New Afrotropical species of _Tenuopus_ Curran, 1924
(Diptera: Dolichopodidae)

**Новые виды **_Tenuopus_ Curran, 1924 (Diptera: Dolichopodidae) из Тропической Африки

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, Tenuopodinae, _Tenuopus_, taxonomy, new species, new record, Tropical Africa.

**КЛЮЧЕВЫЕ СЛОВА:** Diptera, Dolichopodidae, Tenuopodinae, _Tenuopus_, таксономия, новый вид, новое указание, Тропическая Африка.

**ABSTRACT:** A new material for the Afrotropical genus _Tenuopus_, Curran, 1924, has recently been found and identified. _Tenuopus comorensis_ Grichanov, **sp.n.**, from Comoros and _T. birketti_ Grichanov, **sp.n.**, from Mozambique and South Africa are described and illustrated. New species differ from other representatives of the genus in morphology of male genitalia mainly. A new record is given for the known species, _T. kylei_ Grichanov, 2018. Corrections of the last key to species of _Tenuopus_ are also provided.

**РЕЗЮМЕ:** Обнаружен и определён новый материал для афрофлористического рода _Tenuopus_ Curran, 1924. Описаны _Tenuopus comorensis_ Grichanov, **sp.n.**, с Коморских островов и _T. birketti_ Grichanov, **sp.n.**, из Мозамбика и Южной Африки. Новые виды отличаются от известных, главным образом, по морфологии гениталий самцов. Приведён новый материал для _T. kylei_ Grichanov, 2018. Даны дополнения к последнему определителю видов рода.

The Afrotropical genus _Tenuopus_ Curran, 1924 has been recently revised by Grichanov [2018], who has created a new monotypic subfamily _Tenuopodinae_ for the genus and provided a key for 19 known species. A careful sorting of Malaise traps’ residues from two collections has revealed new material showing much more diverse fauna of this group in southern Africa.

In this paper two new species of _Tenuopus, T. comorensis_ Grichanov, **sp.n.**, from Comoros and _T. birketti_ Grichanov, **sp.n.**, from Mozambique and South Africa are described. The present research gives also a new record for the known species, _T. kylei_ Grichanov, 2018. Now five _Tenuopus_ species are found in South Africa and two species in Mozambique. In total, 21 species of the genus are now known. _T. comorensis_ is the fifth dolichopodid species discovered on the Comoros, with all the species being Island endemics.

Material cited in this work is housed at the Natal Museum, Pietermaritzburg, Kwa-Zulu Natal, South Africa (NMSA) and Zoologische Staatsammlung, München, Germany (ZSM). Specimens have been studied and photographed with a ZEISS Discovery V-12 stereo microscope and an AxioCam MRC5 camera. Genitalia preparations have been photographed with a ZEISS Axiosstar stereo microscope and an AxioCam ICC3 camera. Morphological terminology and abbreviations follow Cumming and Wood [2017], and Grichanov, Brooks [2017]. The relative lengths of the antennomeres and podomeres should be regarded as representative ratios and not measurements. Body length is measured from the base of the antenna to the tip of abdominal segment 6. Wing length is measured from the base to the wing apex. The figures showing the hypopygium in lateral view are oriented as it appears in the intact specimens, with the morphologically ventral surface of the genitalia facing upwards, dorsal surface downwards, anterior end facing left and posterior end facing right.

_Tenuopus comorensis_ Grichanov, **sp.n.**, Figs 1–2.

**MATERIAL.** Holotype © (dried from ethanol and mounted on pin), [Comoros:] Comoren, Grand Comore, berghauf von Bahani, 12.IV.2002, M. Kotrba (ZSM).

**DESCRIPTION.** _Male_ (somewhat discolored). _Head_. Frons black, grey pollinose; one pair of short postvertical setae, shorter than uppermost postocular seta; upper postocular setae black, increasing in length upward; lateral and lower postoculars white; ventral postcranium covered with irregular white hairs; face silvery-white, 7 times as high as wide in middle, nearly as wide as postpedicel; clypeus bulg...
New Afrotropical species of Tenuopus

Antennae as long as height of head, yellow; pedicel projected distally on inner side, with a crown of short black setae, one of dorsal setae nearly as long as pedicel; postpedicel rounded, as long as high at base (20/17); arista-like stylus dorsal, with short hairs; length ratio of scape to pedicel to postpedicel to stylus (1st and 2nd segments), 11/15/20/15; palpus and proboscis short, yellow, covered with white hairs, proboscis also with a pair of black lateral setae.

Thorax. Pleura dirty yellow; mesonotum orange, with narrow brown stripe along acrostichals, wider posteriorly and brown on scutellum dorsally; 6 dorsocentral setae with posterior pair shifted laterally; acrostichals regularly biseriate, strong, nearly reaching 5th dorsocentals; scutellum with 2 strong bristles and 2 short lateral hairs; proepisternum with 2 yellow setae.

