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A NEW GENUS OF TETRAGNATHID SPIDERS FROM PAPUA NEW GUINEA (ARANEI, TETRAGNATHIDAE)

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A New Genus of Tetragnathid Spiders from Papua New Guinea (Araneae, Tetragnathidae). Marusik, Y. M., Omelko, M. M. — *Nediphya* gen. n. and four new species, *N. lehtineni* sp. n. (type species), *N. hippai* sp. n., *N. lyleae* sp. n. and *N. padillai* sp. n. are described from Papua New Guinea. Some somatic characters of *Nediphya* gen. n. such as modified eyes and a prolateral row of stiff setae on legs I and II resemble those of *Diphya* Nicolet, 1849, but the morphology of its copulatory organs indicates it belongs to Nanometinae, a subfamily known only from Australasia. The status and composition of Nanometinae are briefly discussed. *Nanometa gentilis* Simon 1908 (the type species of *Nanometa* Simon, 1908), thought to be known only from the female, was actually described from both sexes.
Key words: Araneae, Nanometinae, *Diphya*, new species, relationships.

Introduction

Diphya Nicolet, 1849 has an unusual distribution pattern: southern Chile (3 species), Brazil (1 species), South Africa (2–3 species), Madagascar and Tanzania (1 species in each country) and Southeast Asia (China, Japan, Korea, 6 species) (Marusik , 2017; Marusik et al., 2017). A lack of information on *Diphya* in southernmost East Asia and Australasia led us to check specimens in the Zoological Museum, University of Turku. To our surprise, we found four morphospecies (sorted out by Pekka Lehtinen) from Papua New Guinea that appeared to belong to *Diphya*.

Detailed morphological study of the male palp, epigynes, and eye patterns revealed that all morphospecies are closely related to each other and only distantly related to *Diphya macrophthalma* Nicolet, 1849 (the type species of the genus) or other species of *Diphya*. We know of no described tetragnathid genera that have the combination of characters we observed in these Papuan species and therefore have decided to describe here *Nediphya* gen. n. with four new species.

Material and methods

Specimens were photographed with a SEM JEOL JSM-5200 scanning microscope and a Canon EOS 7D camera attached to an Olympus SZX16 stereomicroscope at the Zoological Museum, University of Turku, Finland. Digital images were montaged using CombineZP image stacking software. Epigynes were cleared in a KOH/water solution until soft tissues were dissolved. Photographs were taken of specimens embedded in cotton or paraffin in the bottom of small dishes. All specimens examined from Papua New Guinea belong to (and are deposited in) the Zoological Museum University of Turku (ZMUT). All measurements are given in mm.

Abbreviations used in the text: ALE — anterior lateral eyes, AME — anterior median eyes, PLE — posterior lateral eyes, PME — posterior median eyes, d — dorsal, p — prolateral, r — retrolateral.

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***Nediphya* gen. n.**

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Type species. *Nediphya lehtineni* **sp. n**.

Diagnosis. The new genus differs from all Tetragnathidae by having eyes arranged in 3 rows (figs 12–17). *Nediphya* gen. n. is most similar to *Diphya* (figs 9–11) by having heterogeneous eyes, a prolateral row of stiff setae on the tibia-tarsus of legs I–II, and a strong, large dorsal claw-like branch of the paracymbium. New genus can be distinguished by small anterior lateral eyes, not spaced with posterior eyes, low clypeus (less than diameter of AME), *vs*. ALE equal in size to PLE and PME, lateral eyes widely spaced, clypeus higher than diameter of AME in *Diphya*. In addition, the cephalic part of the carapace in *Nediphya* gen. n. is unmodified (fig. 12) (slanted in *Diphya* (fig. 11)). The two genera can also be distinguished by the shape of the epiandrous plate and the number of fusules (only 2 pairs of fusules located in 2 pits in *Nediphya* gen. n. (fig. 25) *vs*. about 2 dozen arranged in a transverse row in *Diphya* (cf. Marusik & Omelko, 2017)). Males of *Nediphya* gen. n. can be recognized by having a strongly reduced ventral branch of the paracymbium (large and bilobed in *Diphya*, fig. 33) and the presence of a cymbial lobe (lacking in *Diphya* (figs 32–33)), a filamentous and gradually rounded embolus (broad and twisted in *Diphya*). Females of two genera can be easily distinguished by the epigyne weakly sclerotized in new genus and well sclerotized in *Diphya*).

Description. Small, male 2.50, females 2.42–3.10; carapace 1.14 long in male, 1.05–1.23 in females. Carapace pear-shaped, rather high (figs 1–2, 6–8, 12–13, 15), with pattern composed of lateral or sublateral dark bands. Eyes in 3 rows (figs 12–17), AME in first row, ALE and PME in second, and PLE in third. ALE and AME subequal in size, ALE 1.5–2 times smaller than PME, clypeus small, less than 1 diameter of AME. Sternum shield like (figs 3, 19) with slightly darkened margins. Chelicerae not enlarged, with 3 prolateral and 2–3 retrolateral teeth; distal teeth (*Dt*) large (fig. 21). Legs with annulations, tibia-tarsus of legs I and II with rows of stiff subdecumbent setae (fig. 18) forming a kind of "catching basket" (figs 6–8). Few macrosetae, 0–5 on each segment. Tarsi pseudosegmented (fig. 24). Coxae IV in male unmodified, lacking stridulatory teeth or ridges. Female palp with straight, untoothed claw (fig. 12). Abdomen patterned, pattern partly composed of white guanine spots in 2 species. Book lung opercula unmodified, lacking stridulatory ridges. Male spinnerets as in fig. 23. Colulus well developed with 4 setae (fig. 23). Epiandrous plate with 2 pits, each pit with pair of fusules.

