of origin.

DESCRIPTION: Female. Total length 1.96. Carapace 0.78 long, 0.60 wide, unmodified, pale brown, almost yellow. Chelicerae 0.35 long, unmodified. Legs mostly lost, yellow. Leg I 3.42 (0.93+0.23+0.88+0.83+0.55), FeI 0.90 long. Chaetotaxy: FeI: 0-1-0-0; TiI: 2-1-1-0, TiII: 2-0-1-0, III-IV: ?; MtI: 1-0-0-0, II-IV: ? TmI 0.25. Abdomen 1.30 long, 0.90 wide, dorsally dark grey, with irregularly arranged small white spots. Epigyne (Figs 86-88): Aperture wide. Proscape with a narrow base, stepwise widening in middle part, bifurcated distally. Posterior median plate triangular.

Male unknown.

TAXONOMIC REMARKS: The new species is similar to the Mongolian *T. hyperauritus* (Loksa, 1965) and differs by a shallower depression in the distal part of the proscape, as well as by the shape of the posterior median plate: in *T. baltistan* sp. n. it wider than high vs higher than wide in *T. hyperauritus*.

DISTRIBUTION: Known from the type locality only.

Tenuiphantes tenuis (Blackwall, 1852)

MATERIAL: 2 ♀ (MSNV), PAKISTAN, Karakorum, Baltistan, Shalabot, 1700 m a.s.l.; 15.VIII.1976; leg. G. Osella. – 1 ♂ (MSNV), Northern Areas, Gilgit District, Bagrot Valley, trap

FIGS 89-96

Tiso incisus sp. n., ♂ & ♀ paratypes from Jutogh, Himachal Pradesh. (89) Right palp, retrolateral view. (90) Paracymbium. (91-92) Palpal tibia, dorsal and prolateral views, respectively. (93) Distal suprategular apophysis. (94) Embolic division. (95) Epigyne, ventral view. (96) Vulva, dorsal view.

#5; 25.X.-2.XI.2008; leg. L. Latella & R. Ahmed. – 1 ♀ (MSNV), Bagrot Valley; 17.VI.2008; leg. L. Latella.

REMARKS: The species is here recorded from the Himalayas and Pakistan for the first time.

RANGE: European-Ancient Mediterranean.

Tiso incisus sp. n. Figs 89-96

HOLOTYPE: ♂, INDIA, Himachal Pradesh, Jutogh, 10 km W of Shimla, 2000 m a.s.l., leaf litter near foot of rock; 29.X.1988; leg. S. Vit [37].

PARATYPES: 13 ♂, 19 ♀; 5 ♂, 3 ♀ (ZMMU), from same locality, collected together with the holotype. – 1 ♀, Himachal Pradesh, Kulu Valley, S of Manali, Chijoga, 1900 m a.s.l., hollow in *Quercus*; 14.X.1988; leg. S. Vit [21]. – 1 ♂, 2 ♀, Uttar Pradesh, Garhwal, 10 km E of Dhanolti, 2450 m a.s.l., northern slope, *Quercus* forest, sifting litter; 21.X.1979; leg. I. Löbl [21b]. – 1 ♀, PAKISTAN, Swat District, S of Saidu-Sharif, Marghuzar, 1300 m a.s.l., sifting leaf litter under *Platanus*; 8.V.1983; leg. C. Besuchet & I. Löbl [2b]. – 1 ♂, 3 ♀, Malam Jabba, 2300 m a.s.l., *Pinus* forest, sifting litter under *Pinus* and *Corylus*; 9.V.1983; leg. C. Besuchet & I. Löbl [4c]. – 1 ♂, same, 2500-2600 m a.s.l., under stones; 18.V.1983; leg. C. Besuchet & I. Löbl [17a]. – 1 ♂, 5 ♀, same, 2500-2600 m a.s.l., *Abies* forest, sifting litter and moss; 18.V.1983; leg. C. Besuchet & I. Löbl [17b]. – 1 ♂, 3 ♀, Kalam, 2100 m a.s.l., *Quercus* forest, sifting leaf litter; 12.V.1983; leg. C. Besuchet & I. Löbl [9b]. – 7 ♀, Ushu Valley, upper reaches of Kalam River, 2300 m a.s.l., *Cedrus* forest, sifting leaf litter under *Corylus*; 15.V.1983; leg. C. Besuchet & I. Löbl [13b]. – 1 ♂, 1 ♀, above Miandam, 2400-2500 m a.s.l., *Abies* forest, sifting litter and moss; 17.V.1983; leg. C. Besuchet & I. Löbl [15b]. – 1 ♂, 1 ♀, same, 2400-2500 m a.s.l., *Abies* forest, sifting litter and moss; 17.V.1983; leg. C. Besuchet & I. Löbl [15b].

