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TWO NEW SPECIES OF THE GENUS *LAGLAISIA* BIGOT, 1878 (DIPTERA: PLATYSTOMATIDAE) FROM INDONESIA

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Summary. Two new species, *Laglaisia vikhrevi* Gavryushin et Ozerov, **sp. n.** and *Laglaisia leleji* Gavryushin et Ozerov, **sp. n.** (Diptera: Platystomatidae) are described from Indonesia (Western New Guinea). Illustrations of head, wing, and terminalia of both sexes are provided for both species; characters to distinguish the new species from congeners are supplied.

Key words: Diptera, Tephritoidea, Platystomatidae, *Laglaisia*, signal flies, taxonomy, description, new species, Western New Guinea, Highland Papua, Australasian region.

Д. И. Гаврюшин, А. Л. Озеров. Два новых вида рода *Laglaisia* Bigot, 1878 (Diptera: Platystomatidae) из Индонезии // Дальневосточный энтомолог. 2026. N 554. С. 1-10.

Резюме. Из Индонезии (Западная Новая Гвинея) описаны два новых вида *Laglaisia vikhrevi* Gavryushin et Ozerov, **sp. n.** и *Laglaisia leleji* Gavryushin et Ozerov, **sp. n.** (Diptera: Platystomatidae). Приведены иллюстрации головы, крыла и терминалий обоих полов для обоих видов; указаны признаки, позволяющие отличить новые виды от других представителей рода.

INTRODUCTION

The genus *Laglaisia* Bigot, 1878 is apparently an endemic to mainland New Guinea, with six described species evidently just a fraction of its diversity (McAlpine, 2001). The majority of species show the striking sexual dimorphism, with male heads modified by lateral development of parafacial sclerites forming eye-stalks so that the head width may exceed total body length.

While examining rather extensive recent material of tephritoid flies from Indonesia (Western New Guinea) in ZMMU, we have discovered two species of *Laglaisia* unknown to science which descriptions are given below.

MATERIAL AND METHODS

The terminology used here mainly follows Cumming & Wood (2017) and Whittington & Kirk-Spriggs (2021); terms for parts of aedeagus mostly after McAlpine (2015). Male genitalia were boiled in 10% solution of potassium hydroxide (KOH) for 60 to 90s, neutralised by a 10% solution of acetic acid (CH₃COOH), rinsed in water and then stored in glycerol. When preparing wings for photography, generally the same procedure was followed except for much shorter time allowed for maceration. Dissected terminalia were examined with a Nikon SMZ645 binocular microscope and then photographed using an eTREK DCM900 camera on MBI-1 microscope; stacked images were obtained with CombineZP (Alan Hadley, <http://www.hadleyweb.pwp.blueyonder.co.uk>) software.

All examined material consists of dry-mounted specimens, which are either direct-pinned or glued to insect pins. The material is deposited in the Zoological Museum, Lomonosov Moscow State University (ZMMU).

TAXONOMY

Genus *Laglaisia* Bigot, 1878

Type species: *Laglaisia caloptera* Bigot, 1878

COMPOSITION. The genus consists of eight species; two of them are described below.