Copulatory organs. Male palp with long femur (6 times longer than wide and about 1.4 times longer than patella + tibia); patella and tibia unmodified; cymbium almost round with retrolateral hollow (*Rh*), small antero-retrolateral lobe (*Cl*) connected by shallow fold (*Cf*) to paracymbium; paracymbium composed of small lateral branch (*Pl*) and large dorsal claw-like branch (*Pd*); bulb round in ventral view, hemispherical in lateral view, ventral side of bulb flat, almost entirely covered with broad ribbon-like semitransparent conductor (*Co*); tip of conductor with 3 processes (rounded retrolateral (*Cr*), sharply pointed prolateral (*Cp*) and weakly sclerotized median (*Cm*)); dorso-anterior part of conductor with furrow (*Fc*); embolus (*Em*) very long, filamentous, making 1.5 loops (*ca* 540°), and entirely enclosed by the conductors fold.

Epigyne weakly sclerotized, with distinct median plate (*Mp*), copulatory opening indistinct; copulatory ducts (*Cd*) visible through integument, subparallel; 1–3 pairs of weakly sclerotized receptacles.

Relationships. Although the modified eyes, spination of legs I and II with peculiar stiff setae forming a catching basket, lack of sexual dimorphism, small size and unmodified chelicera in *Nediphya* gen. n. are similar to these in *Diphya*, the morphology of the copulatory organs is significantly different between the two genera.

Highly heterogeneous eyes are also known in *Pinkfloydia* Dimitrov et Hormiga, 2011, but in that genus only the PME are strongly enlarged and larger than the lateral eyes.

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The epiandrous plate in *Nediphya* (fig. 25) is similar to that in *Nanometa* (cf. fig. 87E in Álvarez-Padilla & Hormiga (2011)) and *Dolichognatha pentagona* (Hentz, 1850 (cf. fig. 31G in Álvarez-Padilla & Hormiga (2011)) with 2 isolated pit each bearing 4 fusules.

To date, prolateral rows of stiff setae on tibia-metatarsi of legs I and II are well documented in tetragnathids only in *Diphya* (Tanikawa, 1995; Marusik, 2017, Marusik et al., 2017), but can also be found in *Metellina orientalis* (Spassky, 1932) and *M. kirgisica* (Bakhvalov, 1974) (personal data) and in an unidentified genus and species from Papua New Guinea (figs 52–54).

The bulb in *Nediphya* is very similar to those illustrated of "*Orsinome*" *sarasini* Berland, 1924, Nanometinae sp. and *Nanometa* sp. illustrated by (Álvarez-Padilla & Hormiga (2011), as well as "*Orsinome*" *lagenifera* (Urquhart, 1888). Those species are from either Australia, New Zealand or Tasmania and all have a broad conductor hiding the tegulum as in *Nediphya lehtineni* and a filamentous embolus hidden partly or entirely by the fold of the conductor. In addition, those taxa all possess an antero-lateral lobe of the cymbium (= CEMP or cymbial ectomedian process *sensu* Álvarez-Padilla and Hormiga (2011)) and a cymbial fold between the lobe and the dorsal branch of the paracymbium (= CEBP or cymbial ectobasal process *sensu* Álvarez-Padilla and Hormiga (2011)). In addition to the similar bulb and cymbium morphology in the four species, they each have a well-developed ventral branch of the paracymbium bearing few setae; in *Nediphya lehtineni* sp. n. the ventral branch of paracymbium is strongly reduced and lacks setae (figs 35–39). None of these four species has a modified eye pattern.

Females of "*Orsinome*" *sarasini* and *Nanometa* sp. illustrated by Álvarez-Padilla and Hormiga (2011) have epigynes rather similar to that of *Nediphya lehtineni* sp. n. The complicated morphology of the copulatory organs reflects the phylogenetic relationships between taxa much better than does somatic morphology and thus we consider that *Nediphya* gen. n. belongs to Nanometinae Forster & Forster, 1999 sensu Álvarez-Padilla & Hormiga (2011). Nanometinae is currently composed of the monotypic genera *Nanometa* Simon, 1908 (known from the female only (WSC 2017)) and *Pinkfloydia* Dimitrov et Hormiga, 2011 (Álvarez-Padilla & Hormiga (2011).

Status of **Nanometinae** Forster & Forster, 1999

Forster & Forster (1999) considered Nanometinae to be composed of *Nanometa*, *Orsiella lagenifera* (Urquhart, 1888) (*Orsiella* is a *nomen nudum* and currently species misplaced in *Orsinome*) and *Eryciniolia* Strand, 1912. Álvarez-Padilla & Hormiga's (2011) concept of Nanometinae included only *Nanometa*, *Pinkfloydia*, misplaced "*Orsinome*" *sarasini*, and a single unplaced "Nanometinae sp." It is unclear how Álvarez-Padilla & Hormiga (2011) recognized "*Nanometa* sp." or "Nanometinae sp." without studying the type species, *N. gentilis* Simon, 1908. The type species is known only by the verbal description of Simon (1908) from Western Australia and figures in Dalmas (1917) of the eye region and epigyne of a New Zealand specimen (WSC 2017). Dalmas (1917) studied Simon's type and mentioned some differences between specimens from New Zealand and Australia. It is worth noting that Roewer (1942: 1013) erroneously indicated that *Nanometa gentilis* was described based on the female and known only from Western Australia, although Simon (1908) described both sexes and Dalmas (1917) reported specimens from New Zealand. These errors are repeated in Platnick (2000–2014) and the World Spider Catalog (2017) which are based on Roewer's incorrect data.