ETYMOLOGY: The species name means "incised", "notched", referring to the shape of the embolus.

DIAGNOSIS: The new species is characterized by the peculiar shape of the palpal tibia and the embolic division, as well as by the shape of the ventral plate of the epigyne.

DESCRIPTION: Male. Total length 1.40. Carapace 0.75 long, 0.58 wide, pale brown, unmodified, sulci absent. Chelicerae 0.23 long, unmodified. Legs pale brown. Leg I 1.88 long (0.55+0.20+0.45+0.38+0.30), IV 2.06 long (0.60+0.20+0.55+0.43+0.28). Chaetotaxy 1.1.1.1, spines weak, their length about same as diameter of segment or a little longer. TmI 0.44. Metatarsus IV without trichobothrium. Palp (Figs 89-94): Patella as long as cymbium, with a row of uniform short spines dorsally. Tibia strongly modified: elongated, slightly sigmoid, with several outgrowths different in size and shape. Paracymbium small and narrow, L-shaped. Distal suprategular apophysis long and wide, flat, apically pointed and bent 90º. Radical part of embolic division relatively large and flat. Embolus long, curved, with a notch near it base. Abdomen 0.78 long, 0.50 wide, pale grey.

Female. Total length 1.38. Carapace 0.68 long, 0.53 wide, unmodified. Chelicerae 0.23 long, unmodified. Leg I 1.64 long (0.48+0.20+0.38+0.30+0.28), IV 1.76 long (0.50+0.20+0.45+0.35+0.26). TmI 0.43. Abdomen 0.80 long, 0.55 wide. Epigyne and vulva (Figs 95-96): Ventral plate of epigyne long and narrow. Receptacles spherical, far apart from each other. Body and leg coloration, as well as chaetotaxy, as in male.

TAXONOMIC REMARKS: The new species seems to be most similar to the Holarctic *T. aestivus* (L. Koch, 1872) and can be easily distinguished by the structure of the embolic division: in *T. incisus* sp. n. the loop of the embolus is almost orthogonal to the main axis of the palp, whereas in *T. aestivus* the loop lies almost in the same plane; there are also other small differences in the shape of the palpal tibia and the embolic division. The female differs by the shape of the ventral plate of the epigyne: in *T. aestivus* the ventral plate is triangular, in *T. incisus* sp. n. it is as a narrow transversal stripe.

RANGE: Himalayan.

FIGS 97-100
Tiso (?) *indianus* sp. n., ♂ paratype. (97-98) Right palp, retrolateral and prolateral views, respectively. (99) Palpal tibia, dorsal view. (100) Palpal tibia and paracymbium, lateral view.

Tiso (?) ***indianus*** sp. n. Figs 97-100, 118

HOLOTYPE: ♂, INDIA, West Bengal, Darjeeling District, Tiger Hill, 2500-2600 m a.s.l., near top, forest, sifting litter; 18.X.1978; leg. C. Besuchet & I. Löbl [19].

PARATYPE: 1 ♂, from same locality, collected together with the holotype.

ETYMOLOGY: The specific name is derived from the name of the country of origin; adjective.

DIAGNOSIS: The new species is characterized by the peculiar shape of the embolus and the palpal tibia.

DESCRIPTION: Male (paratype). Total length 1.40. Carapace 0.68 long, 0.50 wide, unmodified, greyish brown. Chelicerae 0.21 long, unmodified. Legs yellow. Leg I 1.78 long (0.51+0.17+0.42+0.39+0.29), IV 1.81 long (0.53+0.15+0.45+0.39+0.29). Chaetotaxy 1.1.1.1, length of spines about same as diameter of segment or a little longer. TmI 0.42. Metatarsus IV without trichobothrium. Palp (Figs 97-100, 118): Tibia with apical outgrowth narrowed at base. Paracymbium narrow, relatively long, hook-

FIGS 101-104
Male carapace of *Walckenaeria martensi* Wunderlich, 1972, carapace, lateral view. (101-103) Specimens from Tonglu, West Bengal. (104) Specimen from Thare Pati, Nepal.

shaped distally. Radical part of embolic division small, embolus very wide, flat, crescent-shapes. Abdomen 0.75 long, 0.56 wide, grey.

Female unknown.

TAXONOMIC REMARKS: In the shape of the paracymbium the species is similar to the representatives of the genus *Paracymboides* gen. n., but the structure of the embolic division is quite different and very peculiar, and this character does not allow to place *T. indianus* sp. n. in that genus. The absence of a corresponding female or of a related species makes the systematic position of the species unclear. Its placement in the genus *Tiso* Simon, 1884 is thus only provisional.

