Zootaxa 5909 (3): 371–386
https://www.mapress.com/zt/
Copyright © 2026 Magnolia Press

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

https://doi.org/10.11646/zootaxa.5909.3.4
http://zoobank.org/urn:lsid:zoobank.org:pub:E09464B1-C99F-400A-90B5-4142DAA28070

Three new species of *Bowie* Jäger, 2022 (Araneae: Ctenidae) from the island of New Guinea

MIKHAIL M. OMELKO[1*] & ALEXANDER A. FOMICHEV[2]
[1]*Federal Scientific Center of East Asia Terrestrial Biodiversity, Far Eastern Branch, Russian Academy of Sciences, Vladivostok 690022, Russia*
omelkom@gmail.com; https://orcid.org/0000-0002-1556-6248
[2]*Altai State University, Lenina Pr., 61, Barnaul, RF-656049, Russia*
a.fomichov@mail.ru; https://orcid.org/0000-0001-9268-622X
**Corresponding author*

Abstract

Three new Ctenidae species from the Island of New Guinea are described: *Bowie adelinae* **sp. nov.** (♂♀), *B. mariae* **sp. nov.** (♂♀), and *B. bogatkovae* **sp. nov.** (♀). *Bowie mariae* **sp. nov.** and *B. bogatkovae* **sp. nov.** belong to the *blackstar*-species group, whereas *B. adelinae* **sp. nov.** possesses an unusual structure of the copulatory organs and cannot be assigned to any of the known species groups. Detailed descriptions, digital photographs, and a distribution map of all Papuan species are provided.

Key words: biodiversity, Papua New Guinea, taxonomy, tropical wolf spiders

Introduction

The family Ctenidae Keyserling, 1877, commonly known as tropical wolf spiders or wandering spiders, currently comprises 629 species in 48 genera worldwide (World Spider Catalog 2026). Ctenid spiders primarily inhabit tropical and subtropical regions and are nocturnal, free-ranging hunters that do not use webs to capture their prey (Jocqué & Dippenaar-Schoeman 2006).

Bowie Jäger, 2022 currently comprises 131 valid species distributed from the Himalayas across South and Southeast Asia to Papua New Guinea, with one undescribed species known from northern Australia (World Spider Catalog 2026; Jäger 2022). *Bowie* is a distinctive genus of Cteninae characterised by a combination of somatic and genitalic features. In both sexes, the carapace usually bears a distinct white median band with a pentagonal or diamond-shaped anterior part; males typically have a single *RTA* and a non-filiform embolus without dorsal or medio-dorsal apophyses, whereas females usually have two vulval folds covering the copulatory ducts and two-chambered spermathecae (Jäger 2022). Species of *Bowie* inhabit the leaf litter of forests and hunt at night without building capture webs (Jäger 2022).

The genus was established by Jäger (2022) and has since been treated by several authors in a number of taxonomic studies (Omelko & Fomichev 2023; Sankaran & Joseph 2023; Logunov 2024; Omelko & Fomichev 2024; Wang *et al*. 2024; Sherwood 2025; Shang *et al*. 2026; Lu *et al.* 2026; Jäger 2026). Although many species have been described during the last years, the taxonomy of *Bowie* remains incomplete. Among the 131 *Bowie* species, 58 are known from a single sex only. Of these, 37 species were described from males only, whereas 21 species are known only from females (World Spider Catalog 2026).

On the island of New Guinea, nine species of *Bowie* have been recorded so far. Four of them were described as new species by Jäger (2022). The other five, originally described by earlier authors, were redescribed in detail in the same work. Given the diversity of suitable habitats on this huge island and the richer fauna known from adjacent territories, the actual diversity of the genus on New Guinea is likely underestimated.

Accepted by A.J. Santos: 21 Oct. 2026; published: 20 Nov. 2026

While examining material collected in south and central parts of New Guinea, we found several specimens of *Bowie* that could not be assigned to any known species. Comparison with published descriptions and illustrations confirmed that the material represents three previously undescribed species. The primary objective of this paper is to describe these newly discovered species.

Material and methods

Specimens were photographed with a Nikon Z6 camera mounted on a WeMacro vertical stand and equipped with Laowa Aurogon FF 10–50X NA0.5 Supermicro APO, Laowa 25 mm f/2.8 2.5–5X Ultra Macro, and Laowa 100 mm f/2.8 2X Ultra Macro APO lenses; image capture was controlled using Helicon Remote software. Photographs were taken in dishes filled with ethanol, with soft white paper or cotton at the bottom. Digital images were montaged using Zerene Stacker (https://zerenesystems.com/cms/stacker) software package. Epigynes were cleared in a KOH/water solution. Distribution map was produced using SimpleMappr (Shorthouse 2010). All measurements are in millimeters. Length of leg segments were measured on the lateral side. Palp and leg spination is based on examination of one specimen of each species (both sides of the body). Spination pattern is given in the following formula: the sum of all spines is listed for the dorsal, prolateral and retrolateral sides; ventral spines are counted including apical ones. All examined material is deposited in the Bioresource Collection of the Federal Scientific Centre of East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences (IBSS, reg. number 2797657); the Institute of Systematics and Ecology of Animals, SB RAS, Novosibirsk, Russia (ISEA; curator: G.N. Azarkina); and the Zoological Museum of Moscow State University, Moscow, Russia (ZMMU; curator: K.G. Mikhailov). Geographic coordinates given in square brackets were not provided on the original specimen labels and were subsequently inferred from maps based on the locality information. Abbreviations used in text and the format of description follow Jäger (2022), with some modifications.

Abbreviations:

Eyes: ALE—anterior lateral eye, AME—anterior median eye, MOA—median ocular area, PLE—posterior lateral eye, PME—posterior median eye.

Leg segments: Fe—femur, Mt—metatarsus, Pa—patella, Ti—tibia, Ta—tarsus.

Spination: d—dorsal, p—prolateral, r—retrolateral, v—ventral.

Copulatory organs: *C*—conductor, *EH*—embolic hook, *Em*—embolus, *FD*—fertilization duct, *LE*—lateral extension of median plate, *LT*—lateral tooth, *MLL* — mediad lobe of lateral lobe, *MP*—median plate of epigyne, *MT*— median tooth, *RPO*—retro-proximal cymbial outgrowth, *RTA*—retrolateral tibial apophysis, *Sp*—spermatheca, *TA*—tegular apophysis, *Te*—tegulum, *TH*—tegular hump, *TR*—transversal rim of median plate, *vRTA*—ventral retrolateral tibial apophysis.

Taxonomy

Family Ctenidae Keyserling, 1877

Genus *Bowie* Jäger, 2022

Diagnosis. The genus was established by Jäger (2022) to accommodate species characterized by males typically having a fused palpal patellar crack, single *RTA*, non-filiform embolus, and lacking palpal patellar apophyses (males), and two vulval folds covering copulatory ducts (females) [refer to the full genus diagnosis in Jäger (2022)].

ungrouped species

***Bowie adelinae* sp. nov.**
(Figs 1–17, 44)

Material examined. PAPUA NEW GUINEA: ***Western Highlands Province:*** **holotype:** ♂ (ZMMU), western flank of Mt Hagen, [05°48'S, 143°58'E], litter in the mountain rainforest, 2900 m, 6–17 August 1995, A.M. Emelyanov leg. **Paratypes:** ♀ (ZMMU), ♂♀ (IBSS), 2♂2♀ (ISEA, 001.9339), together with the holotype.