The morphology of the copulatory organs of *Pinkfloydia*, *Eryciniolia*, and two misplaced *Orsinome* species differ considerably from *Nanometa* sensu Álvarez-Padilla & Hormiga (2011) and, to our mind, cannot be considered in Nanometinae.

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Distinguishing species of *Nediphya* gen. n. Some species can be recognized by carapace pattern (figs 2, 4, 6–8, 12–15). All species differ by spination and shape of epigyne (see diagnoses of the individual species).

Composition: *Nediphya lehtineni* sp. n. (♂, ♀), *N. hippai* sp. n. (♀), *N. lyleae* sp. n., and *N. padillai* sp. n. (♀), all from Papua New Guinea.

Etymology. The genus name is a combination of two letters from terra typica Papua New Guinea with *Diphya* and, in most Slavic languages, meaning "not *Diphya*". The gender is feminine.

***Nediphya lehtineni* sp. n.** (figs 1–5, 12–13, 16–31, 34–39, 43, 50–51)

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Types. Holotype ♂: Papua New Guinea, Morobe Prov., Mt Kaindi, 2350 m, vegetation, 8–10.03.1974 (H. Hippa) (ZMUT). Paratypes: 1 ♀, same locality, in litter, 11.03.1974; 1 ♀, same locality, in hanging moss of cloud forest, 9.03.1974 (P. T. Lehtinen) (ZMUT).

Figs 1–8. Habitus of *Nediphya lehtineni* sp. n. (1–5), *N. lyleae* sp. n. (6), *N. hippai* sp. n. (7) and *N. padillai* sp. n. (8): 1 —male habitus, dorsal; 2, 6–8 — female habitus, dorsal; 3 — female prosoma, ventral; 4 — female prosoma, dorsal; 5 a, b — female leg I, a —dorsal and b —prolateral.

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Diagnosis. Females of *N. lehtineni* sp. n. differ from those of *N. lyleae* sp. n. and *N. hippai* sp. n. by having lateral dark bands on the carapace *vs.* sublateral in the other two species. *Nediphya lehtineni* sp. n. can be distinguished from *N. padillai* sp. n. (which has a similar carapace pattern) by the shape of the epigyne: the median plate in *N. lehtineni* sp. n. is almost as long as wide *vs.* 3 times wider than long in *N. padillai* sp. n.

Description. Male holotype. Total length 2.52, carapace 1.14 long, 0.95 wide. Carapace yellowish brown with wide dark brown lateral bands on thoracic part and thin light marginal stripe. Chelicerae yellow, with 3 prolateral and 3 retrolateral teeth. Sternum and maxillae yellow. Sternum subtriangular. Labium yellowish gray. Legs yellowish. Femora, tibiae, metatarsi grayish proximally. Abdomen with complicated pattern of spots and stripes dorsally and dark longitudinal stripes laterally.

Length of leg segments in ♂

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.91	0.47	1.97	2.04	0.86	7.23
II	1.37	0.45	1.31	1.38	0.63	5.13
III	0.81	0.29	0.60	0.62	0.38	2.69
IV	1.20	0.24	0.93	0.98	0.45	3.80

Leg spination in ♂

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1d, 3p	1d	2d, 2r	1d	–
II	1d	1d	2d, 1p, 1r	1d	–
III	1d	2d	1d	1d, 1p	–
IV	3d	2d	2d, 1p	1d	–

Male palp as in figs 16–31, 34–39 and as described for genus.

Female. Total length 3.36, carapace 1.23 long, 0.95 wide. Coloration and chelicera as in male.

Length of leg segments in ♀

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.58	0.48	1.50	1.46	0.71	5.72
II	1.29	0.45	1.14	1.17	0.57	4.62
III	0.78	0.32	0.56	0.60	0.38	2.63
IV	1.16	0.33	0.90	0.90	0.44	3.72

Leg spination in ♀

	Femur	Patella	Tibia	Metatarsus
I	1(0)p	1d	2p 1r	
II	–	1d	1d 1p 1r	
III	–	1d	1d 1p 1r	1d 1p 1r
IV	–	1d	2d 1p	1d 1p

Epigyne as in figs 43, 50–51, with subtriangular median plate slightly wider than long; copulatory ducts almost parallel, separated by less than one diameter; 2 pairs of receptacles visible through integument; vulva with round proper receptacles (*Re*) and 2 weakly sclertozied pairs of anterior receptacles, one pair rounded (*Rr*) and the other pair elongated (*Er*).

Note. In *Nanometa* sp., Álvarez-Padilla & Hormiga (2011) interpreted the anterior pairs of receptacles as being part of the copulatory ducts.

Distribution. The new species is known only from the type locality where *Nediphya hippai* sp. n. is also known to occur.

Etymology. The species name is a patronym in honour of our senior colleague Pekka Lehtinen (Turku, Finland) who collected the holotype as well as specimens of the other three species of *Nediphya* gen. n.

