

РОССИЙСКАЯ АКАДЕМИЯ НАУК
Южный Научный Центр

RUSSIAN ACADEMY OF SCIENCES
Southern Scientific Centre

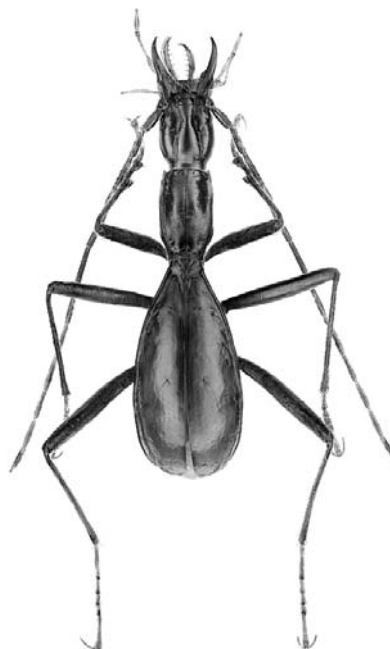


Кавказский Энтомологический Бюллетень

CAUCASIAN ENTOMOLOGICAL BULLETIN

Том 6. Вып. 1

Vol. 6. No. 1



Ростов-на-Дону
2010

Species of the genus *Argyrochlamys* Lamb, 1922 (Diptera: Dolichopodidae)

Виды рода *Argyrochlamys* Lamb, 1922 (Diptera: Dolichopodidae)

I. Ya. Grichanov
И. Я. Гричанов

All-Russian Institute of Plant Protection, Podbelskiy roadway, 3, St. Petersburg, Pushkin 196608 Russia. E-mail: grichanov@mail.ru
Всероссийский институт защиты растений, шоссе Подбельского, 3, Санкт-Петербург-Пушкин 196608 Россия

Key words: Diptera, Dolichopodidae, *Argyrochlamys*, Afrotropical Region, Tanzania, new species, key.

Ключевые слова: Diptera, Dolichopodidae, *Argyrochlamys*, Тропическая Африка, Танзания, новый вид, определитель.

Abstract. The genus *Argyrochlamys* Lamb is reviewed. It comprises seven species including a new species *Argyrochlamys marshalli* sp. n. from Tanzania. A check list and revised key to species of this genus are provided.

Резюме. Приведен обзор рода *Argyrochlamys* Lamb. В него включено семь видов, в т.ч. *Argyrochlamys marshalli* sp. n. из Танзании. Составлены список и определитель описанных видов рода.

Introduction

Until recently, the genus *Argyrochlamys* Lamb, 1922 was known by only type species, *A. impudicus* Lamb, 1922. Grichanov [2004] has described two new species of the genus. Brooks [2005] has synonymised *Halaiba* Parent, 1929 with *Argyrochlamys*, thus adding two more species. He has redescribed the genus and figured male and female genitalia of *A. impudicus* and *A. cavicola* (Parent, 1929), mentioning also an undescribed species from Sri Lanka. After the description of the new species in this paper, *Argyrochlamys marshalli* Grichanov, sp. n., the genus includes now seven species recorded from the Afrotropics, the Oriental Region (Chagos Archipelago, Sri Lanka) and the southernmost part of the Palaearctic Region. Species of *Argyrochlamys* are restricted to ocean beaches and are sometimes collected in crab burrows (e.g., *Ocyropode* Lamarck, Ocyropodidae); at present, their ecological role within these burrows is unknown [Grichanov, 2004; Brooks, 2005].

The holotype and paratype of new species are deposited in the Natural History Museum of Denmark (ZMUC). New material has been also found in the Hungarian Natural History Museum, Budapest (HNHM). Types of *Camptoneura decolor* Parent, 1930 and *Halaiba cavicola* have been examined in the collection of the National Museum of Natural History, Paris (MNHN). Morphological terminology mainly follows Cumming and Wood [2009]. Body length is measured from the base of the antenna to the tip of abdominal segment 7. Wing length is measured from the base to the wing apex. The relative lengths of the tarsomeres should be regarded as representative ratios and not measurements. A key to described species of this genus is compiled for the first time.

Genus *Argyrochlamys* Lamb

Argyrochlamys Lamb, 1922: 391.

Halaiba Parent, 1929: 56.