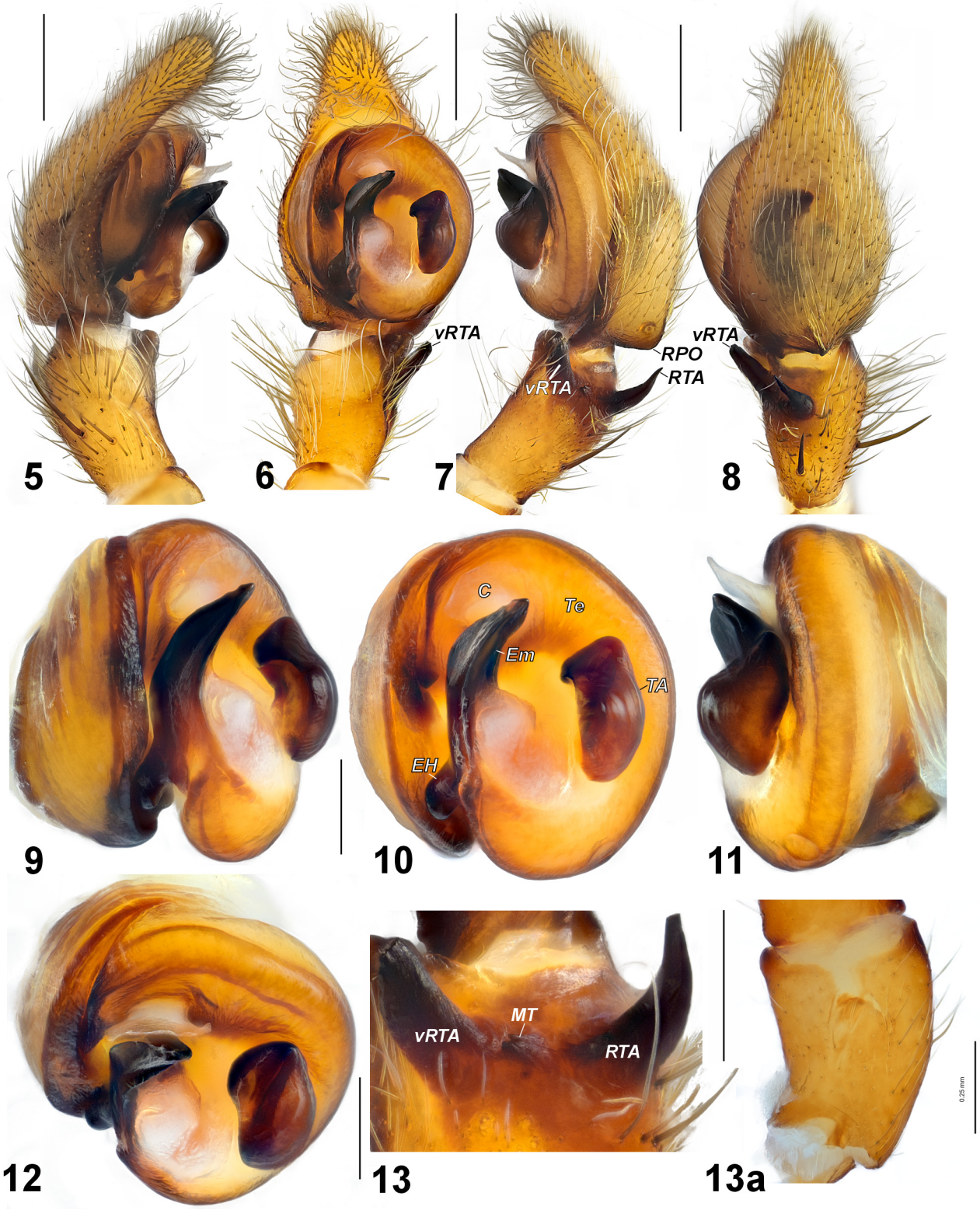
FIGURES 1–4. *Bowie adelinae* **sp. nov.** Habitus of male (1–2) and female (3–4) 1, 3—dorsal; 2, 4—ventral. Scale bars: 2 mm.

Etymology. The specific name is a matronym in memory of Adelina, from Nakhodka, Russia, a person dear to a close friend of the authors. It is formed in the genitive singular.

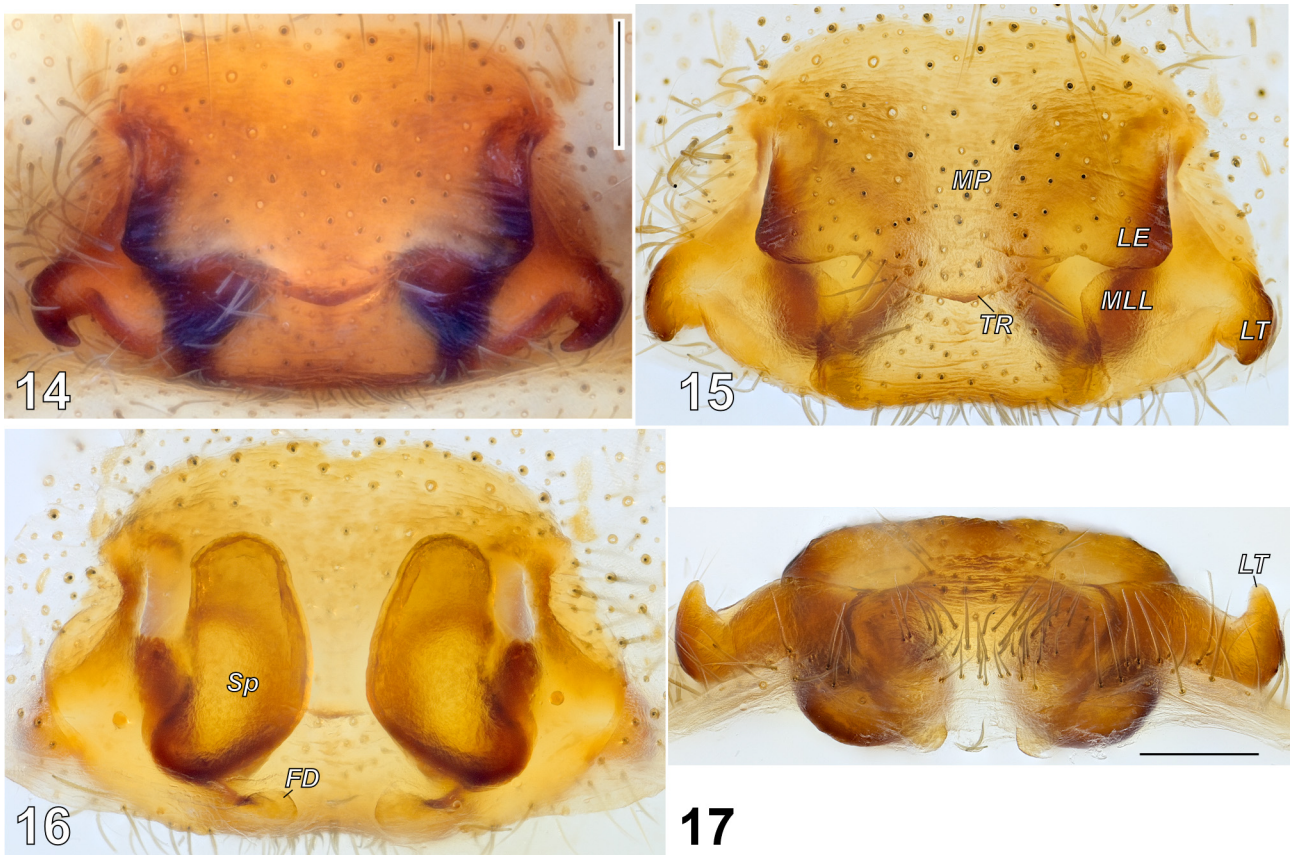
Diagnosis. The male of the new species can be easily distinguished from all congeners by the unique configuration of the retrolateral tibial structures, with two large apophyses, the retrolateral tibial apophysis (*RTA*) and ventral retrolateral tibial apophysis (*vRTA*), and a small median tooth (*MT*) between them (vs. a single *RTA*). The female of the new species differs from all congeners by the presence of a pair of large, exposed mediad lobes of the lateral lobes (*MLL*) on both sides of the median plate (vs. no comparable exposed *MLL* in other congeners). It resembles *B. floweri* (F. O. Pickard-Cambridge, 1897) and *B. magicdance* Jäger, 2022 in having a strongly curved transversal rim of the median plate (*TR*), but differs from both by the higly elongate spermathecae in *B. adelinae* **sp. nov.** (vs. comparatively short; cf. Fig. 16 and Jäger 2022: 424, 663). It also differs from all congeners, except *B. ceylonensis* (F. O. Pickard-Cambridge, 1897), by the presence of distinct posterolateral extensions of the median plate (*LE*) (vs. posterolateral extensions absent; anterolateral shoulders may be present in some congeners). From most congeners [except for *B. blackout* Jäger, 2022, *B. celebensis* (Pocock, 1897), and *B. kochi* (Simon, 1897)] it further differs by the strongly elongated spermathecae (*Sp*) (vs. not elongated). From these three species it differs by the presence of curved *TR* (vs. absence; cf. Fig. 16 and Jäger 2022: 646, 683, 686, 691).