***Laglaisia vikhrevi* Gavryushin et Ozerov, sp. n.**

<https://zoobank.org/NomenclaturalActs/BDBBEC46-512D-4D42-A919-8A0C9A78F7B6>

Figs 2, 4, 7, 8, 10, 11, 13, 15

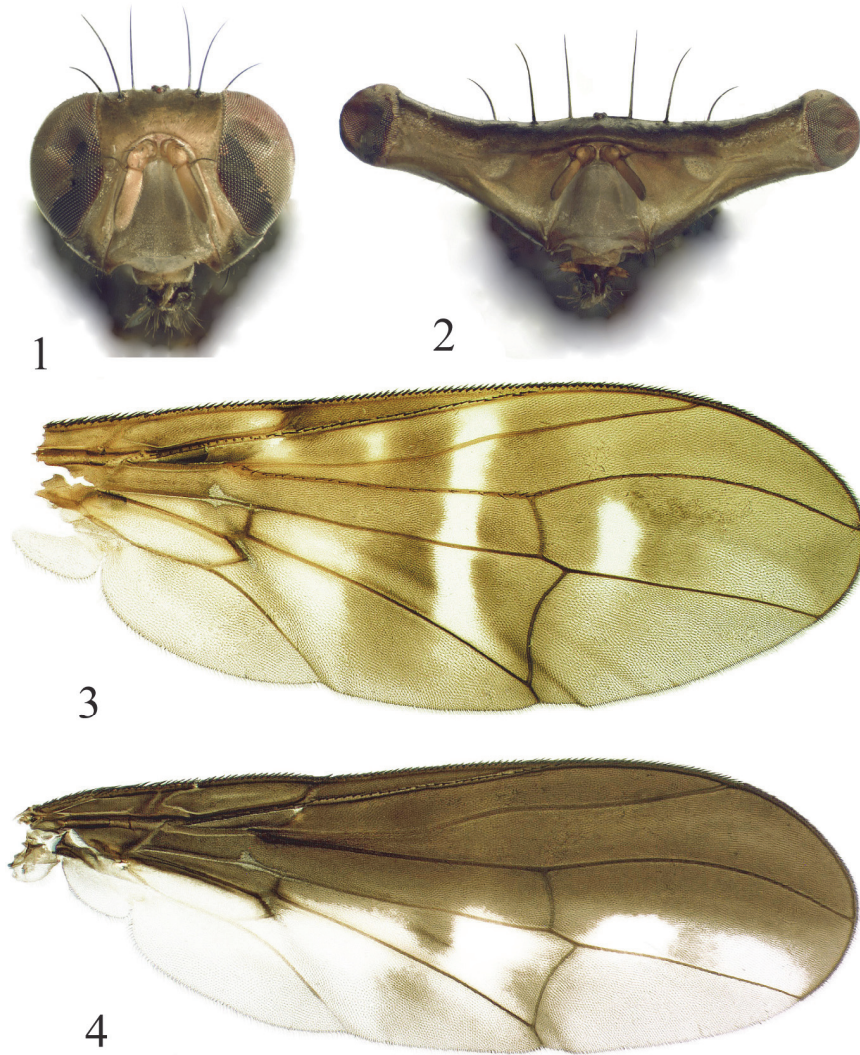
MATERIAL. Holotype: ♂, **Indonesia**: W Papua, Wamena env., 4.17° S, 138.99° E, 1700 m, 5–9.XII 2017, coll. N. Vikhrev. Paratypes: same data as holotype, 2 ♂, 4 ♀.

DESCRIPTION. MALE. *Head* (Fig. 2) mostly reddish yellow, the posterior surface more polished, brownish. The head capsule laterally produced into eye-stalks of quite variable length. The male holotype has the widest separation of the eyes, with head width 5.8 mm, the two male paratypes have head widths 2.1 mm and 4.5 mm. Frons three and a half to nine times wider than eye, weakly shining, with very sparse and short black setulae. Ocellar triangle black. Parafacialia yellow, greatly expanded in males with long eye-stalks, in the male with the narrowest head subequal to width of eye. Genae yellow, subequal to height of eye in males with long eye-stalks, two-thirds the height of eye in the male with the narrowest head. Face yellow, almost vertical, with silvery pruinescence, lower facial margin (epistoma auct.) weakly convex. Prelabrum (sensu McAlpine (2007), clypeus auct.) reddish yellow, transverse, wider than long, anterior margin very weakly emarginate. Palpi narrow, moderately long, reddish yellow with brownish base, proboscis dark brown. One moderately long orbital seta subequal to inner vertical seta; inner and outer vertical setae divergent, the former one-third longer than the latter. Ocellar setae very strongly reduced yet present, subequal in length to diameter of ocelli; a few strongly reduced, hair-like postocellar setae. Genal seta present; lateral postocular setae moderately developed, black. Antennae divided by a space less than length of scape, reddish yellow, postpedicel with brownish edges, approximately twice the length of pedicel, rounded apically, four times longer than wide, arista longer than face, yellow basally, remainder black, bipectinate, with dorsal hairs at base of arista two-thirds the width of postpedicel.

Thorax brownish red with purple hue visible at certain angles, subshining, with fine golden pruinescence which is less evident on scutellum, pleurae more brown and shining. Scutum covered with irregular suberect black setulae; anepimera covered with reddish setae in anterior part and bare posteriorly; katatergites, anatergites and mediotergite bare; katatergites and mediotergite laterally with fine golden pruinescence; katapisterna with hairs ventrally before the bases of mid coxae. One postpronotal seta, two notopleural setae, the posterior one on a raised callus, one postsutural supra-alar seta, one inter-alar seta, one postalar seta, one prescutellar dorsocentral seta; one anepisternal seta on upper posterior margin of the sclerite. Scutellum subtriangular, flat dorsally, weakly setose dorsally; three pairs of well-developed scutellar marginal setae, the apical pair the longest, weakly convergent, the lateral pair subparallel, the basal pair divergent.