Camptoneura Parent, 1930: 110.

Remark. See diagnosis and discussion in Brooks [2005]. Included species:

Argyrochlamys angolensis Grichanov, 2004: 15. HT et 16PT [NMSA], 2PT [ISNB]. Type locality: Angola: Cuanza River Mouth, 4 mi. S. Luanda. Afrotropical: Angola.

Argyrochlamys breviseta (Parent, 1939) [*Halaiba*] [Brooks, 2005: 38].

Halaiba breviseta Parent, 1939: 280. ST [MNHN], 2ST [BMNH]. Type locality: Ghana: Accra, Ashanti. Afrotropical: Ghana.

Argyrochlamys cavicola (Parent, 1929) [*Halaiba*] [Brooks, 2005: 38].

Halaiba cavicola Parent, 1929: 57. 2ST [MNHN]. Type locality: Mersa Halaib. Afrotropical: Sudan, Djibouti; S Palaearctic: S Egypt, Oman.

Argyrochlamys erythreus Grichanov, 2004: 17. HT et 1PT [BMNH]. Type locality: Eritrea: Museri Id (Dahlak Archipelago). Afrotropical: Eritrea.

Argyrochlamys impudicus Lamb, 1922: 391. 2ST [BMNH]. Type locality: Seychelles: Long I., Mahe. Afrotropical: Seychelles, Mauritius; Oriental: Sri Lanka, Chagos Archipelago; S Palaearctic: Oman.

Camptoneura decolor Parent, 1930: 111. HT [MNHN]. Type locality: Mauritius: Tamarin Falls. (synonymised: Dyte, 1975: 231).

Argyrochlamys marshalli Grichanov, sp. n. Type locality: Tanzania, Dar es Salaam, City beach. Afrotropical: Tanzania.

Argyrochlamys sp. 1 [Brooks, 2005: 39, 42, 43; MZLU]. Oriental: Sri Lanka.

Remark. Brooks provided the following combination of characters that distinguish the species from all other species of the genus. Notum with flattened region in front

of scutellum. Hind tibia of male with distinct bifurcate posteroapical projection; hind basitarsus with 1 strong dorsal seta. Phallus slender and finely wrinkled; ejaculatory apodeme short, rod-like, with its apex dorsoventrally flattened and weakly flared laterally; male cercus very reduced.

Abbreviations:

HT – holotype; PT – paratype; ST – syntype;

BMNH – Natural History Museum, London, United Kingdom;

ISNB – Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium;

MZLU – Museum of Zoology, Lund University, Lund, Sweden;

NMSA – Natal Museum, Pietermaritzburg, South Africa.

Argyrochlamys marshalli Grichanov, **sp. n.** (Color plate 15: fig. 1–4)

Type material. Holotype ♀, Tanzania, Dar es Salaam, City beach, 26.11.2009, 6°48'56"S / 39°18'01"E. T. Pape & S.A. Marshall [ZMUC]. Paratype ♀, same label [ZMUC].

Description. Female. Setae on body and legs are black except as noted. Head 1/3 wider than high. Frons, face and postcranium densely white pollinose. Frons 1.5 times wider than high. One strong black vertical seta bend forward, one shorter yellow postvertical, a pair of strong black ocellar setae present. Eyes with rather long hairs; postocular setae yellow, uniseriate; upper postoculars stronger than lower setae. Face glabrous, almost parallel-sided; nearly 1.3 times higher than wide, 1.9 times wider than height of postpedicel. Clypeus slightly bulging, reaching lower margin of eyes. Antenna as long as height of head; yellow-orange; scape and pedicel simple, with short setulae; postpedicel elongate-triangular, 1.5 times as long as high, with acute apex and very short hairs; stylus positioned just before apex, practically apical, blackish in distal half, with microscopic hairs. Length ratio of scape to pedicel to postpedicel to stylus (1st and 2nd stylomeres), 10/5/40/7/35. Palpus and proboscis small, yellow, with short brownish cilia.

Thorax almost entirely yellow, whitish pollinose, with small blackish spot on pteropleura; 6 strong dorsocentral setae with 5th seta shifted towards median axis; 2 rows of acrostichals; 2 strong notopleural, 1 strong humeral, 1 posthumeral setae present. Proepisternum with 1 strong yellow seta above fore coxa and group of hairs. Notum with narrow eye-shaped flattened region in front of scutellum. Scutellum with 2 strong setae and 2 lateral hairs.