Description. Male (Figs 1–2). Total length 7.84. Prosoma 4.35 long, 3.41 wide. Opisthosoma 3.40 long, 2.55 wide. Prosoma brown, with light brown median band. Median band widened anteriorly, with a pair of small, roughly right-angled lateral projections near the cephalic–thoracic transition. Lateral bands light brown, clearly visible, without white setae. Fovea thin, black. Clypeus light brown. Chelicerae light brown with 3 promarginal and 4 retromarginal teeth. Labium brown with yellowish margin. Endites yellowish. Sternum light brown, without pattern.

Dorsal part of opisthosoma dark brown with distinct yellowish cardiac mark and five pairs of yellowish spots. Lateral sides of opisthosoma yellow anteriorly, light brown with a number of black spots posteriorly. Ventral part of opisthosoma light brown with dark brown patch medially. Spinnerets dark brown with yellow distal segments.



FIGURES 5–13. *Bowie adelinae* **sp. nov.** male, holotype: palp (5–8), bulb (9–12), distal part of palpal tibia (13) and palpal patella (13a). 5, 9—prolateral; 6, 10—ventral; 7, 11, 13, 13a—retrolateral; 8—dorsal, 12—apical. Scale bars: 5–8 = 0.5 mm; 9–13 = 0.25 mm. Abbreviations: *C*—conductor, *EH*—embolic hook, *Em*—embolus, *MT*— median tooth, *RPO*—retro-proximal cymbial outgrowth, *RTA*—retrolateral tibial apophysis, *TA*—tegular apophysis, *Te*—tegulum, *vRTA*—ventral retrolateral tibial apophysis.



FIGURES 14–17. *Bowie adelinae* **sp. nov.** epigyne: 14—intact, ventral; 15—macerated, ventral; 16— macerated, dorsal; 17—ditto, posterior. Note that the relative position of the lateral teeth may be slightly altered after maceration; their natural orientation is shown in Fig. 14. Scale bar: 0.25 mm. Abbreviations: *FD*—fertilization duct, *LE*—lateral extension of median plate, *LT*—lateral tooth, *MLL*— mediad lobe of lateral lobe, *MP*—median plate, *Sp*—spermatheca, *TR*— transversal rim of median plate.

Eye diameters: AME 0.19, ALE 0.12, PME 0.30, PLE 0.23; interdistances: AME–AME 0.12, AME–ALE 0.29, PME–PME 0.21, PME–PLE 0.20, AME–PME 0.06, ALE–PLE 0.12. Clypeus height at AME 0.17, at ALE 0.30.

For palp and leg measurements see Table 1. Palp coloration: Fe, Pa and Ti light brown; Ta brown. Leg coloration: Fe I light brown; Fe II–IV light brown with yellow semi-rings. Pa I–IV light brown. Ti I–III light brown; Ti IV light brown with dark, poorly visible, smooth patches proximally and medially. Mt I–III light brown; Mt IV light brown with poorly visible, smooth dark patches. Ta I–IV light brown. Ventral coxae with many short setae. For palp and leg spination see Table 2.

TABLE 1. Palp and leg measurements of male of *Bowie adelinae* **sp. nov.**

	Fe	Pa	Ti	Mt	Ta	Total
Palp	1.61	0.80	0.77	-	1.39	4.57
I	3.70	1.68	3.87	3.32	1.28	13.85
II	3.35	1.62	3.34	2.98	1.08	12.37
III	3.21	1.25	2.72	2.71	1.07	10.96
IV	4.15	1.47	3.72	4.76	1.44	15.54

TABLE 2. Palp and leg spination for the male of *Bowie adelinae* **sp. nov.**

	Fe	Pa	Ti	Mt
Palp	3d 1p	1p	1d 1p 1r	-
I	3d 3p 4r	1p 1r	1d 2p 2r 2-2-2-2-2v	3p 3r 2-2-2v
II	3d 3p 4r	1p 1r	1d 2p 2r 2-2-2-2v	3p 3r 2-2-2v
III	3d 4p 4r	1p 1r	2d 2p 2r 2-2-2v	3p 3r 2-2-2v
IV	3d 4p 2r	1p 1r	3d 2p 2r 2-2-2v	4p 5r 1-1-1-1-1-2v

Palp as shown in Figs 5–13a. Tibia with two retrolateral apophyses, *RTA*, *vRTA*, and *MT*. *RTA* long, with sharply pointed tip; *vRTA* straight, with blunt tip; *MT* tiny, bilobed. Cymbium with short, rounded (in retrolateral view) retro-proximal cymbial outgrowth (*RPO*). Tegulum (*Te*) rounded, smooth. Tegular apophysis (*TA*) almost rectangular in ventral view, originating in 4 o'clock position. Conductor (*C*), membranous. Embolus (*Em*) curved, with prolateral groove; originating in 7-o'clock position, tip pointed. Membranous embolic extension with rounded lobe. Base of *Em* with evenly rounded embolic hook (*EH*).

Female (Figs 3–4). Total length 9.82. Prosoma 4.56 long, 3.48 wide. Opisthosoma 5.52 long, 3.93 wide. Prosoma brown, with light brown median band. Median band widened, with small projections near ocular area. Lateral bands light brown, poorly visible, discontinuous. Fovea thin, black. Clypeus brown. Chelicerae reddish brown with 3 promarginal and 4 retromarginal teeth. Labium brown with yellowish anterior margin. Endites reddish-brown. Sternum light brown, without pattern. Dorsal part of opisthosoma brown with barely visible yellowish cardiac mark and series of black transversal W-shaped bands. Lateral sides of opisthosoma brown with number of small dark brown spots, these latter fused close to spinnerets. Ventral part of opisthosoma light brown with indistinct brown patch medially. Spinnerets dark brown with yellow distal segments.

Eye diameters: AME 0.20, ALE 0.16, PME 0.30, PLE 0.32; interdistances: AME–AME 0.16, AME–ALE 0.33, PME–PME 0.20, PME–PLE 0.34, AME–PME 0.08, ALE–PLE 0.18. Clypeus height at AME 0.15, at ALE 0.43.

For palp and leg measurements see Table 3. Palp coloration: Fe, Pa, Ti and Ta brown. Leg coloration: Fe I–III brown, Fe IV brown with poorly visible light brown semi-rings. Pa I–III brown. Ti I brown, Ti II–IV brown with with dark, poorly visible, smooth patches proximally and medially. Mt I–II brown, Mt III–IV brown with poorly visible, smooth dark patches. Ta I–IV brown. Ventral coxae with many moderately short setae. For palp and leg spination see Table 4.

TABLE 3. Palp and leg measurements of female of *Bowie adelinae* **sp. nov.**

	Fe	Pa	Ti	Mt	Ta	Total
Palp	1.69	0.84	1.04	-	1.16	4.73
I	3.24	1.66	2.89	2.20	0.96	10.95
II	3.14	1.64	2.65	2.18	1.00	10.61
III	2.73	1.40	2.17	2.22	1.00	9.52
IV	3.62	1.44	3.29	3.78	1.35	13.48

TABLE 4. Palp and leg spination for the female of *Bowie adelinae* **sp. nov.**

	Fe	Pa	Ti	Mt
Palp	3d 1p 1r	1p	2p 2r	3p
I	3d 3p 2r	spineless	2-2-2-2-2v	2-2-2v
II	3(4)d 3(4)p 2(3)r	spineless	2-2-2-2-2v	2-2-2v
III	3d 4p 3r	1p 1r	2(3)d 2p 2r 2-2-2v	4p 5r 2-2-2v
IV	3d 3(4)p 1r	1p 1r	3d 2p 2r 2-2-2v	4p 5r 1-1-1-1-2v

Epigyne as shown in Figs 14–17. Epigyne 1.7 times wider than long with two *MLL*. Median plate (*MP*) widest medially with procurved *TR* and two *LE*. Lateral teeth (*LT*) strongly curved, positioned far lateral to the median plate and distinctly separated from it. *Sp* elongated. Fertilization ducts (*FD*) oriented horizontally, tips mediad.