Legs. Coxae brownish, fore coxae elongate, one-half the length of fore femora, mid coxae anteriorly, hind coxae laterally with strong setae. Trochanters, femora, and tibiae yellow, mid tibiae with a strong ventroapical spur which is twice longer than width of tibia and a short additional spur which is shorter than width of tibia. Fore femora slightly longer than fore tibiae, mid and hind coxae more elongate, hind femora one-third longer than hind tibiae. Fore femora with a row of four strong ventral setae and a less distinct row of 2–3 anterodorsal setae apically. Tarsi black with dense hairs ventrally which appear golden at certain angles, pulvilli yellow, fore tarsi equal in length to fore tibiae, all basitarsi longer than the combined length of the remaining tarsomeres.

Wing (Fig. 4) elongate, relatively narrow, ca. 2.9 times longer than wide, the widest near anterior part of cell m_4 , extensively patterned with brown; wing length 4.6–5.8 mm. Veins brown, more yellow in pale areas; wing membrane densely covered with regularly arranged microtrichia except for the hyaline areas indicated below. The entire lengths of veins R_1 and R_{4+5} setulose, other veins bare. Costal fringe short, vein C thickened before the tip of vein M_1 . The anterior part of wing widely brown,



Figs 1–4. *Laglaisia leleji* sp. n. (1, 3) and *Laglaisia vikhrevi* sp. n. (2, 4): 1, 2 – male head, anterior view; 3, 4 – wing.