Legs whitish-yellow, with apical segments of posterior four tarsi darkened; all coxae yellow. Fore coxa with yellow hairs anteriorly and several yellow setae at apex; mid coxa with yellow cilia; hind coxa with 1 strong external golden-yellow seta. Fore tibia with 1–2 strong dorsal, 1 posterodorsal and 0–1 posteroventral short setae. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 85/75/33/20/18/11/12. Mid femur with 1 anterior subapical seta. Mid tibia with 2–3 anterodorsal, 2–3 posterodorsal, 1 strong ventral at middle and 4–5 apical setae. 1st–4th segments of mid tarsus each with short apical setae. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 100/110/45/40/32/22/17. Hind femur with 1 anterodorsal seta at 5/6 and row of elongated dorsal cilia. Hind tibia with 3 anterodorsal, 3 posterodorsal, 3–4 apical setae, with or without small anterior or posterodorsal seta. Hind basitarsus with 1 short basoventral seta; 1st–4th tarsomeres each with apicoventral setae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 110/140/33/65/50/37/26.

Wing hyaline, simple; veins yellow. R₁ reaching nearly 2/5 of wing. R₂₊₃ almost straight. Ratio of part of costa between R₂₊₃ and

R₄₊₅ to this between R₄₊₅ and M₁₊₂, 35/5. R₄₊₅ straight in basal half, slightly curved posteriorly in distal half. M₁₊₂ with gentle (about 45°) sinuation in middle of distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA₁, 23/63. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow with white cilia. Halteres yellow.

Abdomen conoid (dorsal view), entirely orange-yellow, weakly whitish pollinose. Oviscapt with rather long ventral brownish furci. 9th hemitergite having 3 short thin black acanthophorites. Cerci small, with rather long hairs, as long as cercus.

Length (mm): body 3.5, antenna 0.6, wing 3.3/1.1.

Male unknown.

Etymology. The species is named for one of the collectors, Canadian dipterist Stephen Marshall.

Diagnosis. The new species is close to *A. impudicus*, differing in lighter coloration of body and antenna, rather gentle curvature of M₁₊₂ in the middle of its distal part, longer postpedicel and practically apical stylus. It differs from closely related *A. cavicola* and *A. erythraeus* in entirely yellow mesonotum and abdomen; in having yellow cilia and setae on fore coxa; in mid tibia bearing one ventral seta at middle.

Argyrochlamys breviseta (Parent, 1939)

Material examined. 3♂, Ghana: Kwadaso, 10–24.07.1965, leg. Endrődy-Y. [HNHM].

Diagnosis. *A. breviseta* and *A. angolensis* are sister species that may be distinguished by genitalia morphology. Male cercus in *A. breviseta* is less strongly broadened towards apex, 4 times (vs 3 in *A. angolensis*) longer than wide at apex, 2 times (vs 3) wider at apex than at base; postgonite is swollen at base, thin and deeply bifurcated in distal half, at base as high as cercus at base (lateral aspect); dorsal surstylus is evenly thin; female postpedicel 2 times longer than arista-like stylus. Ground colour of thorax and abdomen is more greyish-yellow in *A. breviseta* and more blackish in *A. angolensis*.

Argyrochlamys impudicus Lamb, 1922

Type material examined. ♂, Museum Paris, Île Maurice, Tamarin Falls, R. Carié, 1914 / Decembre / Type [red label] / *Camptoneura decolor* n.sp. ♂, O. Parent det. [MNHN].

Diagnosis. Setation of body and legs mostly black. Wing venation aberrant, with R₂₊₃ short, reaching wing margin just beyond middle; apical section of M₁₊₂ in middle with nearly right-angular curvature; ratio of *m-cu* to distal part of CuA₁, 17/35. Female postpedicel as long as high, with distinctly dorsal stylus; stylus not shorter than postpedicel. Hypopygium with long and narrow curved distal epandrial lobe; cercus long, gradually narrowing apicad.

Argyrochlamys cavicola (Parent, 1929)

Type material examined. 1♂, 1♀, Halaib, Red Sea Coast, 15.3. to end April 1928 / Coll. Eflatoun, Egypte / *Halaiba cavicola* Par. Cotype [and] Paratype [red labels; MNHN].