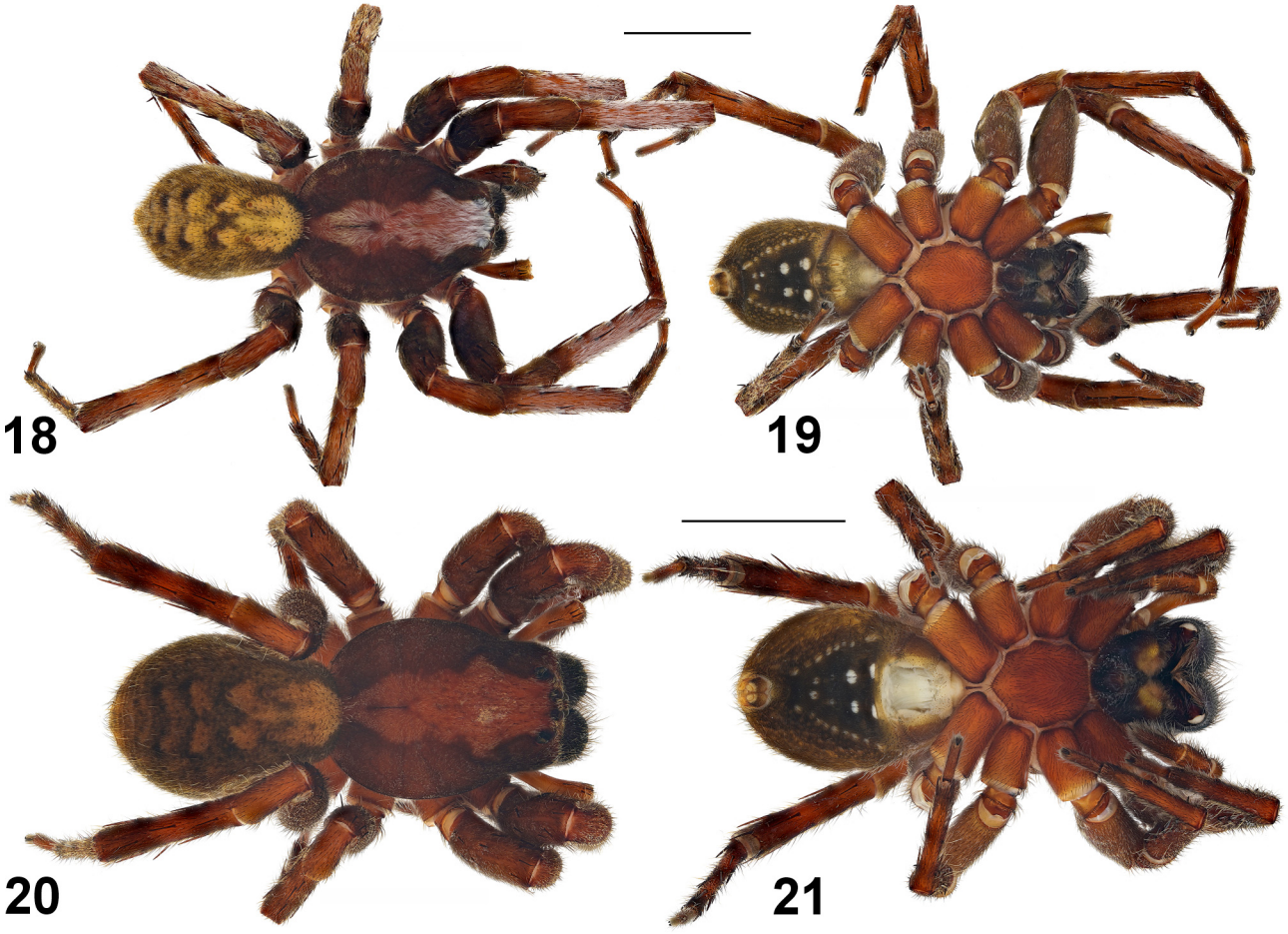
Notes. According to the diagnosis by Jäger (2022), males of *Bowie* are characterised by the presence of «a fused palpal patellar crack in ventro-retrolateral position which leads to the lyriform organ» and by a single retrolateral tibial apophysis (*RTA*). In the male of *B. adelinae* **sp. nov.**, the patellar crack is represented by a wide notch (Fig. 13a), while the retrolateral tibial structures are more complex than in the generic diagnosis: in addition to the *RTA*, a ventral retrolateral tibial apophysis (*vRTA*) and a small median tooth (*MT*) are present. However, since both sexes of this species agree with the diagnosis of *Bowie* in all other respects, we consider it a morphologically distinctive representative of this genus. As such an RTA is unknown in all other congeners, we do not assign this species to any of the species groups currently recognized within the genus.

Distribution. Type locality only (Fig. 44).

