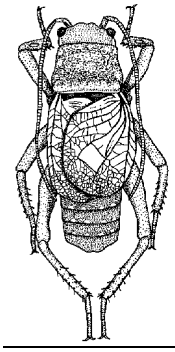

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A NEW SPECIES OF *CONDYLOSTYLUS* BIGOT, 1859 (DIPTERA: DOLICHOPODIDAE) FROM TANZANIA WITH NOTES ON GENERIC SYNONYMY

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A new species, *Condylostylus danieli* **sp. n.**, is described from Tanzania. New synonymy is established: *Condylostylus* Bigot, 1859 = *Aldabromyia* Meuffels et Grootaert, 2007, **syn. n.** Type species of genus *Aldabromyia* is transferred to *Condylostylus* and new combination is proposed: *Condylostylus plagiochaeta* (Meuffels et Grootaert, 2007), **comb. n.**

KEY WORDS: Diptera, Dolichopodidae, Sciapodinae, *Condylostylus*, new species, new synonymy, Tanzania.

И. Я. Гричанов. Новый вид рода *Condylostylus* Bigot, 1859 (Diptera: Dolichopodidae) из Танзании с замечаниями по родовой синонимии // Дальневосточный энтомолог. 2010. N 216. С. 1-10.

Из Танзании описан *Condylostylus danieli* **sp. n.** Установлена новая синонимия: *Condylostylus* Bigot, 1859 = *Aldabromyia* Meuffels et Grootaert, 2007, **syn. n.** Типовой вид рода *Aldabromyia* перенесен в род *Condylostylus* и предложена новая комбинация: *Condylostylus plagiochaeta* (Meuffels et Grootaert, 2007), **comb. n.**

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INTRODUCTION

The genus *Condylostylus* Bigot, 1859 belongs to the subfamily Sciapodinae and numbers about 300 species, being mainly a Pantropical genus with an extremely high diversity in the Neotropical Region and reaching southern Palaearctic Region in the Far East (Bickel, 1994). Here we describe one peculiar new species from Tanzania, strongly differing from other Afrotropical species in male secondary sexual characters (MSSC). One generic synonym is also proposed for the *Condylostylus*.

MATERIAL AND METHODS

Morphological terminology follows Robinson and Vockeroth (1981), Stuckenberg (1999), and Sinclair (2000). 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 relative lengths of the tarsomeres should be regarded as representative ratios and not measurements. Figures showing the male genitalia in lateral view are oriented as they appear on the intact specimen (rotated 180° and lateroflexed to the right), with the morphologically ventral surface of the genitalia facing up, dorsal surface down, anterior end facing right and posterior end facing left.

The following abbreviations are used below: HT – holotype; LT – lectotype; PT – paratype; BMNH – The Natural History Museum, London, United Kingdom; IRSNB – Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium; MNHN – Muséum National d'Histoire Naturelle, Paris, France; NMK – National Museum of Kenya, Nairobi, Kenya; NMN – National Museum of Namibia, Windhoek, Namibia; NMSA – Natal Museum, Pietermaritzburg, South Africa; RMCA – Musee Royal de l'Afrique Centrale, Tervuren, Belgium; TAU – Department of Zoology, Tel Aviv University, Israel.

The holotype and paratypes of the new species described in this paper are deposited in the collection of the Zoological Museum of the University of Copenhagen, Denmark (ZMUC).

SYSTEMATICS

Genus *Condylostylus* Bigot, 1859

Condylostylus Bigot, 1859: 215. Type species: *Psilopus bituberculatus* Macquart, 1842, by original designation.

Aldabromyia Meuffels et Grootaert, 2007: 29, **syn. n.** Type species: *Aldabromyia plagiochaeta* Meuffels et Grootaert, 2007, by original designation.

REMARKS. The diagnosis of the genus *Condylostylus* was provided by Bickel (1994). Afrotropical fauna has been recently studied by Grichanov (1996, 1998, 1999, 2000, 2003), reaching to 20 species (including new ones and excluding species transferred to *Parentia* Hardy, 1935). They form three distinct species groups that can be diagnosed within the genus as follows.