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***Nediphya hippai* sp. n.** (figs 7, 14–15, 40–41, 46, 49)

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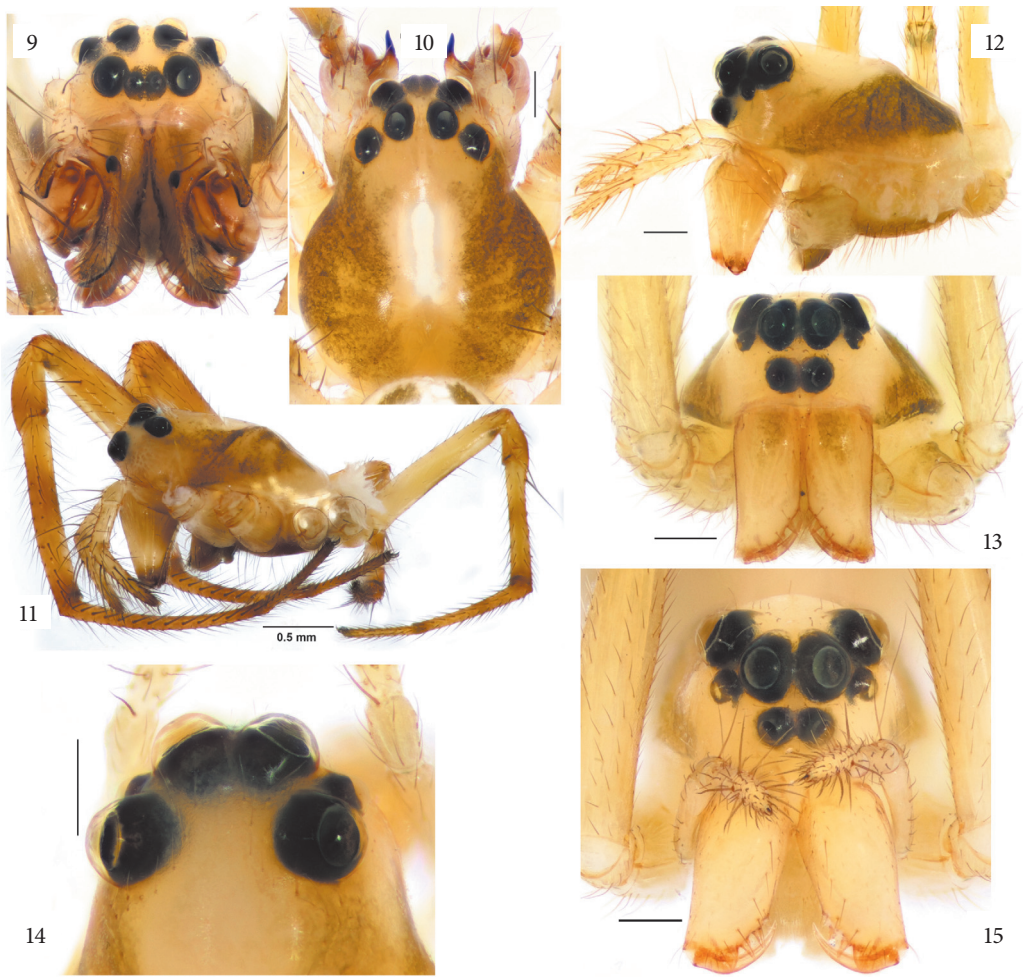
Types. Holotype ♀, paratypes: 1 ♂, subadult and 2 ♀: Papua New Guinea: Morobe Province, Mt Kaindi, 2350 m, 8–10.03.1974 (H. Hippa) (ZMUT).

Diagnosis. *Nediphya hippai* sp. n. and *N. lyleae* sp. n. have similar carapace banding patterns and white spotted abdomens. The two species can be distinguished by epigynal median plates (*Mp*) (wider than long in *N. hippai* sp. n. *vs*. longer than wide in *N. lyleae* sp. n. (cf. figs 40–41 and 44–45)) and femoral spines (lacking in *N. hippai* sp. n. *vs*. present on femora I and II in *N. lyleae* sp. n.

Description. Female holotype. Total length 2.42, carapace 1.08 long, 0.78 wide. Carapace light yellow with dark V-mark. Clypeus blackish. Chelicerae yellow with longitudinal blackish stripes proximally. Sternum, maxillae and labium yellow. Legs yellow. Femora, tibiae, metatarsi grayish distally. Abdomen dorsally dark yellow with light longitudinal band and indistinct transversal stripes and covered with numerous white guanine spots. Abdomen somewhat darker laterally. Abdomen yellow ventrally, without any markings.



Figs 9–15. Somatic characters of *Diphya macrophthalma* (9–11), *Nediphya lehtineni* sp. n. (12–13) and *N. hippai* sp. n. (14–15).