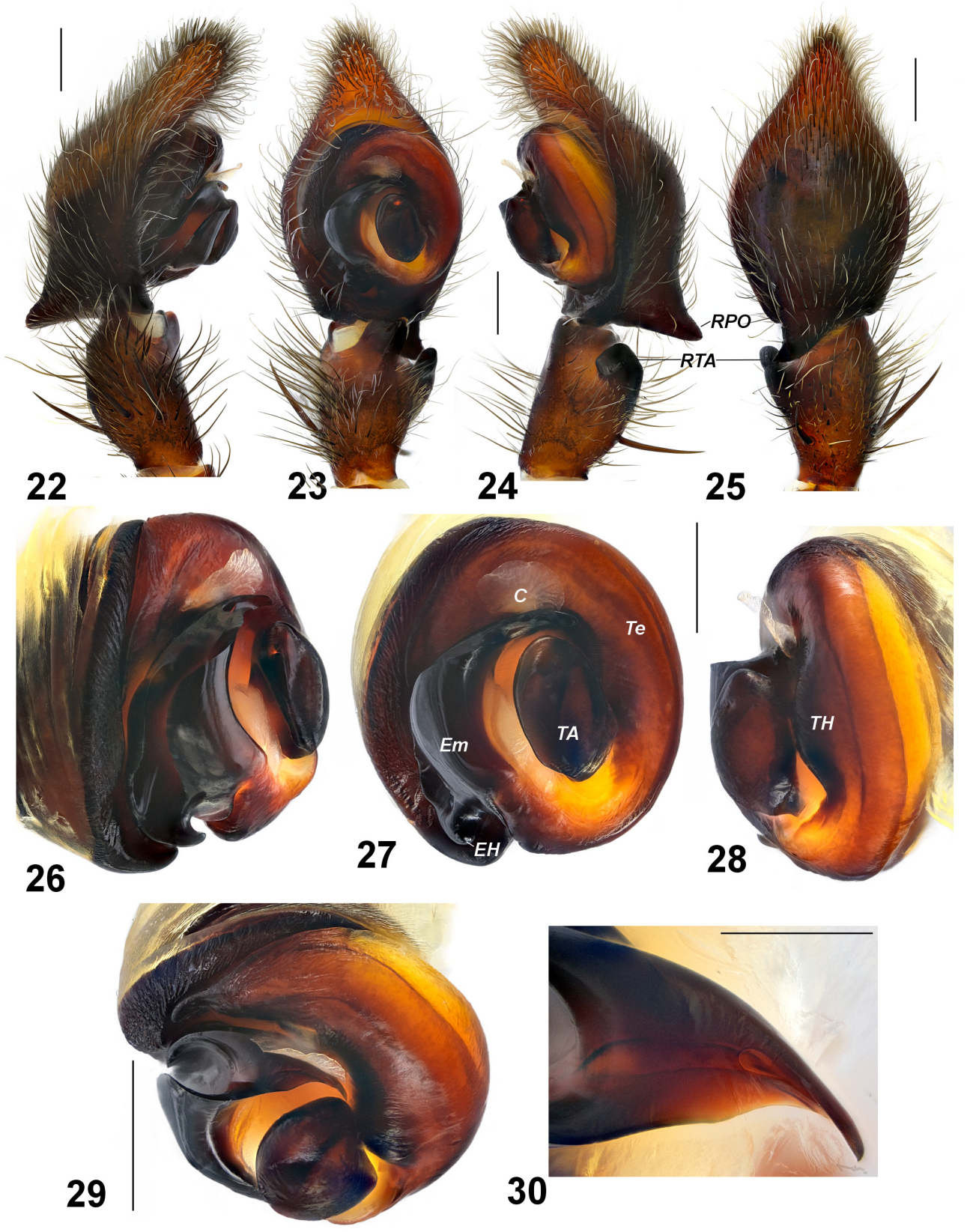
blackstar-species group

***Bowie mariae* sp. nov.**
(Figs 18–37, 44)

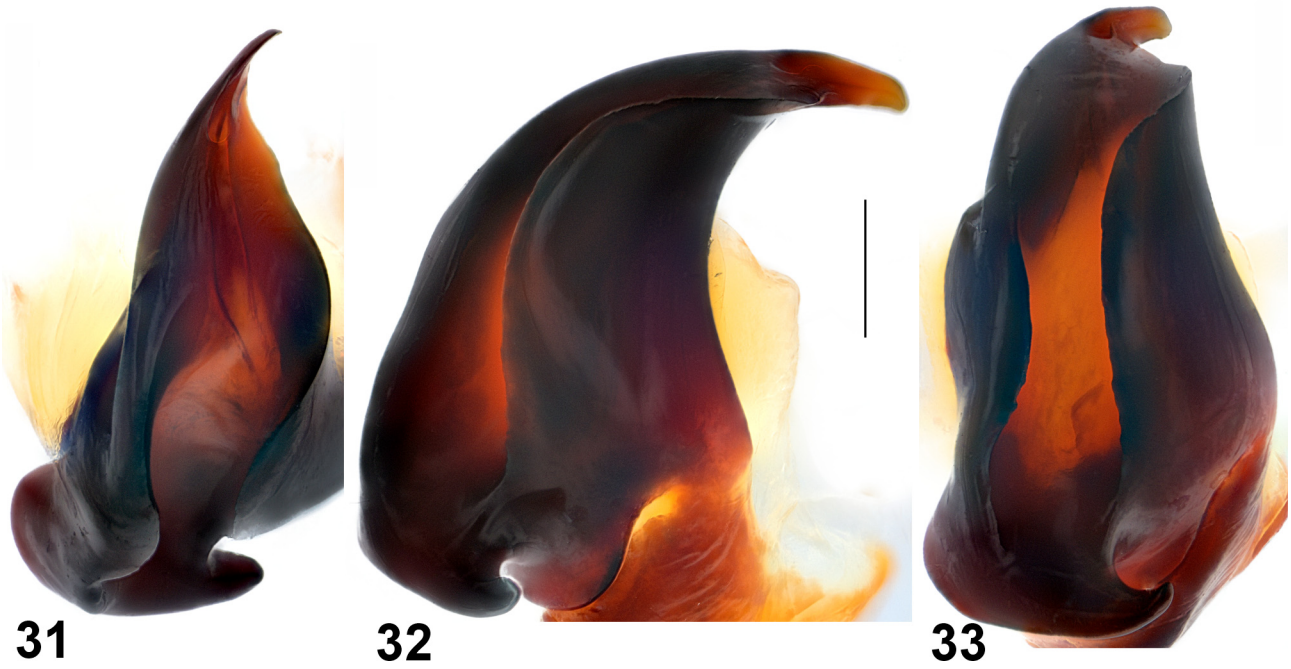
Material examined. PAPUA NEW GUINEA: *Central Province:* holotype: ♂ (ZMMU), Astrolabe Mountain Range [09°30'S, 147°24'E], litter in the tropical rainforest, 700 m, 18–31 August 1995, A.M. Emelyanov leg. **Paratypes:** ♀ (ZMMU), ♂3♀ (IBSS), 4♂3♀ (ISEA, 001.9340), together with the holotype.



FIGURES 18–21. *Bowie mariae* **sp. nov.** Habitus of male (18–19) and female (20–21). 18, 20—dorsal; 19, 21—ventral. Scale bars: 5 mm.



FIGURES 22–30. *Bowie mariae* **sp. nov.**, male. Palp (22–25), bulb (26–29) and tip of embolus (30). 22, 26—prolateral; 23, 27—ventral; 24, 28—retrolateral; 25—dorsal, 29, 30—apical. Scale bars: 22–29 = 0.5 mm; 30 = 0.2 mm. Abbreviations: *C*—conductor, *EH*—embolic hook, *Em*—embolus, *RPO*—retro-proximal cymbial outgrowth, *RTA*—retrolateral tibial apophysis, *TA*—tegular apophysis, *Te*—tegulum, *TH*— tegular hump.



FIGURES 31–33. *Bowie mariae* **sp. nov.**, embolus: 31—prolateral-apical; 32— ventral-prolateral; 33— prolateral. Scale bar: 0.2 mm.

Etymology. The specific name is a matronym in honour of Maria Naumenko (Nakhodka, Russia), wife of the authors' friend Ivan Naumenko, a Russian macrophotographer. The name is formed in the genitive singular.

Diagnosis. Males of the new species are similar to those of *Bowie thenextday* Jäger, 2022 and *B. lazarus* Jäger, 2022 in having a strongly developed retro-proximal cymbial outgrowth (*RPO*). It can be distinguished from *B. thenextday* by the absence of a prolateral outgrowth of embolus (*PO*) (vs. strongly developed; cf. Figs 23, 26–27, 32–33 and Jäger 2022: figs 806, 808), and from *B. lazarus* by the square-shaped tip of the *RTA* (vs. pointed; cf. Fig. 24 and Jäger 2022: fig. 810). Females of the new species are similar to those of *B. lazarus* and *B. blackstar* Jäger, 2022 in the shape of the median plate (*MP*). It can be distinguished from *B. lazarus* by the kidney-shaped spermathecae (*Sp*) (vs. oval; cf. Fig. 36 and Jäger 2022: figs 826, 829) and by the ratio of the length of the median plate (*MP*) anterior to the transversal rim (*TR*) to the length of the *MP* posterior to the *TR* (ca. 2 vs. 4.9; cf. Fig. 34 and Jäger 2022: figs 824, 827). It can be distinguished from *B. blackstar* by the touching *Sp* (vs. separated by a space; cf. Fig. 36 and Jäger 2022: fig. 832) and by the longer *MP* with length/width ratio of 1.1 (vs. 0.86; cf. Fig. 34 and Jäger 2022: fig. 830).

Description. Male (Figs 18–19). Total length 14.14. Prosoma 7.72 long, 5.95 wide. Opisthosoma 6.32 long, 4.45 wide. Prosoma dark brown, with light brown median band covered with short white setae, a pair of small, roughly right-angled lateral projections near the cephalic–thoracic transition. Lateral bands disrupted into several whitish elongated spots. Fovea thin, black. Clypeus brown. Chelicerae black with 3 promarginal and 4 retromarginal teeth. Labium dark brown. Endites dark brown with yellow distal margin. Sternum brown with poorly visible light brown marginal spots. Dorsal part of opisthosoma brown with yellow cardiac mark and series of yellow and black spots and dark transverse markings, partly fused into chevrons, posterior of it. Lateral sides of opisthosoma brown with a number of tiny gray spots. Ventral part of opisthosoma dark brown with spots forming two V-marks. Outer mark formed by small yellowish spots; inner mark formed by two pairs of large white spots followed, after a distinct gap, by three smaller white dots. Spinnerets dark brown with yellow distal segments.

Eye diameters: AME 0.33, ALE 0.22, PME 0.41, PLE 0.22; interdistances: AME–AME 0.11, AME–ALE 0.45, PME–PME 0.21, PME–PLE 0.64, AME–PME 0.07, ALE–PLE 0.28. Clypeus height at AME 0.24, at ALE 0.61.



FIGURES 34–37. *Bowie mariae* **sp. nov.**, epigyne: 34—intact, ventral; 35—macerated, ventral; 36— macerated internal genitalia, dorsal; 37—ditto, posterior. Note that the relative position of the lateral teeth may be slightly altered after maceration; their natural orientation is shown in Fig. 34. Scale bars: 0.5 mm. Abbreviations: *FD*—fertilization duct, *LT*—lateral tooth, *MP*—median plate, *Sp*—spermatheca, *TR*— transversal rim of median plate.

For palp and leg measurements see Table 5. Palp coloration: Fe, Pa and Ti brown; Ta dark brown. Leg coloration: Fe I–II dark brown, Fe III–IV dark brown with poorly visible brown semi-rings. Pa I–IV brown. Ti I–IV light brown, covered with short white setae, especially densely on leg I. Mt I–II dark brown; Mt III–IV dark brown with poorly visible brown semi-rings. Ta I–IV brown. Ventral coxae with many moderately short setae. For palp and leg spination see Table 6.