Legs. Yellow; last segments of tarsi brown; fore and mid coxae with black hairs anteriorly and 5-7 black apical bristles of various length; hind coxa with one long black outer bristle above middle; fore femur with only dark fine erect ventral hairs on basal half, and 3 short black posteroventral cilia; fore tibia simple, with 1 anterodorsal and 1 posterodorsal at base, 2 apical setae; 2nd segment of fore tarsus on distal third and 3rd segment on basal half with posteroventral row of short semi-erect setulae; claws simple; mid femur without anterior preapical seta, with anteroventral row of black erect hairs, about half as long as diameter of femur; mid tibia with 3 anterior, 3 posterodorsal, 3–4 short ventral, 4–5 apical setae; mid basitarsus with several short ventral setae; hind femur ventrally with black erect hairs, about one-third as long as diameter of femur, with 1 strong anterior preapical seta; hind tibia with 4 anterior, 4 posterozeral, 3–4 apical setae. Femur, tibia and tarsomere (from first to fifth) length ratio (in mm): fore leg: 1.85/1.98/1.69/1.13/0.86/0.59/0.31, mid leg: 1.86/2.79/2.07/0.96/0.76/0.45/0.19, hind leg: 2.45/3.81/1.26/1.25/0.80/0.49/0.24.

Wing. Greyish, almost hyaline, veins brown; subcosta very thin; ratio of part of costa between R23 and R45 to that between R45 and M1, 6/1; M1 with gentle arc to apex, reaching costa right before wing apex; M1 present as fold on membrane; cross-vein dm-m straight; ratio of crossvein dm-m to apical part of M1+2 (fork-handle) to apical part of M4, 0.37/1.12/0.85; anal vein foldlike, not reaching wing margin; anal angle obtuse; lower calypter yellow, with black apex and pale setae; halter yellow with orange knob, halter stem thin and long, with dorsal and ventral groups of short hairs distally.

Abdomen. Mostly yellow-orange, black setose; 1st segment yellow, with narrow brown posterior edging; 2nd–5th yellow, with narrow brown edging posteriorly and anteriorly; 6th mostly brown; 8th segment and epandrium entirely yellow; 8th segment with brownish setae; cercus and surstylus yellow; cercus covered with yellow hairs and setae; hypandrium small, simple; phallosome thin and simple; 2 long epandrial lobes.

Figs 1–4. Tenuopus spp., males: 1–2 — T. comorensis Grichanov, sp.n.; 3–4 — T. birketti Grichanov, sp.n.; 1, 3 — head; 2, 4 — hypopygium, lateral view.

Рис. 1–4. Tenuopus spp., самцы: 1–2 — T. comorensis Grichanov, sp.n.; 3–4 — T. birketti Grichanov, sp.n.; 1, 3 — голова; 2, 4 — гипопигий, сбоку.
distally on each side; thin epandrial lobe with 2 basal, narrow at apex, simple. 16a. Fore tibia without elongate ventral hairs and posterior setae; fore tarsomeses covered with dense hairs ventrally and elongate setulae dorsally; surstylus about half as long as cercus, simple. T. birketti Grichanov — Fore tibia without elongate hairs and setae; 2nd segment of fore tarsus on distal third and 3rd segment on basal half with posteroventral row of short semi-erect setulae; surstylus about as long as cercus, divided in 2 lobes from middle. T. comorense sp.n.

Legs. Yellow; last segments of tarsi brown; fore coxa with white hairs anteriorly and 3 black apical bristles; mid coxa with black hairs anteriorly and 5–7 black apical bristles of various length; hind coxa with one long black outer bristle above middle; fore leg devoid of bristles and remarkable hairs; claws simple; mid femur with anterior preapical seta, glabrous ventrally; mid tibia with 2 long and 1 short anterior, 3 short posterodorsal, 2–3 ventral, 4–5 apical setae; hind femur ventrally with simple setae, with 1 strong anterior preapical bristle; hind tibia with 2–3 anterior, 4 short posterodorsal, 3–4 apical setae. Femur, tibia and tarsomeres (from first to fifth) length ratio (in mm): fore leg: 1.02/1.09/1.06/1.00/0.47/0.24/0.14, mid leg: 1.27/1.90/1.17/0.57/0.45/0.26/0.15, hind leg: 1.48/2.50/0.58/0.77/0.46/0.27/0.15.

Wing. Evenly coloured, almost hyaline, veins yellow; subcosta very thin; ratio of part of costa between R1 and R2, to that between R1 and M1, 6/1; M, with gentle arc to apex, reaching costa right before wing apex; M, present as fold on membrane; cross vein dm-m straight, oblique; ratio of cross-vein dm-m to apical part of M2, (fork-handle) to apical part of M1, 0.24/0.85/0.84; anal vein foldlike, not reaching wing margin; anal angle obtuse; lower calypter yellow, with dark apex and pale setae; halter yellow; halter stem thin and long, with dorsal and ventral groups of short hairs distally.