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Length of leg segments

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.50	0.41	1. 47	1.58	0.68	5.63
II	1.20	0.41	1.07	1.17	0.53	4.37
III	0.68	0.30	0.45	0.53	0.38	2.33
IV	0.98	0.29	0.71	0.78	0.41	3.15

Leg spination

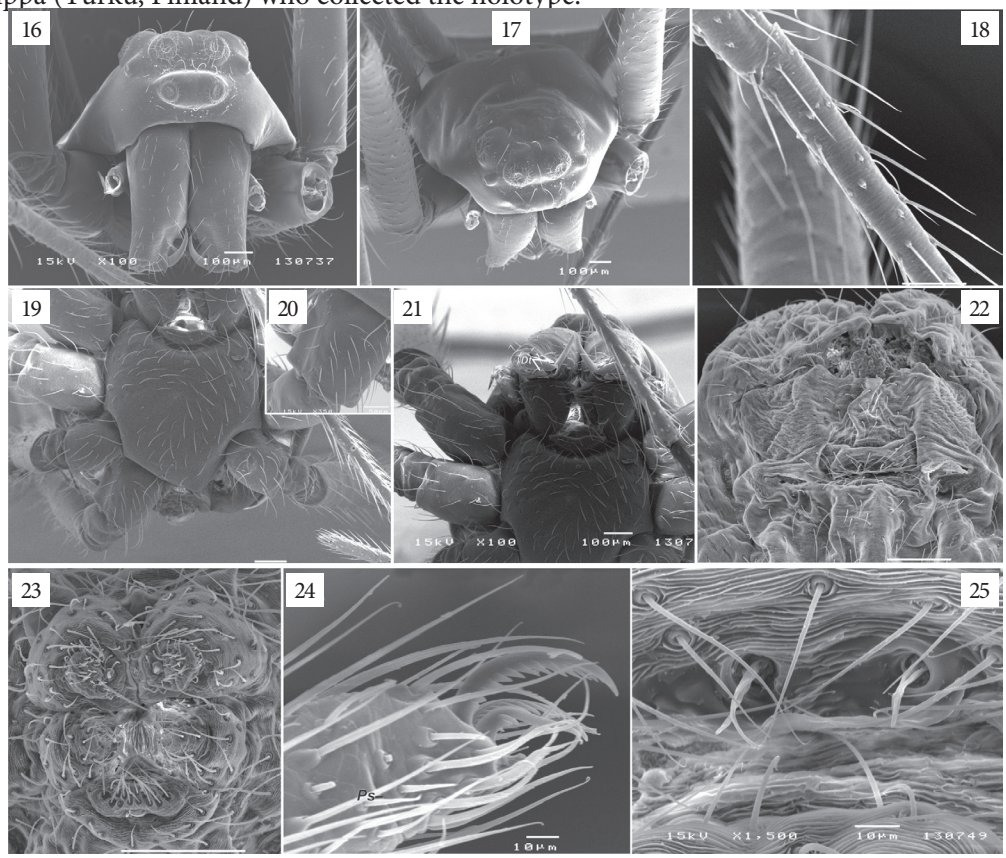
	Femur	Patella	Tibia	Metatarsus
I	–	1d	1p	
II	–	1d	2p 2r	
III	–	1d	1p 1r	1p
IV	–	1d	2d	1p

Epigyne as in figs 40–41, 46, 49; median plate wider than long with distinct sulci directed laterally from copulatory openings, sclerotized copulatory ducts short; receptacles tear-drop shaped. Paratype female with broken off tip of embolus in left receptacle (figs 41, 49).

Male unknown.

Distribution. The new species is known only from the type locality, where *Nediphya lehtineni* sp. n. is also known to occur.

Etymology. The species name is a patronym in honour of our senior colleague Heikki Hippa (Turku, Finland) who collected the holotype.



Figs 16–25. Male somatic characters of *Nediphya lehtineni* sp. n.: 16–17 — prosoma, frontal, and fronto-dorsal; 18 — metatarsus I showing stiff setae; 19, 21 — prosoma, ventral, both cheliceral claws broken; 20 — coxa IV, ventral; 22 — abdomen, ventral showing unmodified book lung operculae; 23 — spinnerets, caudal-ventral; 24 — tarsus II, showing pseudosegmentation (Ps); 25 — epiandrous fusules.

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***Nediphya lyleae* sp. n.** (figs 6, 44–45, 48)