Diagnosis. *A. cavicola* male differs from related *A. impudicus* in short suboval cercus. Antennal arista-like stylus 2 times shorter than postpedicel in male and slightly shorter than that in female, Mesonotum mostly dark; M₁₊₂ with gentle (about 45°) sinuation in middle of distal part;



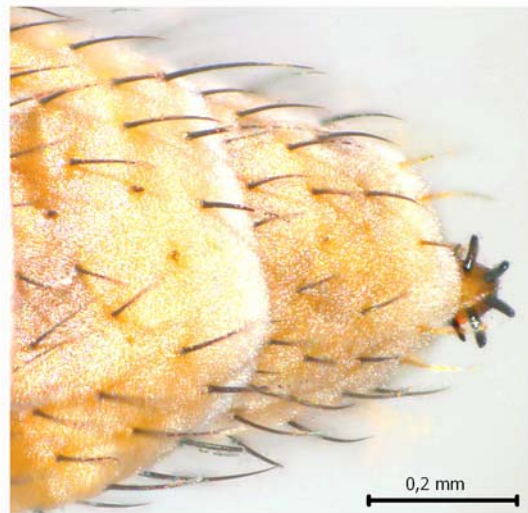
1



2



3



4

Fig. 1. *Argyrochlamys marshalli* Grichanov, **sp. n.**, habitus. Photo by Stephen Marshall.

Рис. 1. *Argyrochlamys marshalli* Grichanov, **sp. n.**, внешний вид. Фото: Stephen Marshall.

Fig. 2. *Argyrochlamys marshalli* Grichanov, **sp. n.**, wing.

Рис. 2. *Argyrochlamys marshalli* Grichanov, **sp. n.**, крыло.

Fig. 3. *Argyrochlamys marshalli* Grichanov, **sp. n.**, antenna.

Рис. 3. *Argyrochlamys marshalli* Grichanov, **sp. n.**, усик.

Fig. 4. *Argyrochlamys marshalli* Grichanov, **sp. n.**, apex of abdomen, dorsal aspect.

Рис. 4. *Argyrochlamys marshalli* Grichanov, **sp. n.**, вершина брюшка дорсально.

ratio of part of costa between R_{2+3} and R_{4+5} to this between R_{4+5} and M_{1+2} , 30/3; ratio of *m-cu* to distal part of CuA_1 , 14/34. Fore tibia with 2 anterodorsals, 2 posterodorsals, 1 posteroventral seta; fore coxa with black cilia; mid tibia with 3 anterodorsals, 3 posterodorsals, 2 ventral setae; hind tibia with 4 anterodorsals, 4 posterodorsals, 3 short ventral setae; all setae black.

Key to described species of the genus *Argyrochlamys*

1. Setation of body and legs entirely light (*breviset*a group) 2
 - Setation of body and legs mostly black (*impudicus* group) 3
2. Male cercus strongly broadened towards apex; postgonite evenly thick, pointed in distal third, at base as high as cercus in middle (lateral aspect), biapicate; female postpedicel 1.5 times longer than arista-like stylus; 3 mm *A. angolensis*
 - Male cercus less strongly broadened towards apex; postgonite swollen at base, thin and deeply bifurcated in distal half, at base as high as cercus at base (lateral aspect); female postpedicel 2 times longer than arista-like stylus; 2.75 mm *A. breviseta*
3. Apical section of M_{1+2} in middle with nearly right-angular curvature; female postpedicel as long as high, with distinctly dorsal stylus; 5.5 mm *A. impudicus*
 - Apical section of M_{1+2} in middle with gentle (about 45°) curvature; female postpedicel 1.5–1.7 times longer than high, with practically apical stylus 4
4. Mesonotum entirely yellow; fore coxa with yellow cilia; mid tibia with one ventral seta at middle; 3.5 mm (females only) *A. marshalli* **sp. n.**
 - Mesonotum mostly dark; fore coxa with black cilia; mid tibia with 2 or without ventral setae 5
5. Arista-like stylus distinctly longer than postpedicel; mid tibia without ventral setae; 3.7 mm (females only) *A. erythraeus*
 - Arista-like stylus 2 times shorter than postpedicel in male and slightly shorter than that in female; mid tibia with 2 ventral setae; 3.75 mm *A. cavicola*

Acknowledgments

The work was undertaken in the Zoological Museum of Copenhagen University (ZMUC) and was supported by the IAMONET-RU programme. We would like to thank Dr. Thomas Pape (ZMUC), Dr. Laszlo Papp (HNHM) and late Dr. Loïs Matile (MNHN) for the loan of specimens. Anonymous reviewers kindly reviewed earlier drafts of the manuscript.