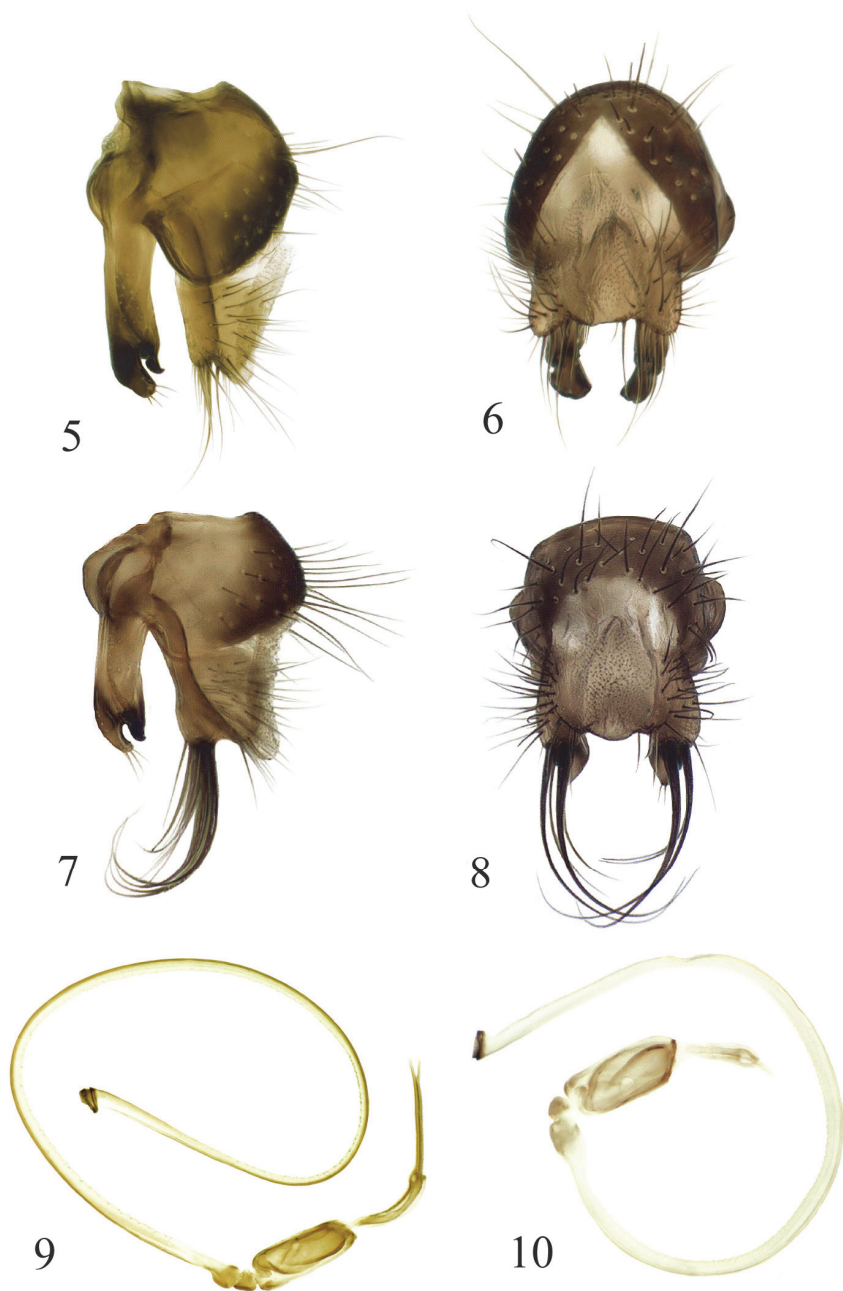
including cells *bc*, *c*, *sc*, *r*₁, *br*, *bm*, *r*₂₊₃, and upper half of cell *r*₄₊₅. The brown areas also include the upper basal part of cell *dm-m* beyond crossvein *bm-m*, an incomplete crossband beyond midlength of cell *dm* not reaching vein *M*₄, a narrow upper portion of cell *cua*, and a small portion of cell *m*₄ adjacent to crossvein *m-cu*. More diffuse brown areas are the spot dividing the basal hyaline and apical subhyaline spots in lower half of cell *r*₄₊₅, the spot over crossvein *dm-m* and tip of vein *M*₄ extended into cell *dm-m*, and the spot in distal portion of cell *m*₄. The posterior half of wing mostly pale brownish except for the following subhyaline areas: most of cell *cua*, lower basal part of cell *dm* with wide adjacent upper part of cell *m*₄, and apical subrectangular spot in lower part of cell *r*₄₊₅. The two hyaline, iridescent areas devoid of microtrichia are distal portion of cell *dm* (narrowly expanded into cell *br* where it's covered with microtrichia) and basal subrectangular spot in lower part of cell *r*₄₊₅. There's also a small subhyaline spot in cell *r*₁ beyond tip of vein *Sc*. Vein *Sc* runs very close to vein *R*₁ and ends shortly beyond level of crossvein *bm-m*. Cell *c* very wide, cell *sc* very narrow basally and elongate, one-third longer than cell *c*. Vein *R*₁ straight, its tip near level of crossvein *r-m*; an oblique fold in cell *r*₁ near the point of furcation of radial sector in alignment with the tip of vein *Sc*. Radial sector slightly longer than crossvein *r-m*. Vein *R*₂₊₃ sinuous near midlength. Distal portion of vein *R*₄₊₅ strongly curved downwards, tips of veins *R*₂₊₃ and *R*₄₊₅ divergent, cells *sc*, *r*₁, and *r*₂₊₃ of subequal width. The tips of veins *R*₄₊₅ and *M*₁ weakly convergent, cell *r*₂₊₃ one-half wider than cell *m*₁. Cell *br* very long and narrow, one-third longer than cell *r*₄₊₅. Crossvein *r-m* slightly arcuate, weakly oblique, two-thirds of its length before crossvein *dm-m*; crossvein *bm-m* oblique, starts beyond the point of furcation of radial sector; crossvein *dm-m* oblique, arcuate, one-half longer than crossvein *r-m*; crossvein *m-cu* almost horizontal, shorter than crossvein *bm-m*. Cell *dm* strongly widened distally, twice as long as cell *bm*, one-third longer than vein *M*₁; cells *bm* and *cua* of subequal length. Cell *cua* triangular at apex. Tip of vein *M*₄ short, about one-half the length of crossvein *r-m*, vein *CuA+CuP* reaches the posterior wing margin. Halteres moderately long, reddish yellow, knobs brownish.