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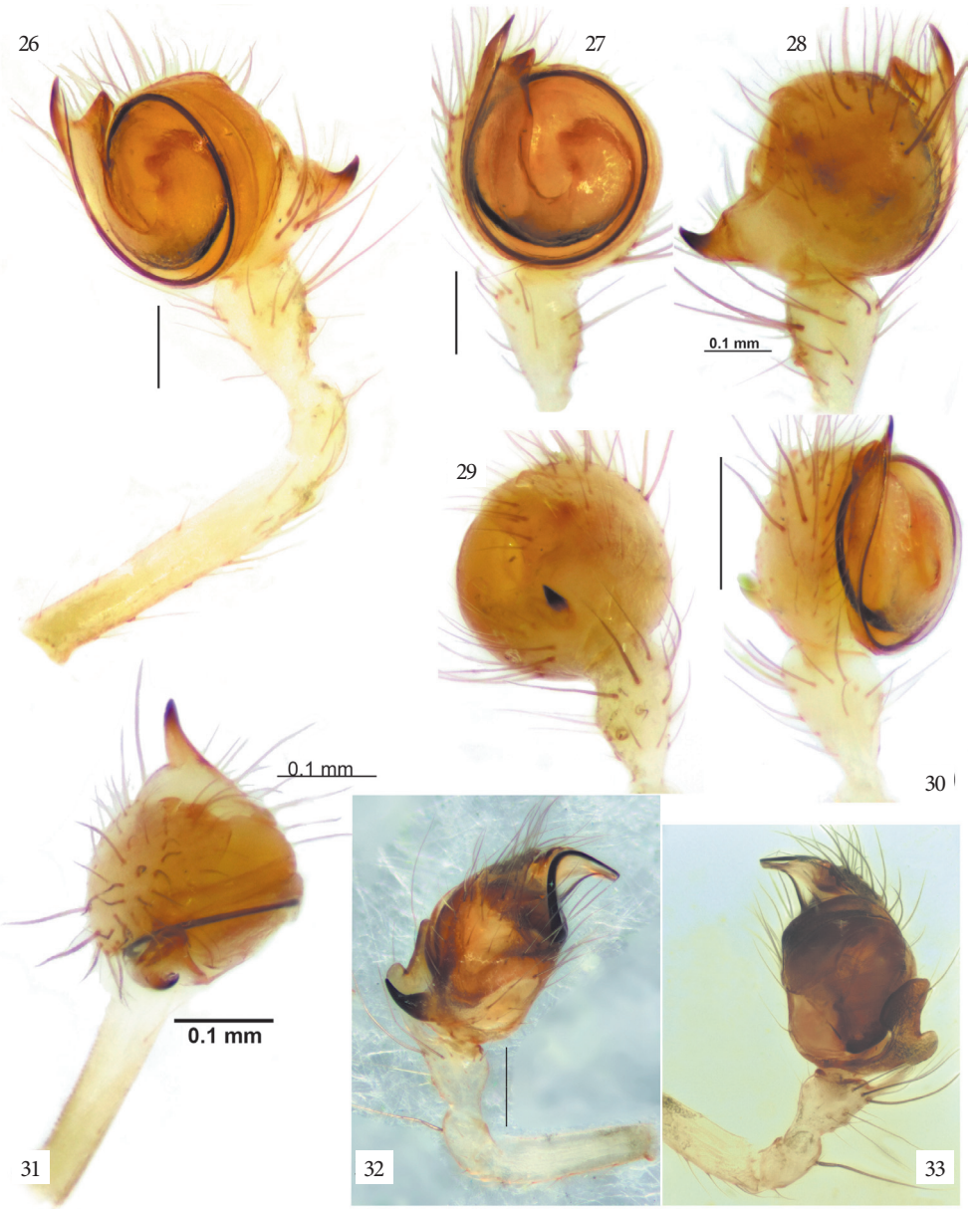
Types. Holotype ♀: Papua New Guinea: Central Province, Goilala District, Avios, in *Sphagnum*, 20.02.1974 (P. T. Lehtinen) (ZMUT). Paratypes: 1 ♀, Papua New Guinea: Central Province, Goilala District, Avios, in litter of rain forest, 17.02.1974 (P. T. Lehtinen); 1 ♀, same locality, in vegetation of roadside, 20.02.1974 (P. T. Lehtinen) (ZMUT).

Diagnosis. *Nediphya lyleae* sp. n. is similar to *N. hippai* sp. n. by carapace pattern and abdominal pattern with white guanine spots. It can be distinguished from the latter by the epigyne with median plate (*Mp*) longer than wide *vs*. wider than long (cf. figs 43 and 44–45) and presence of femoral spines on legs I and II *vs*. lacking on all legs in sibling species.



Figs 26–33. Male palp of *Nediphya lehtineni* sp. n. (26–31) and *Diphya macrophthalma* (32–33): 26, 33 — retrolateral; 27 —ventral; 28 — dorsal; 29 —posterio-dorsal; 30, 32 — prolateral; 31 — anterior.

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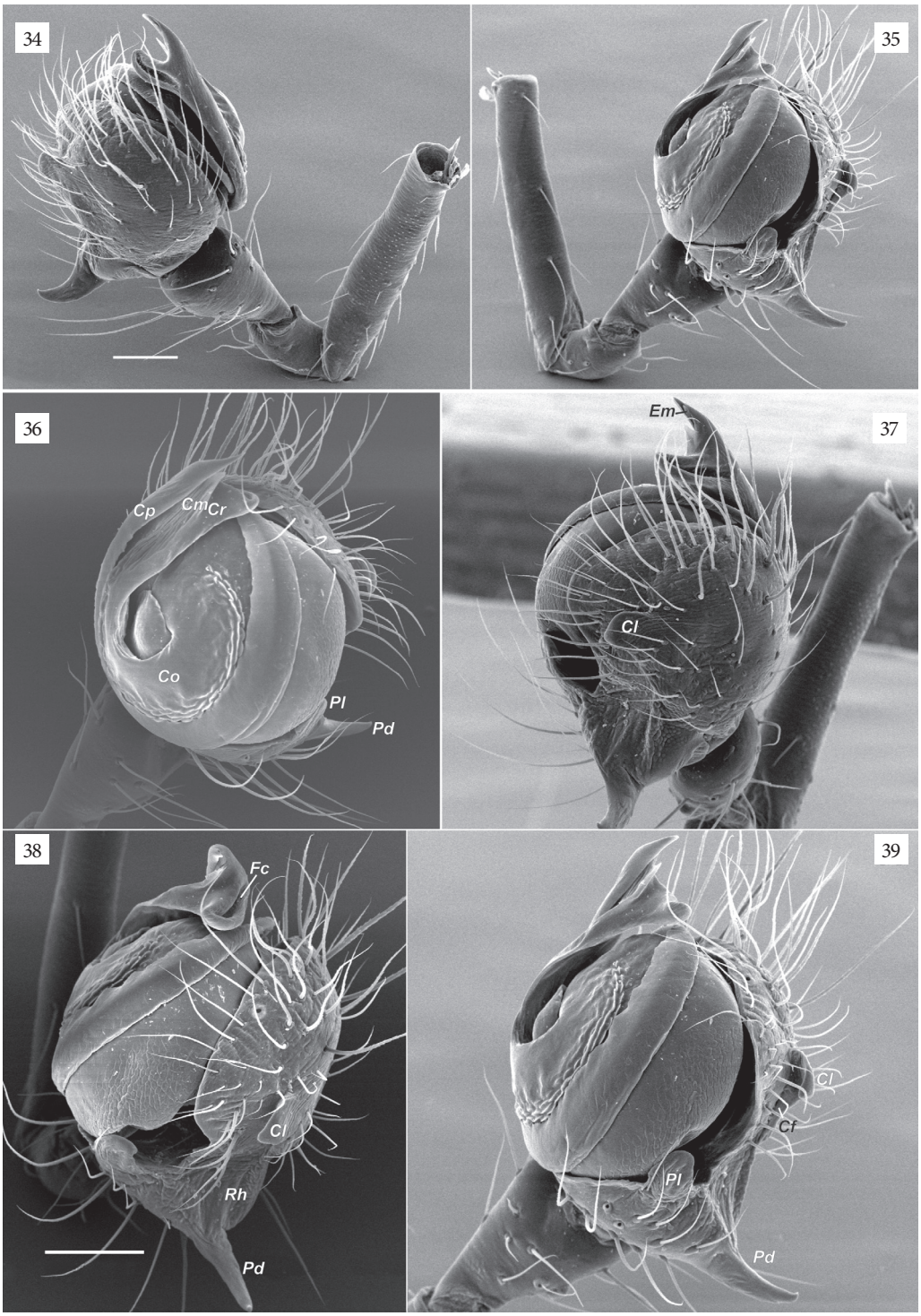