DISTRIBUTION: Known from the type locality only.

Walckenaeria martensi Wunderlich, 1972 Figs 101-104

Walckenaeria nepalensis Wunderlich, 1972 **syn. n.**

TYPE MATERIAL EXAMINED: *Walckenaeria martensi*, SMF 25298/1, ♂ holotype, NEPAL, Khumbu, Everest Region at confluent of Imja- and Phunki-Drangka rivers, *Betula* forest, 3200-3250 m a.s.l.; 30.IX.-2.X.1970; leg. J. Martens. – SMF 25299/7, 1 ♂, 6 ♀ paratypes, same locality, collected together with holotype. – SMF 25300, 2 ♀ paratypes, NEPAL, Khumbu, Pare, Nangba-Tsangpo Valley, subalpine forest with *Betula utilis* and *Rhododendron campanulatum*, 3350 m a.s.l.; 14.16.X.1970; leg. J. Martens. – SMF 25302/1, 1 subad. ♀ paratype, Gorapani, *Rhododendron* forest along stream, 2850-2900 m a.s.l.; 10.-14.XII.1969; leg. J. Martens. *W.*

FIGS 105-108

Walckenaeria saetigera sp. n., ♂ holotype (105-106), ♂ paratype from Weiloi, Meghalaya (107) and £ paratype from Shillong, Meghalaya (108). (105-107) carapace, lateral (105, 107) and dorsal (106) views, respectively. (108) Epigyne, ventral view (not to scale).

nepalensis, SMF 25303/1, ♂ holotype, NEPAL, Kathmandu-Tal, Mt Phulchoki, *Quercus semicarpifolia* forest, 2600-2700 m a.s.l.; 25.-30.I.1970; leg. J. Martens. – SMF 25304/4, 4 ♀ paratypes, same locality, collected together with holotype.

OTHER MATERIAL: 2 ♂, INDIA, West Bengal, Darjeeling District, Tonglu, 3100 m a.s.l., near top, under stones;16.X.1978; leg. C. Besuchet & I. Löbl [16a]. – 1 ♂, 3 ♀, same, sifting in dwarf forest under brushes on pasture; 16.X.1978; leg. C. Besuchet & I. Löbl [16b]. New records of *W. martensi*:1 ♀, NEPAL, Bagmati Province, above Gul Bhanjyang, 2600 m a.s.l., northern slope, old *Quercus* forest, sifting litter and rotten wood under trees; 6.IV.1981; leg. I. Löbl & A. Smetana [9]. – 1 ♂, 1 ♀, lower Thare Pati, 3300 m a.s.l., sifting litter under fern and Acer near stream; 10.IV.1981; leg. I. Löbl & A. Smetana [18b]. – 1 ♀, lower Thare Pati, 3500 m a.s.l., *Acer* forest, sifting litter; 12.IV.1981; leg. I. Löbl & A. Smetana [21]. – 3 ♀, Malemchi, 2800 m a.s.l., sifting litter; 14.IV.1981; leg. I. Löbl & A. Smetana [24]. – 3 ♀, above Shermathang, 2900 m a.s.l., in faeces; 26.IV.1981; leg. I. Löbl & A. Smetana [47b]. – 1 ♀, Kathmandu District, Phulcoki, 2600-2700 m a.s.l., dry forest, sifting litter and rotten wood along fallen trunks; 15.X.1983; leg. I. Löbl & A. Smetana [36]. – 1 ♂, 1 ♀, Sankhuwasawa District, Kosi Province, NE of Kuwapani, 2350 m a.s.l., sifting litter and humus near spring; 5.IV.1984; leg. I. Löbl & A. Smetana [5]. – 1 ♀, same, 2250 m a.s.l., sifting litter near rotten trunk, 6.IV.1984; leg. I. Löbl & A. Smetana [6]. – 1 ♀, NE of Mangmaya, 2300 m a.s.l., northern slope, dry forest, sifting rotten wood and litter; 6.IV.1984; leg. I. Löbl & A. Smetana [7]. – 2 ♀, southern part of Mangsingma, 2200 m a.s.l., and rotten wood in ravine; 11.IV.1984; leg. I. Löbl & A. Smetana [13]. – 1 ♀, Induwa Kola Valley, 2000 m a.s.l., sifting litter and rotten wood; 14.IV.1984; leg. I. Löbl & A. Smetana [18]. – 1 ♀, same, 2100 m a.s.l., sifting litter; 17.IV.1984; leg. I. Löbl & A. Smetana [27].