References

- Brooks S.E. 2005. Systematics and phylogeny of the Dolichopodinae (Diptera: Dolichopodidae) // *Zootaxa*. 857: 1–158.
- Cumming J.M., Wood D.M. 2009. Adult morphology and terminology [Chapter] 2 // *Manual of Central American Diptera* (Brown B.V., Borkent A., Cumming J.M., Wood D.M., Woodley N.E., Zumbado M.A. eds.). Volume 1. Ottawa: NRC Research Press: 9–50.
- Dyte C.E. 1975. Family Dolichopodidae // *A catalog of the Diptera of the Oriental Region* (Delfinado M.D., Hardy D.E. eds.). Volume II. Suborder Brachycera through Division Aschiza. Suborder Cyclorrhapha. Honolulu: University Press of Hawaii: 212–258.
- Grichanov I.Ya. 2004. Review of Afrotropical Dolichopodinae (Diptera: Dolichopodidae) // *Plant Protection News Suppl. St. Petersburg: VIZR RAAS*: 1–244.
- Lamb C.G. 1922. The Percy Sladen Trust expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner M.A. Vol. 7. No. VIII. – Diptera: Asilidae, Scenopinidae, Dolichopodidae, Pipunculidae, Syrphidae // *Transactions of the Linnean Society of London* (2, Zoology). 18: 361–416.
- Parent O. 1929. Contribution à la faune diptérologique d'Égypte: dolichopodides de la région de Halaïb // *Bulletin de la Société Royale Entomologique d'Égypte*. 13: 42–58.
- Parent O. 1930. Espèces nouvelles de dolichopodides (diptères) conservées au Muséum National d'Histoire Naturelle de Paris // *Annales de la Société Scientifique de Bruxelles. Ser. B*, 50: 86–115.
- Parent O. 1939. Diptères dolichopodides de la région éthiopienne // *Revue de Zoologie et de Botanique Africaines*. 32: 256–282.

References

- Brooks S.E. 2005. Systematics and phylogeny of the Dolichopodinae (Diptera: Dolichopodidae). *Zootaxa*. 857: 1–158.
- Cumming J.M., Wood D.M. 2009. Adult morphology and terminology [Chapter] 2. In: Manual of Central American Diptera (B.V. Brown, A. Borkent, J.M. Cumming, D.M. Wood, N.E. Woodley, M.A. Zumbado eds). Vol. 1. Ottawa: NRC Research Press: 9–50.
- Dyte C.E. 1975. Family Dolichopodidae. In: A catalog of the Diptera of the Oriental Region. Volume II. Suborder Brachycera through Division Aschiza. Suborder Cyclorrhapha. (M.D. Delfinado, D.E. Hardy eds). Honolulu: University Press of Hawaii: 212–258.
- Grichanov I.Ya. 2004. Review of Afrotropical Dolichopodinae (Diptera: Dolichopodidae). *Plant Protection News*. Supplement: 1–244.
- Lamb C.G. 1922. The Percy Sladen Trust expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner M.A. Vol. 7. No. VIII. – Diptera: Asilidae, Scenopinidae, Dolichopodidae, Pipunculidae, Syrphidae. *Transactions of the Linnean Society of London (2, Zoology)*. 18: 361–416.
- Parent O. 1929. Contribution a la faune dipterologique d’Egypte: dolichopodides de la region de Halaib. *Bulletin de la Societe Royale Entomologique d’Egypte*. 13: 42–58.
- Parent O. 1930. Especies nouvelles de dolichopodides (dipteres) conservees au Museum National d’Histoire Naturelle de Paris. *Annales de la Societe Scientifique de Bruxelles*. Ser. B. 50: 86–115.
- Parent O. 1939. Dipteres dolichopodides de la region ethiopienne. *Revue de Zoologie et de Botanique Africaines*. 32: 256–28.