Figs 34–39. Male palp of *Nediphya lehtineni* sp. n.: 34–35 — whole palp, prolateral and retrolateral; 36 — anterio-ventral; 37 — anterio-dorsal; 38 — anterio-retrolateral; 39 — retrolateral.
Abbreviations: *Cf* cymbial fold, *Cl* antero-retrolateral lobe of cymbium, *Cm* median tip of conductor, *Co* conductor, *Cp* prolateral tip of conductor, *Cr* retrolateral tip of conductor, *Em* embolus, *Fc* conductor furrow, *Pd* dorsal branch of paracymbium, *Pl* lateral branch of paracymbium.

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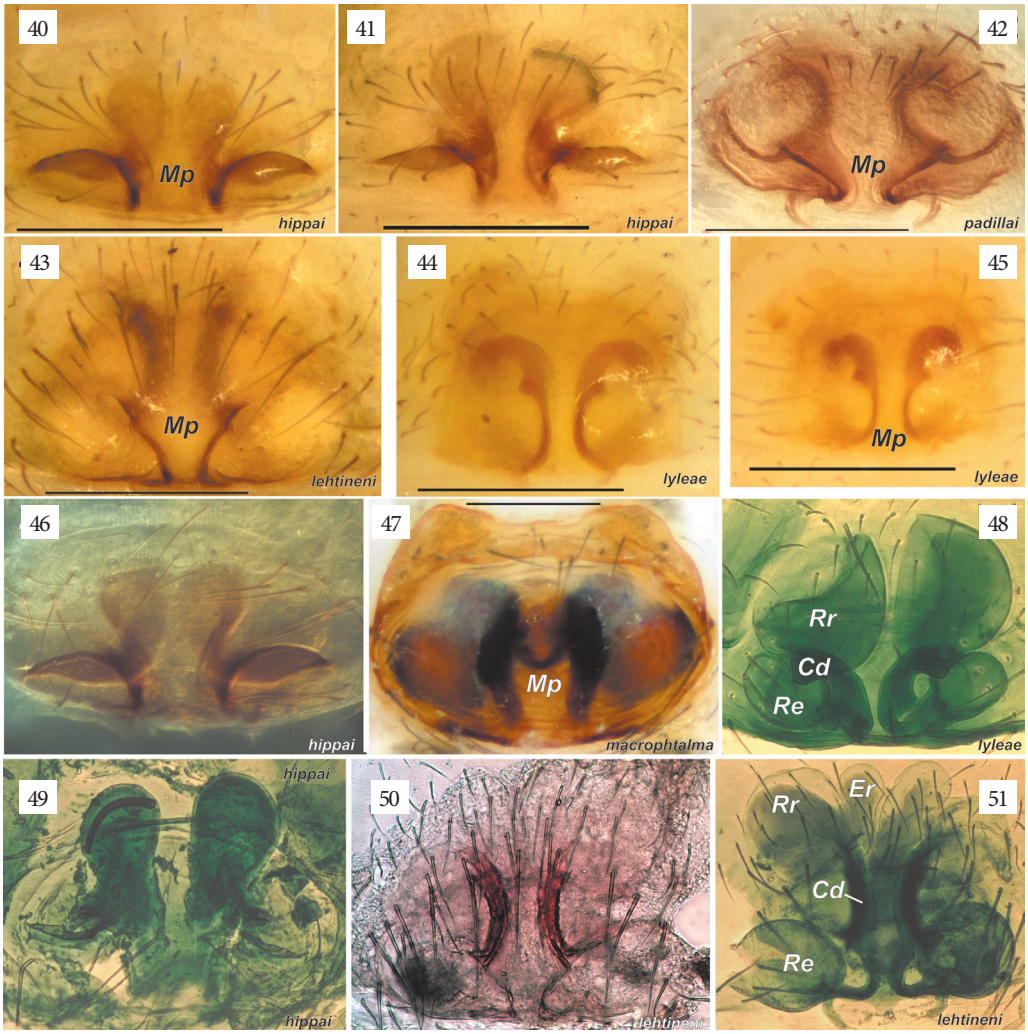
Description. Female holotype. Total length 2.7, carapace 1.05 long, 0.85 wide. Carapace light brown with dark brown V-mark. Chelicerae with 3 prolateral and 2 retrolateral teeth. Chelicerae, maxillae, labium and sternum yellow. All eyes with black edging (completely encircling AME and PME, on ALE and PLE on inner margins only). Leg segments dark at top. Tibiae and metatarsi with light and dark rings. Abdomen light yellow with pattern obscured due to poor specimen preservation.