Palp as shown in Figs 22–33. *RTA* arising from medial part of tibia, short, with square-shaped tip in retrolateral view. Cymbium with long, pointed *RPO*, its tip roughly dorsad. Tegulum (*Te*) with prominent hump (*TH*) in retrolateral half. Tegular apophysis (*TA*) elongated oval, originating in 5 o'clock position. Conductor (*C*) rounded, membranous. Embolus (*Em*) C-shaped, with basal part forming deep groove with slightly undulate margins; originating in 7-o'clock position, its tip with deep oval cutout. Base of *Em* with embolic hook (*EH*).

TABLE 5. Palp and leg measurements of male of *Bowie mariae* **sp. nov.**

	Fe	Pa	Ti	Mt	Ta	Total
Palp	3.03	1.38	1.27	-	2.51	8.19
I	5.98	3.02	5.81	5.05	1.68	21.54
II	5.68	2.97	5.24	4.57	1.55	20.01
III	5.18	2.48	4.03	4.26	1.44	17.39
IV	6.51	2.60	5.97	7.29	1.74	24.11

TABLE 6. Palp and leg spination for the male of *Bowie mariae* **sp. nov.**

	Fe	Pa	Ti	Mt
Palp	4d 1p 1r	1p	2p 1r	-
I	3d 4p 3 (4)r	1p 1r	1d 1p 2r 2-2-2-2v	3p 3r 2-2-2v
II	3d 2(4)p 4r	1p 1r	1(2)d 1p 2r 2-2-2-2-2v	3p 3r 2-2-2v
III	3d 4p 4r	1p 1r	3d 2p 2r 2-2-2v	1d 4p 4r 2-2-2v
IV	3d 4p 3r	1p 1r	2d 2(3)r 2-2-2v	4p 4r 1-1-1-1-2v

Female (Figs 20–21). Total length 13.45. Prosoma 7.06 long, 5.34 wide. Opisthosoma 6.92 long, 4.99 wide. Prosoma dark brown, with light brown median band with 2 pairs of triangular lateral projections between ocular area and fovea. Lateral bands absent. Fovea thin, black. Clypeus brown. Chelicerae black with 3 promarginal and 4 retromarginal teeth. Labium almost black. Endites almost black with yellow distal edge. Sternum brown with poorly visible light brown marginal spots. Dorsal part of opisthosoma dark brown with dirty brown cardiac mark and series of yellow patches posterior of it, some of them fused. Lateral sides of opisthosoma brown with a number of tiny gray spots. Ventral part of opisthosoma dark brown with white spots forming two V-marks. Outer mark formed by small spots and inner mark with two pairs of larger ones behind epigastric furrow and three smaller towards spinnerets. Spinnerets dark brown with yellowish distal segments.

Eye diameters: AME 0.29, ALE 0.24, PME 0.38, PLE 0.34; interdistances: AME–AME 0.18, AME–ALE 0.53, PME–PME 0.26, PME–PLE 0.55, AME–PME 0.12, ALE–PLE 0.28. Clypeus height at AME 0.25, at ALE 0.67.

For palp and leg measurements see Table 7. Palp coloration: Fe, Pa and Ti light brown; Ta dark brown. Leg coloration: Fe I–II brown, Fe III–IV brown with poorly visible light brown semi-rings. Pa I–III light brown, Pa IV brown. Ti I–II brown, Ti III–IV brown with poorly visible light brown semi-rings. Mt I–II brown, Mt III–IV brown with poorly visible light brown semi-rings. Ta I–IV brown. Ventral coxae with many moderately short setae. For palp and leg spination see Table 8.

Epigyne as shown in Figs 34–37. Epigyne slightly longer than wide. *MP* widest medially with straight *TR*. Lateral teeth (*LT*) situated distinctly lateral to the median plate, with pointed tips directed posteromediad. *Sp* roughly kidney-shaped, touching each other medially; no distinct second chamber discernible. Fertilization ducts (*FD*) oriented diagonally.

TABLE 7. Palp and leg measurements of female of *Bowie mariae* **sp. nov.**

	Fe	Pa	Ti	Mt	Ta	Total
Palp	2.57	1.24	1.36	-	1.71	6.88
I	4.56	2.62	4.29	3.33	1.1	15.9
II	4.38	2.60	3.88	3.19	1.19	15.24
III	3.88	2.25	2.96	3.13	1.14	13.36
IV	5.21	2.40	4.42	5.67	1.45	19.15

TABLE 8. Palp and leg spination for the female of *Bowie mariae* **sp. nov.**

	Fe	Pa	Ti	Mt
Palp	3d 1p 1r	1p	2p 2r	3p 1r
I	3d 3p 3(4)r	spineless	2-2-2-2-2v	2-2-2v
II	3d 4p 3r	spineless	2-2-2-2-2v	2-2-2v
III	3d 4p 4r	1p 1r	2(3)d 2p 2r 2-2-2v	4p 5r 2-2-2v
IV	3d 4p 2r	1p 1r	3d 2p 2r 2-2-2v	4p 5r 1-1-1-1-1-2v

Distribution. Type locality only (Fig. 44).

***Bowie bogatkovae* sp. nov.**
(Figs 38–44)

Material examined. PAPUA NEW GUINEA: *Central Province:* holotype: ♀ (ZMMU), Astrolabe Mountain Range [09°30'S, 147°24'E], litter in the tropical rainforest, 700 m, 18–31 August 1995, A.M. Emelyanov leg.

Etymology. The specific name is a matronym honouring Yulia Bogatkova (Nakhodka, Russia), for her substantial assistance in the acquisition of the scientific equipment used in this study. The name is formed in the genitive singular.

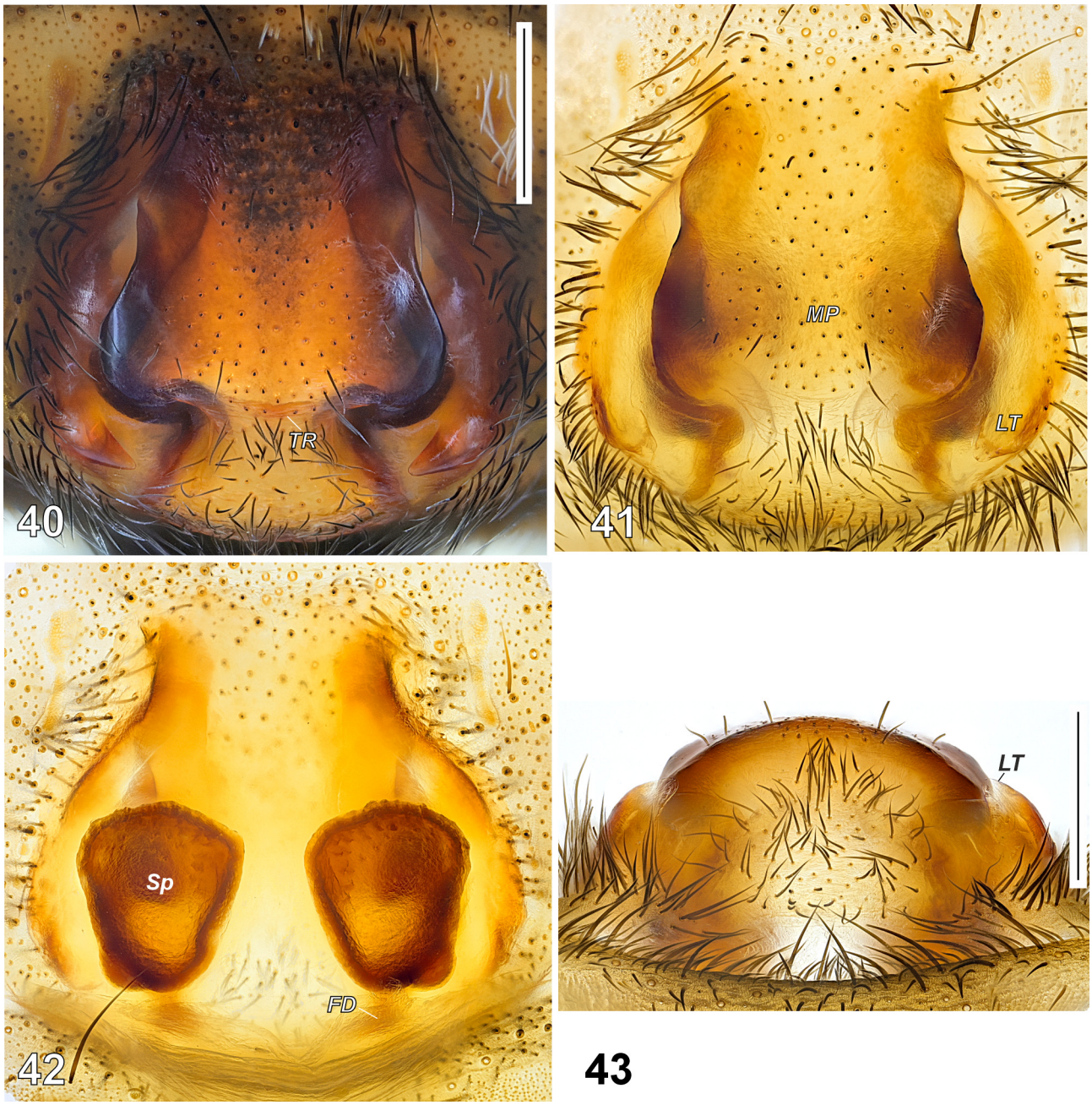


FIGURES 38–39. *Bowie bogatkovae* **sp. nov.**, habitus, female: 38—dorsal; 39—ventral. Scale bar: 5 mm.