Abdomen longer than wide, shiny dark brown with greenish, purple, or bronze hue, sparsely covered with subappressed pale setae which are more abundant and suberect on syntergite 1+2; posterior margin of tergite 5 with three pairs of long curved black setae apically (Fig. 11) and several pairs of shorter setae basally. Male terminalia as in Figs 7–8, 10; medial surstyli with tufts of very strong, curved setae ventroapically (Figs 7–8); aedeagus (Fig. 10) with stipe long and narrow, preglans simple, flexible section weakly developed, glans subcylindrical, without distal lobe, bulb elongate, terminal filaments very short, apparently symmetrical.

FEMALE. Similar to male yet with head shape not modified; wing length 4.3–5.7 mm; frons two to two and a half times wider than eye; parafacialia narrow, from subequal in width to one-half wider than postpedicel; face more widened at mouth margin; genae nearly one-third the height of eye; occiput laterally before postocellar setae with silvery pruinescence. Female ovipositor as in Figs 13, 15.

DISTRIBUTION. Indonesia (Province of Highland Papua).

ETYMOLOGY. The species is named after the collector, Dr. Nikita E. Vikhrev.



Figs 5–10. *Laglaisia leleji* sp. n. (5, 6, 9) and *Laglaisia vikhrevi* sp. n. (7, 8, 10): 5, 7 – epandrium, cerci and surstyli, lateral view; 6, 8 – same, dorsal view; 9, 10 – aedeagus, lateral view.

COMPARATIVE NOTES. *Laglaisia vikhrevi* **sp. n.** differs from its described congeners primarily in details of wing pattern, with the anterior part of wing mostly brown only in *L. telescopica* Enderlein, 1924 which has a completely different arrangement of hyaline areas including a triangular spot in cell r_1 near tip of vein R_1 , a semicircular apical spot in cell r_{4+5} , etc. (Enderlein, 1924: 116). Among other related species from New Guinea, the wing pattern of *Laglaisia vikhrevi* **sp. n.** resembles that of some representatives of the genus *Bama* McAlpine, 2001, e.g. *B. flexifer* McAlpine, 2015 and *B. signifier* McAlpine, 2015 which are quite dissimilar in many other respects (McAlpine, 2015).

***Laglaisia leleji* Gavryushin et Ozerov, sp. n.**

<https://zoobank.org/NomenclaturalActs/8FF22BC1-C460-42F4-B343-25737FAC98CE>

Figs 1, 3, 5, 6, 9, 12, 14

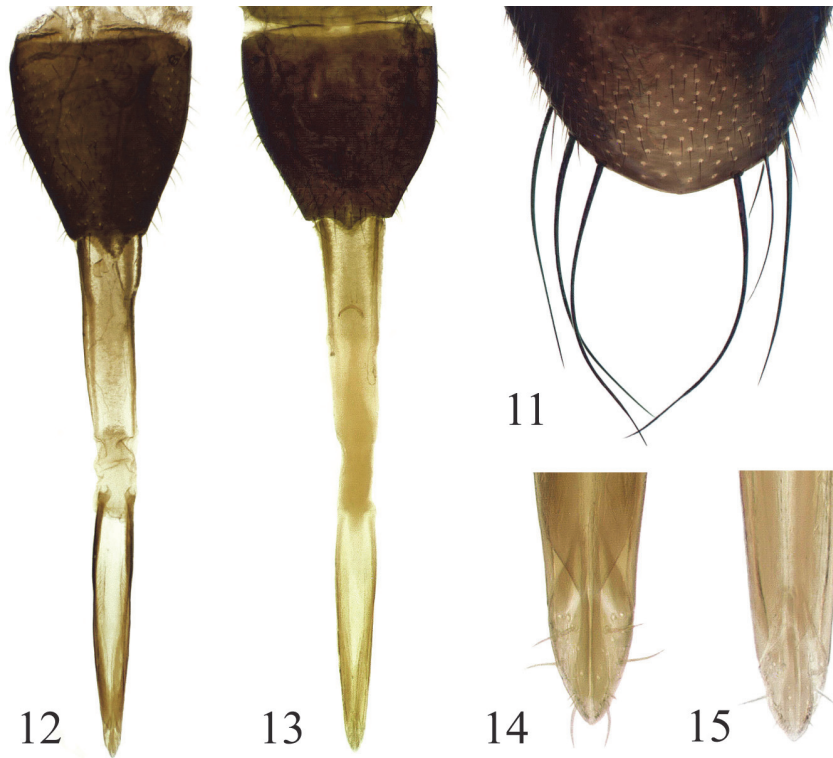
MATERIAL. Holotype: ♂, **Indonesia**: W Papua, Baliem Resort, 4.059° S, 139.032° E, 2000 m, 1–16.XII 2017, coll. N. Vikhrev. Paratypes: same data as holotype, 1 ♂, 2 ♀; W Papua, Baliem Resort, 4.06° S, 139.03° E, 2000 m, 16–25.XII 2014, 1 ♀, coll. N. Vikhrev.