REMARKS: All three males of *W. martensi* from Tonglu, West Bengal have palps identical to those of the type specimens, but the shapes of the cephalic elevations are slightly different from each other (see Figs 101-104) and similar to that of the holotype

FIGS 109-113

Walckenaeria saetigera sp. n., ♂ holotype. (109-110) Right palp, retrolateral and prolateral views, respectively. (111) Palpal tibia, dorsal view. (112-113) Embolic division and distal suprategular apophysis, different aspects.

of *W. nepalensis*, described from a single male and several females from Nepal (Wunderlich, 1972). A detailed comparison of the male palps of all available material of *W. martensi* and *W. nepalensis* (see above) shown that they belong to the same species. Epigynes are very variable and I could not find identical ones in specimens even from the same locality. *W. martensi*, was described a few pages earlier, therefore I decided that *W. nepalensis* becomes its junior synonym.

RANGE: Himalayan.

FIGS 114-119

Gongylidioides keralaensis sp. n., ♀ paratype from Cardamom Hills, Muttapatti, India (114); *Paracymboides tibialis* sp. n., ♀ paratype from Ootacamund, Tamil Nadu, India (115); *P. aduncus* sp. n., ♀ paratype from Cardamom Hills, Muttapatti, India (116); *Porrhomma pygmaeum* (Blackwall, 1834), ♀ from Kaplu Ghwari, Pakistan (117); *Tiso* (?) *indianus* sp. n., ♂ paratype from Tiger Hill, India (118); *Walckenaeria saetigera* sp. n., ♀ paratype from Shillong, Meghalaya, India (119). (114-117) Vulva. (118) Embolic division and distal suprategular apophysis. (119) Genital region, ventral view. Not to scale.

Walckenaeria saetigera sp. n. Figs 105-113, 119

HOLOTYPE: ♂, INDIA, Meghalaya, above Shillong, Khasi Hills, northern slope, 1850-1950 m a.s.l., primary forest near Shillong Peak, sifting litter; 25.X.1978; leg. C. Besuchet & I. Löbl [27].

PARATYPES: 2 ♀, from same locality, collected together with holotype. – 1 ♀, Meghalaya, above Cherrapunjee, Khasi Hills, 1200 m a.s.l., forest, near foot of rock, sifting litter; 26.X.1978; leg. C. Besuchet & I. Löbl [28b]. – 1 ♂, Khasi Hills, Weiloi, 1700 m a.s.l, sifting in forest; 27.X.1978; leg. C. Besuchet & I. Löbl [31].

ETYMOLOGY: The species name is a Latin adjective meaning "carrying bristles", referring to the group of bristles on the male palpal tibia of this species.

DIAGNOSIS: The new species is characterized by the peculiar shape of the male carapace and the shape of the palpal tibia. The epigyne is also well distinct from that of congeners.

DESCRIPTION: Male (holotype). Total length 2.30. Carapace 1.08 long, 0.75 wide, modified as shown in Figs 105-107, pale orange-yellow. Chelicerae 0.30 long, unmodified. Legs pale orange-yellow. Leg I 2.81 long (0.83+0.25+0.73+0.60+0.40), IV 2.94 long (0.83+0.23+0.83+0.65+0.40). Chaetotaxy 2.2.1.1, spines very thin, their length about same as diameter of segment or a little longer. TmI 0.53. All metatarsi with a trichobothrium. Palp (Figs 109-113): Tibia sickle-shaped, dorsal surface bearing a group of short stout bristles. Paracymbium small, L-shaped. Distal suprategular apophysis distally narrow, claw-shaped. Radical part of embolic division fusiform, with a large conical outgrowth near base of embolus. Embolus relatively short, curved to a semicircle. Abdomen 1.15 long, wide, 0.75, grey.

Female. Total length 2.33. Carapace 1.08 long, 0.80 wide, unmodified. Chelicerae 0.35 long, unmodified. Leg I 3.11 long (0.90+0.30+0.83+0.65+0.43), IV 3.29 long (0.92+0.28+0.88+0.78+0.43). TmI 0.45. Abdomen 1.15 long, 0.78 wide. Epigyne (Fig. 108, 119): Aperture fully covered by tapered ventral plate, with a transversal wrinkle posteriorly. Receptacles oval, well visible on both sides of ventral plate. Body and leg coloration, as well as chaetotaxy, as in male.

VARIABILITY: The shapes of the male carapaces in the holotype and the paratype are slightly different (Fig. 105 cf. Fig. 107).

TAXONOMIC REMARKS: The epigyne bears some resemblance to that of the representatives of the subgenus *Wideria* Simon, 1864, sensu Wunderlich (1972), but the embolic division shows similarities to that of the subgenus *Prosopotheca* Simon, 1884.

DISTRIBUTION: Known from Meghalaya, northeastern India.

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