Diagnosis. The female of the new species differs from those of the other species of the *blackstar*-group, namely *Bowie lazarus*, *B. blackstar*, *B. aruanus* (Strand, 1911), and *B. mariae* **sp. nov.**, by the strongly elongated median plate (*MP*) (length/width ratio 1.3 vs. 0.84–1.1 in the other species; cf. Fig. 40 and 34, Jäger 2022: figs 824, 827, 830, 833). The female of the new species can also be distinguished from the other females of this group by the almost triangular spermathecae (*Sp*) (vs. oval or kidney-shaped in the other species; cf. Fig. 42 and 36, Jäger 2022: figs 826, 829, 832, 834). From *B. mariae* **sp. nov.**, which occurs at the same locality, the new species also differs by the presence of a longitudinal yellow dorsal stripe on patella, tibia and metatarsus of leg IV (vs. absence; cf. Fig. 38 and 20).

Description. Female (Figs 38–39). Total length 14.96. Prosoma 8.11 long, 6.62 wide. Opisthosoma 7.00 long, 4.60 wide. Prosoma brown, with light brown median band with two large triangular projections near ocular area and two small projections posterior of them. Lateral bands absent. Fovea thin, black. Clypeus brown. Chelicerae dark brown with 3 promarginal and 4 retromarginal teeth. Labium dark brown. Endites dark brown with yellow distal margin. Sternum brown without distinct pattern. Dorsal part of opisthosoma dark brown with dirty brown cardiac mark and series of yellow spots posterior of it. Lateral sides of opisthosoma brown with a number of tiny brown

spots. Ventral part of opisthosoma black with white small spots forming V-mark. Three pairs of larger spots located inside V-mark. Spinnerets with yellowish distal segments.



FIGURES 40–43. *Bowie bogatkovae* **sp. nov.**, epigyne: 40—intact, ventral; 41—macerated, ventral; 42—internal genitalia, dorsal; 43—ditto, posterior. Scale bars: 0.5 mm. Abbreviations: *FD*—fertilization duct, *LT*—lateral tooth, *MP*—median plate, *Sp*—spermatheca, *TR*— transversal rim of median plate.

Eye diameters: AME 0.29, ALE 0.29, PME 0.46, PLE 0.43; interdistances: AME–AME 0.25, AME–ALE 0.65, PME–PME 0.26, PME–PLE 0.69, AME–PME 0.09, ALE–PLE 0.28. Clypeus height at AME 0.30, at ALE 0.73. For palp and leg measurements see Table 9.

TABLE 9. Palp and leg measurements of female of *Bowie bogatkovae* **sp. nov.**

	Fe	Pa	Ti	Mt	Ta	Total
Palp	2.80	1.52	1.76	-	2.02	8.1
I	5.64	3.47	5.1	4.03	1.34	19.58
II	5.35	2.98	4.78	3.93	1.35	18.39
III	4.68	2.52	3.73	3.72	1.36	16.01
IV	6.17	2.86	5.36	6.39	1.83	22.61

Palp coloration: Fe, Pa, Ti and Ta brown. Leg coloration: Fe I dark brown; Fe II–III brown; Fe IV brown with poorly visible light brown semi-rings. Pa I–IV brown. Ti I–II dark brown; Ti III–IV brown with poorly visible light brown semi-rings. Mt I–II dark brown; Mt III–IV brown with poorly visible light brown semi-rings. Ta I–IV brown. Prolaterodorsal of Pa, Ti and Mt IV with short white setae forming longitudinal stripe. Ventral coxae with many moderately short setae, some areas, especially the large ones on coxae II, are glabrous and lack setae. For palp and leg spination see Table 10.

TABLE 10. Palp and leg spination for the female of *Bowie bogatkovae* **sp. nov.**

	Fe	Pa	Ti	Mt
Palp	3d 1p 1r	1p	1d 2p 1r	3p 1r
I	3d 3p 3r	spineless	2-2-2-2-2v	2-2-2v
II	3d 4p 3r	spineless	2-2-2-2-2v	2-2-2v
III	3d 4p 4r	1p 1r	3d 2p 2r 2-2v	5p 5r 2-2-2v
IV	3d 4p 2r	1p 1r	3d 2p 2r 2-2v	4p 5r 1-1-1-1-1-2v

Epigyne as shown in Figs 40–43. Epigyne longer than wide. *MP* widest medially with slightly curved transversal rim (*TR*). Lateral teeth (*LT*) situated distinctly lateral to the median plate, with pointed tips directed posteromediad. *Sp* almost inverted triangular, with single chamber, separated by approximately half their maximum width. Fertilization ducts (*FD*) oriented diagonally.

Notes. According to Jäger (2022), the *blackstar* species group may be related to the *argentipes*-group. Representatives of these two groups can be readily distinguished mainly by the shape of the tip of the male embolus (pointed or with a notch vs. barb-shaped), whereas females of both groups have similar copulatory organs. Since the female of the new species has an epigyne similar in structure to those of other species of the *blackstar*-group, and representatives of the other groups (*argentipes*-group and *chinagirl*-group) are known from areas distant from southern New Guinea, we provisionally assign this species to the *blackstar*-group. However, as four *blackstar*-group species from New Guinea [*Bowie thenextday*, *B. thiesi* Jäger, 2022, *B. rufisternis* (Pocock, 1898), and *B. angularis* (Roewer, 1938)] are known only from males, it cannot be excluded that the female of the new species actually belongs to one of them. Whether the female of the new species is conspecific with any of these male-based species remains to be clarified in future studies, including those based on molecular data.

Distribution. Type locality only (Fig. 44).