DESCRIPTION. MALE. *Head* (Fig. 1) of normal shape, mostly reddish yellow, the posterior surface more polished, brownish. Frons subrectangular, one-half wider than long, about two-thirds wider than eye, weakly shining, with very sparse and short black setulae. Ocellar triangle black. Parafacialia subequal to width of pedicel. Genae brown, two-ninths the height of eye. Face almost vertical, weakly convex, face and parafacialia with silvery pruinescence. Prelabrum reddish yellow, transverse, wider than long, anterior margin very weakly emarginate. Palpi narrow, moderately long, reddish yellow with brownish base, proboscis dark brown. One moderately long orbital seta subequal to outer vertical seta; inner vertical setae subparallel, outer vertical setae divergent, the former one-fourth longer than the latter. Ocellar setae very strongly reduced yet present, subequal in length to diameter of ocelli; a few strongly reduced, hair-like postocellar setae. Genal and postgenal setae present; a row of 12 moderately developed, black lateral postocular setae. Antennae divided by a space less than length of scape, reddish yellow, postpedicel approximately twice the length of pedicel, rounded apically, four times longer than wide, arista longer than face, yellow basally, remainder black, bipectinate, with dorsal hairs at base of arista one-half the width of postpedicel.

Thorax much as in *Laglaisia vikhrevi* **sp. n.**, including the details of chaetotaxy; colouration generally more brown, the fine golden pruinescence on scutum more distinct before the suture.

Legs. Coxae brownish, fore coxae elongate, one-half the length of fore femora, mid coxae anteriorly, hind coxae laterally with strong setae. Trochanters and femora yellow, apical two-fifths of fore femora, apical one-fifth of mid and hind femora brownish. Tibiae brownish, mid tibiae with a strong ventroapical spur which is twice longer than width of tibia and a short additional spur which is shorter than width of

tibia. Fore femora with a row of four strong ventral setae and a less distinct row of 2–3 anterodorsal setae apically. Tarsi black with dense hairs ventrally which appear golden at certain angles, pulvilli yellow, tarsi of all legs equal in length to tibiae, basitarsi subequal to or slightly shorter than the combined length of the remaining tarsomeres.



Figs 11–15. *Laglaisia leleji* sp. n. (12, 14) and *Laglaisia vikhrevi* sp. n. (11, 13, 15): 11 – marginal setae on male tergite 5; 12, 13 – ovipositor, dorsal view; 14, 15 – aculeus, ventral view.

Wing (Fig. 3) ca. 2.6 times longer than wide, the widest near anterior part of cell m_4 , wing membrane mostly pale brown with rather clearly defined hyaline areas; wing length 5.1–5.2 mm. Veins brown, more yellow in pale areas; wing membrane densely covered with regularly arranged microtrichia. The entire lengths of veins R_1 and R_{4+5} setulose, other veins bare. Costal fringe short, vein C thickened before the tip of vein M_1 . Venational details almost exactly as in *Laglaisia vikhrevi* sp. n. The anterior part of wing widely pale brown, darker brown at base of cell r_1 , in cell sc , and rather wide areas bordering a transverse hyaline crossband, the posterior part paler brown. The subhyaline areas include the apex of cell sc , a small spot in cell r_1

beyond tip of vein *Sc*, a more distal transverse spot in cell r_1 , the centre of cell *bm*, most of cell *cua*, an elongate area at base of cell *dm*, and a subtriangular area at base of cell m_4 . The hyaline transverse crossband which is relatively narrow, not exceeding the length of crossvein *r-m* in width, runs from midlength of cell r_1 near tip of vein R_1 across distal parts of cells *br* and *dm* to vein M_4 . Another nearly hyaline area is an almost semicircular transverse spot at base of cell r_{4+5} which is isolated from vein R_{4+5} but reaches vein M_1 . Halteres moderately long, reddish yellow, knobs brownish.