Length of leg segments

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.58	0.57	1.62	1.80	0.69	6.26
II	1.17	0.48	1.13	1.20	0.57	4.55
III	0.80	0.30	0.53	0.57	0.32	2.51
IV	1.05	0.30	0.77	0.83	0.35	3.29



Figs 40–51. Epigynes of *Nediphya hippai* sp. n. (40–41, 46, 49), *N. padillai* sp. n. (42), *N. lehtineni* (43, 50–51), *N. lyleae* sp. n. (44–45, 48) and *Diphya macrophthalma* (47). Scale = 0.2 mm.
Abbreviations: *Cd* copulatory ducts, *Er* elongate anterior receptacles, *Mp* median plate, *Re* round proper receptacles, *Rr* round anterior receptacles.

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Leg spination

	Femur	Patella	Tibia	Metatarsus
I	2p 1r	1d	2d 2p 1r	
II	1r	1d	1d 1p 2r	1d
III	–	1d	1d 1p 1r	1d 1p
IV	–	2d	2d 1p 2r	1d 1p

Epigyne as in figs 44–45, 48; median plate longer than wider, copulatory ducts arched and separated by about one diameter at the base.

Distribution. The new species is known only from the type locality where *N. padillai* is also known to occur.

Etymology. The species name is a patronym in honour of our colleague Robin Lyle (Pretoria, South Africa), coauthor of the study of African *Diphya* (Marusik & Lyle in prepartion).

***Nediphya padillai* sp. n.** (figs 8, 42)

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Type. Holotype ♀: Papua New Guinea, Central Province, Goilala District, Avios, 2600 m in sphagnum, 20.02.1974 (P. T. Lehtinen, J. Ingi, P. Ivola) (ZMUT).

Diagnosis. *Nediphya padillai* sp. n. is larger than its congeners (carapace length 1.35 *vs*. 1.05–1.23 in other species). In general appearance it is most similar to *N. lehtineni* sp. n. Both species have wide lateral bands on the carapace and lack white guanine spots on the abdomen. The two species can be distinguished from each other by difference in carapace pattern (dark bands starting from PLE in *N. padillai* sp. n. *vs*. bands present on thoracic part), leg spination (tibia I with 5 spines in *N. padillai* sp. n. *vs*. 3; metatarsus IV without spines in *N. padillai* sp. n. *vs*. 2), and shape of the epigynal median plate (3 times wider than long in *N. padillai* sp. n. *vs.* almost as long as wide).

Description. Female holotype. Total length 3.1, carapace 1.35 long, 0.99 wide. Carapace yellowish brown with wide brown lateral bands starting behind PLE. Chelicerae, maxillae, labium and sternum yellow. Chelicerae with 3 prolateral and 2 retrolateral teeth. Legs yellowish. Femora, tibiae, metatarsi grayish distally and medially; legs I and II darker than III and IV. Abdomen light brown with complicated pattern of spots and stripes.

Length of leg segments

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.65	0.48	1.46	1.50	0.75	5.84
II	1.32	0.45	1.11	1.16	0.60	4.64
III	0.95	0.30	0.53	0.60	0.38	2.75
IV	1.17	0.30	0.92	0.92	0.47	3.77

Leg spination

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1p	1d	2d 2p 1r	–	–
II	–	1d	2d 1p 1r	–	–
III	–	1d	1d 1p	1d 1p	–
IV	–	1d	2d 1p	–	–

Epigyne as in fig. 42; median plate 3 times wider than long, copulatory ducts "⟩⟨" shaped, separated by more than one diameter.

Male unknown.

Distribution. The new species is known only from the type locality where *N. lyleae* is also known to occur.

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Figs 52–54. Habitus of unknown Tetragnathidae female:
52–53 — prosoma, antero-lateral and anterior; 54 — abdomen, ventral. Scale = 0.2 mm.

Etymology. The species name is a patronym in honour of Fernando Álvarez-Padilla (Mexico, Mexico) who has made major contributions to the study of Tetragnathidae.

Tetragnathidae gen. sp. (figs 52–54)

Material examined. ♀ (ZMUT), Papua New Guinea, Central Province, Goilala District, Avios, in sphagnum, 20.02.1974 (A. Sog).

Note. Figures of this unidentified species are given to demonstrate that the prolateral row of stiff setae found on legs I and II in *Diphya* and *Nediphya* gen. n. is also found in other Tetragnathidae genera.

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