Abdomen. Mostly yellow-orange, black setose; 1st segment yellow; 2nd–5th yellow, brown dorsally at posterior suture; 8th segment and epandrium entirely yellow; 8th segment with yellow and brownish setae; cercus and surstylus yellow; surstylus brown distally; cercus covered with yellow hairs and setae; hypandrium small, simple; phallus thin and simple; 2 epandrial lobes distally on each side; thick epandrial lobe with 5–6 apical setae; thin epandrial lobe with 2 apical setae; 2 long epandrial setae at base of hypandrium; surstylus nearly as long as cercus, simple, with short subapical dorsal tooth, with 2 short apical setae; cercus half as long as epandrium, swollen basally, narrow distally, covered with long setae dorsally and distally.

Measurements (in mm, in ethanol). Body length 4.2–4.8, antenna length 1.0, wing length 3.6–4.7, wing width 1.0–1.2.

Female. Similar to male except lacking male secondary sexual characters. Frons shining blue; face nearly parallel-sided, 4 times as high as wide in middle; postpedicel subtrigonal, with rounded apex, as long as high at base (15/13); length ratio of scape to pedicel to postpedicel to stylus (1st and 2nd segments), 15/11/15/6/102; mesonotum with shining green stripe along acrostichals; tibia and tarsomeres (from first to fifth) length ratio (in mm): fore leg: 1.02/1.09/1.06/0.47/0.24/0.14, mid leg: 1.27/1.90/1.17/0.57/0.45/0.26/0.15, hind leg: 1.48/2.50/0.58/0.77/0.46/0.27/0.15; 7th segment of abdomen brown; oviscapt small; terga 9–10 divided medially into 2 hemitergites, each bearing 5 long simple setae; anal plate weakly sclerotized, semicircular, adjacent to lateral processes covered with long hairs.

Measurements (in mm, in ethanol). Body length 4.5–5.2; wing length 3.9–4.2.

ETYMOLOGY. The species is named after the South African entomologist, P. Birkett (NMSA), the collector of the type specimens.

DIAGNOSIS. T. birketti sp.n. is the smallest fly in the genus and belongs to a group of species with uniseriate acrostichals or without acrostichals, being the closest to T. soderlundi Grichanov, 2018, differing from the latter in antennal postpedicel about 2 times as long as high and different morphology of epandrial lobes and surstylus. T. soderlundi has antennal postpedicel about as long as high. Both species differ from T. cognatus Parent, 1934 in abdo-
New Afrotropical species of *Tenuopus* 463

men with 2<sup>nd</sup>–5<sup>th</sup> segments almost entirely yellow and deeply furcated surstylus with narrow arms (see key below). *T. birketti* sp.n. female differs from *T. cognatus* and *T. erroneus* Parent, 1934 in abdomen with 3<sup>rd</sup>–5<sup>th</sup> segments almost entirely yellow (see key below).

**Males**

8. Abdomen with 2<sup>nd</sup>–5<sup>th</sup> segments mostly yellow orange, each with broad black posterior triangular spot; M<sub>4</sub> 3 times longer than dm-m; antennal postpedicel as long as high; surstylus deeply furcated with narrow arms; body length 6 mm ........................................... *T. cognatus* Parent

— Abdomen with 2<sup>nd</sup>–5<sup>th</sup> segments almost entirely yellow; M<sub>4</sub> usually 4 times longer than dm-m; surstylus not furcated ......................................................................................... 8a

8a. Antennal postpedicel as long as high; body length 5–5.2 mm........................................... *T. soderlundi* Grichanov

— Antennal postpedicel about 2 times as long as high; body length 4.2–4.8 mm ........................................... *T. birketti* sp.n.

**Females**

22. Hind tarsus entirely black; R<sub>4+5</sub> and M<sub>1</sub> reaching costa at wing apex ........................................... *T. cognatus* Parent

— Hind tarsus yellow at base; M<sub>1</sub> reaching costa before wing apex ................................................................. 22a

22a. Abdomen with 3<sup>rd</sup>–5<sup>th</sup> segments each with large blue-black posterior spots ..................... *T. erroneus* Parent

— Abdomen with 3<sup>rd</sup>–5<sup>th</sup> segments each with narrow brown posterior bands ........................................... *T. birketti* sp.n.

**Remarks.** *T. birketti* sp.n. male from Kwa-Zulu Natal is remarkable in its smallest size, with wing length 3.6 mm, differing also from the Mozambiquean material in the reduction of some bristles on legs. Hypopygia of the two forms are identical; therefore, I consider their difference as an intraspecific variation. The collection sites for the two populations are located at a distance about 30–40 km from each other.

*Tenuopus kylen* Grichanov, 2018

MATERIAL. 2♂, 2♀, South Africa: KZN [Kwa-Zulu Natal], Kosi Bay (2632DD), 30 XI–12 XII [1982?] (NMSA).

DISTRIBUTION. South Africa (Kwa-Zulu Natal).

**References**