Abdomen generally as in *Laglaisia vikhrevi* **sp. n.**; long curved setae on posterior margin of tergite 5 present but much shorter. Male terminalia as in Figs 5–6, 9; medial surstyli with tufts of relatively short and weakly curved setae ventroapically (Figs 5–6); aedeagus (Fig. 9) with stipe more elongate and narrow, preglans simple, flexible section weakly developed, glans subcylindrical, without distal lobe, bulb elongate, terminal filaments rather long, subequal in length to glans, symmetrical.

FEMALE. Similar to male yet considerably larger; wing length 7.1–7.4 mm; occiput laterally before postocellar setae with silvery pruinescence; all six scutellar setae subequal in length; tip of vein M_4 shorter, one-fourth to one-third the length of crossvein *r-m*; colouration of femora more variable, fore femora with apical one-third to one-half, mid femora with apical one-third, hind femora with apical one-fourth to one-third brownish; some subhyaline areas of wing membrane (apex of cell *sc*, both spots at base of cell r_1 , centre of cell *bm*) may be less distinct; metallic hue on abdomen may be barely visible. Female ovipositor as in Figs 12, 14.

DISTRIBUTION. Indonesia (Province of Highland Papua).

ETYMOLOGY. Named in honor of well-known Russian hymenopterist and expert on Mutillidae Dr. Arkady Stepanovich Lelej.

COMPARATIVE NOTES. *Laglaisia leleji* **sp. n.** differs from the described congeners with banded wing pattern and at least partially metallic colouration (*Laglaisia fascipennis* de Meijere, 1913; *L. biroi* Hendel, 1914; *L. stylops* Enderlein, 1924) primarily in details of wing pattern, with two crossbands and extensive hyaline subapical area divided by dark posterior apical band which connects with subapical band in cell r_{4+5} in *L. fascipennis*, a wedge-shaped hyaline crossband from vein *C* to vein M_4 and subapical dark band over crossveins *r-m* and *dm-m* which continues on apical margin of wing to midlength of cell r_{4+5} in *L. biroi*, while *L. stylops* has the wing pattern similar to that of *L. biroi* (Malloch, 1939). *Laglaisia leleji* **sp. n.** is the first described species of the genus with unmodified head in males although the late Dr. D. K. McAlpine mentioned an undescribed species without eye-stalks (McAlpine, 2001: 169).

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REFERENCES

- Cumming, J.M. & Wood, D.M. 2017. Adult morphology and terminology. P. 89–133. In: Kirk-Spriggs, A.H., Sinclair, B.J. (Eds). *Manual of Afrotropical Diptera. Volume 1. Introductory chapters and keys to Diptera families. Suricata 4*. South African National Biodiversity Institute, Pretoria.
- Enderlein, G. 1924. Beiträge zur Kenntnis der Platystomini. *Mitteilungen aus dem Zoologischen Museum in Berlin*, 11(1): 99–153.
- Malloch, J.R. 1939. The Diptera of the Territory of New Guinea. VII. Family Otitidae (Ortaliidae). *Proceedings of the Linnean Society of New South Wales*, 64(1–2): 97–154.
- McAlpine, D.K. 2001. Review of the Australasian genera of signal flies (Diptera: Platystomatidae). *Records of the Australian Museum*, 53(2): 113–199. DOI: 10.3853/j.0067-1975.53.2001.1327.
- McAlpine, D.K. 2007. The Surge Flies (Diptera: Canacidae: Zaleinae) of Australasia and Notes on Tethinid-Canacid Morphology and Relationships. *Records of the Australian Museum*, 59(1): 27–64. DOI: 10.3853/j.0067-1975.59.2007.1468.
- McAlpine, D.K. 2015. Signal flies of the genus *Bama* (Diptera: Platystomatidae) in Papua New Guinea. *Records of the Australian Museum*, 67(2): 25–53. DOI: 10.3853/j.2201-4349.67.2015.1603.
- Whittington, A.E. & Kirk-Spriggs, A.H. 2021. 70. Platystomatidae (Signal Flies). P. 1619–1667. In: Kirk-Spriggs, A.H., Sinclair, B.J. (Eds.). *Manual of Afrotropical Diptera. Volume 3. Brachycera–Cyclorrhapha, excluding Calyptratae. Suricata 8*. South African National Biodiversity Institute, Pretoria.