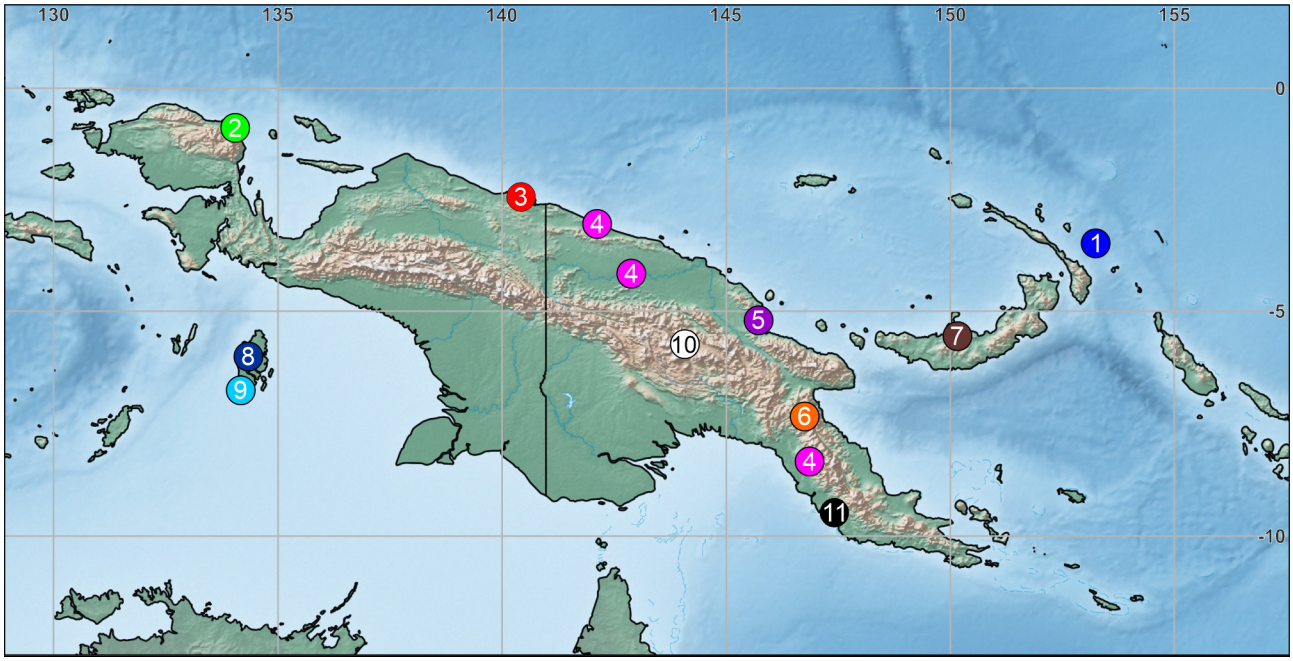


FIGURE 44. *Bowie* spp., distribution records in New Guinea: *B. angigitanus* (Roewer, 1938) (1), *B. kochi* (Simon, 1897) (2), *B. thenextday* Jäger, 2022 (3), *B. lazarus* Jäger, 2022 (4), *B. thiesi* Jäger, 2022 (5), *B. blackstar* Jäger, 2022 (6), *B. rufisternis* (Pocock, 1898) (7), *B. angularis* (Roewer, 1938) (8), *B. aruanus* (Strand, 1911) (9), *B. adelinae* **sp. nov.** (10), *B. mariae* **sp. nov.** and *B. bogatkovae* **sp. nov.** (11).

Discussion

To date, 12 species of *Bowie* are known from the island of New Guinea and adjacent smaller islands: *B. adelinae* **sp. nov.**, *B. angigitanus* (Roewer, 1938), *B. angularis*, *B. aruanus* (Strand, 1911), *B.blackstar* Jäger, 2022, *B. bogatkovae* **sp. nov.**, *B. kochi*, *B. lazarus*, *B. mariae* **sp. nov.**, *B. rufisternis*, *B. thenextday*, and *B. thiesi*. Among the islands located relatively close to New Guinea, Borneo has a comparable area, being only slightly smaller. At the same time, 22 species of *Bowie* are known from Borneo (Chu *et al.* 2022; Jäger 2022; Omelko & Fomichev 2024; Shang *et al.* 2026). Both islands are located in equatorial latitudes. Such a difference in the number of known *Bowie* species is most likely due to the lack of research on New Guinea. In addition, those *Bowie* species that are known from New Guinea are described from the coastal parts of the island or even from small islands surrounding the main island (Angi-Gita, Aru, New Britain). The central mountainous part of the island remains a blank spot in the study of ctenids.

Acknowledgements

The work of Mikhail M. Omelko was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. 124012400285-7).

References

Chu, C., Lu, Y., Li, S.Q. & Yao, Z.Y. (2022) Taxonomic notes on eleven species of the subfamily Cteninae (Araneae, Ctenidae) from Asia. *Biodiversity Data Journal*, 10 (e96003), 1–46. https://doi.org/10.3897/BDJ.10.e96003

Jäger, P. (2022) *Bowie* gen. nov., a diverse lineage of ground-dwelling spiders occurring from the Himalayas to Papua New Guinea and northern Australia (Araneae: Ctenidae: Cteninae). *Zootaxa*, 5170 (1), 1–200. https://doi.org/10.11646/zootaxa.5170.1.1

Jäger, P. (2026) Fourteen new species and notes on the genera *Amauropelma* Raven, Stumkat & Gray, 2001 and *Bowie* Jäger, 2022 (Arachnida: Araneae: Ctenidae) from Southeast Asia. *Zootaxa*, 5839 (3), 401–438. https://doi.org/10.11646/zootaxa.5839.3.1

Jocqué, R. & Dippenaar-Schoeman, A.S. (2006) *Spider families of the world*. Musée Royal de l'Afrique Central, Tervuren, 336 pp.

Keyserling, E. (1877) Ueber amerikanische Spinnenarten der Unterordnung Citigradae. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien*, 26, 609–708, pl. 7–8.

Logunov, D.V. (2024) On two species of *Bowie* Jäger, 2022 (Aranei: Ctenidae) from Vietnam. *Invertebrate Zoology*, 21 (1), 97–102. https://doi.org/10.15298/invertzool.21.1.06

Lu, Z.C., Yu, J.H., Chen, R. & Yang, Z.Z. (2026) Description of a new species of the genus *Bowie* from China (Araneae: Ctenidae). *Acta Arachnologica Sinica*, 35 (1), 53–56. https://doi.org/10.3969/j.issn.1005-9628.2026.01.007

Omelko, M.M. & Fomichev, A.A. (2023) A survey of Sumatran Ctenidae (Araneae). 2. Three new species of *Bowie* Jäger, 2022. *Zootaxa*, 5353 (2), 101–116. https://doi.org/10.11646/zootaxa.5353.2.1

Omelko, M.M. & Fomichev, A.A. (2024) New and poorly known species of *Bowie* Jäger, 2022 (Araneae: Ctenidae) from Southeast Asia. *Zootaxa*, 5543 (3), 383–403. https://doi.org/10.11646/zootaxa.5543.3.5

Pickard-Cambridge, F.O. (1897) On the cteniform spiders of Ceylon, Burmah and the Indian archipelago, west and north of Wallace's line; with bibliography and list of those from Australia, south and east of Wallace's line. *Annals and Magazine of Natural History*, Series 6, 20 (118), 329–356, pl. 4. https://doi.org/10.1080/00222939708680638

Pocock, R.I. (1897) Spinnen (Araneae). *In*: Kükenthal, W. (Ed.), *Ergebnisse einer zoologischen Forschungsreise in den Molukken und Borneo*. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 23, pp. 591–629.

Pocock, R.I. (1898) Scorpions, pedipalpi and spiders collected by Dr Willey in New Britain, the Solomon Islands, Loyalty Islands, etc. *In*: Willey, A. (Ed.), *Zoological results based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, collected during the years 1895, 1896 and 1897. Part I.* University Press, Cambridge, pp. 95–120, pl. 10–11. https://doi.org/10.5962/bhl.title.27080

Roewer, C.F. (1938) Araneae. *In*: *Résultats scientifiques du Voyage aux indes orientales néerlandaises de la SS. AA. RR. le Prince et la Princesse Leopold de Belgique*. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique*, 3 (19), pp. 1–94.

Sankaran, P.M. & Joseph, M.M. (2023) The hitherto unknown male of *Bowie indicus* (Gravely, 1931) (Araneae: Ctenidae). *Journal of Natural History*, 57 (1–4), 19–24. https://doi.org/10.1080/00222933.2022.2160282

Shang, J.X., Tian, Y., Zhang, Z.S., Wang, L.Y. & Yang, Z.Z. (2026) On nine species of the genus *Bowie* (Araneae: Ctenidae) from China and Malaysia. *Zootaxa*, 5760 (1), 57–74. https://doi.org/10.11646/zootaxa.5760.1.2

Sherwood, D. (2025) Annotated checklist of imported non-native spider (Araneae) taxa recorded in the United Kingdom 1800–2024. *Arthropoda Selecta*, 34 (1), 121–160. https://doi.org/10.15298/arthsel.34.1.10

Shorthouse, D.P. (2010) SimpleMappr, an online tool to produce publication-quality point maps. Available from: http://www.simplemappr.net (accessed May 2026)

Simon, E. (1897) Etudes arachnologiques. 27e mémoire (1). XLII. Descriptions d'espèces nouvelles de l'ordre des Araneae. *Annales de la Société Entomologique de France*, 65 (3, 1896), 465–510, pl. 12–13.

Strand, E. (1911) Araneae von den Aru- und Kei-Inseln. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 34, 127–199.

Wang, L.Y., Irfan, M., Zhang, F. & Zhang, Z.S. (2024) On three species of ctenids (Araneae: Ctenidae) from Tibet, China. *Zootaxa*, 5458 (1), 119–129. https://doi.org/10.11646/zootaxa.5458.1.7

World Spider Catalog (2026) *World Spider Catalog. Version 27.* Natural History Museum Bern. Available from: http://wsc.nmbe.ch (accessed May 2026). https://doi.org/10.24436/2