1. Frons with a strong front vertical bristle arising from hairy mound; fore tibia with 1-2 long apicoventral setae ...…… ***paricoxa*** **species group** (four species)
– Frons with a strong front vertical bristle only, with at most one fine hair on small mound; fore tibia without long apicoventral seta ..…….. 2
2. Wing venation abnormal: M_{1+2} (fork-handle) strongly curved towards posterior wing margin, M_1 continued nearly in the same line as M_{1+2} …… ……..…... ***pateraeformis*** **species group** (seven species)
– Wing with normal female-type venation .... ***burgeoni*** **species group** (nine species)

In fact, only *C. paricoxa* species group has all characters typical of generic concept. *C. pateraeformis* species group seems to be confined to Afrotropical Region, while *C. burgeoni* species group is a transitional group between the former two ones (see also discussion in Bickel, 1994). All Afrotropical species of *Condylostylus* have rather similar morphology of hypopygium, but well differing in shape and setation of cercus in combination with leg ornamentation and coloration. Surstyli are greatly reduced in African species (in contrast to American and Oriental species) and have no diagnostic value. When I studied the description of the genus *Aldabromyia* (Meuffels & Grootaert, 2007), I have noted close relation of its generic concept to characters of the *C. burgeoni* species group. I have reexamined a male paratype of *C. skufjini* Grichanov, 1998 (a member of this group, described from Madagascar) and found no differences between this species and description of *Aldabromyia plagiochaeta* (collected from Aldabra Island). I think the two species are possible synonyms. Unfortunately such specific character as small inner pointed lobe on male cercus of *C. skufjini* has not been described and pictured in *A. plagiochaeta*.

Meuffels & Grootaert (2007) have proposed the following combination of characters to distinguish *Aldabromyia* from other sciapodine genera: *tp* (=*m-cu*) straight; 5 strong *dc*; *acr* short; laterals of scutellum very long; arista (=stylus) dorsal, relatively short, on a small 3rd antennal segment; 2nd antennal segment with only short bristles; cercus of hypopygium bladelike, not lengthened; nearly bristleless legs; on either side of frons only one, weak vertical seta; narrow face; 1st segment of fore tarsus remarkably broadened and flattened.

But all these characters are rather common in Afrotropical *Condylostylus* species. Even such key characters as broad face and hairy frontal mound are described in only four of twenty Afrotropical species. So, I propose here a new generic synonym and a new combination, *Condylostylus plagiochaeta* (Meuffels et Grootaert, 2007), **comb. n.**

Condylostylus danieli **Grichanov, sp. n.**
Figs. 1–6

TYPE MATERIAL. Holotype – ♂, **Tanzania**: East Usambara, Amani, 1000 m, 30.I 1977 / Zool. Mus., Copenhagen, H. Enghoff, O. Lomholdt, O. Martin [ZMUC]; Paratypes: 1 ♂, 4 ♀, same data, 24-28.I and 6.II 1977 [ZMUC].

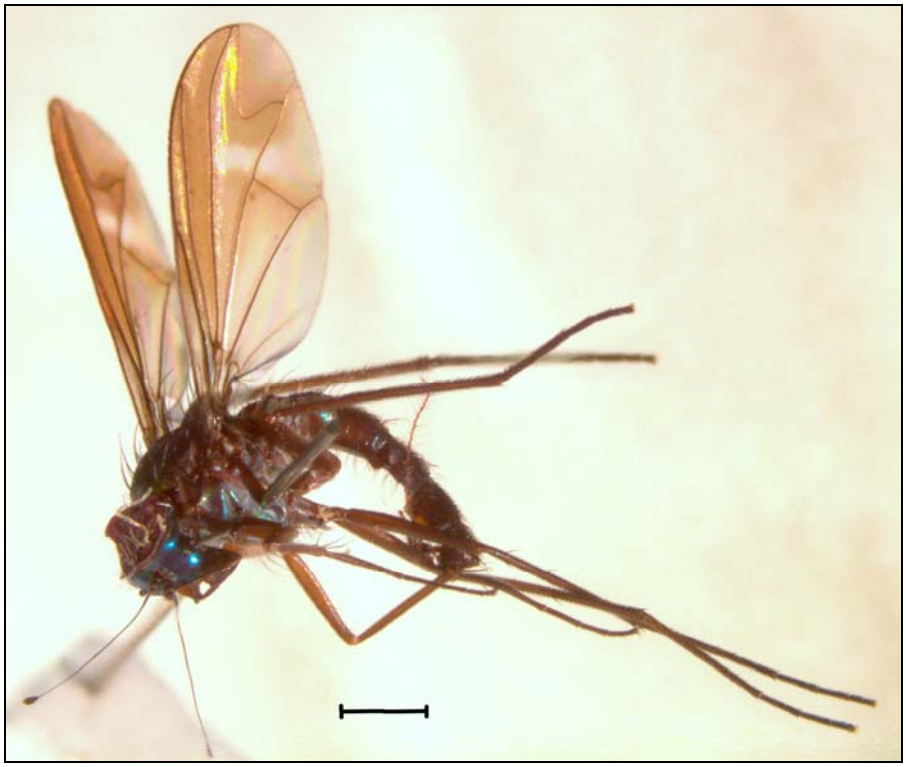

Fig. 1. *Condylostylus danieli* sp. n., body, lateral view. Scale bars: 1 mm.

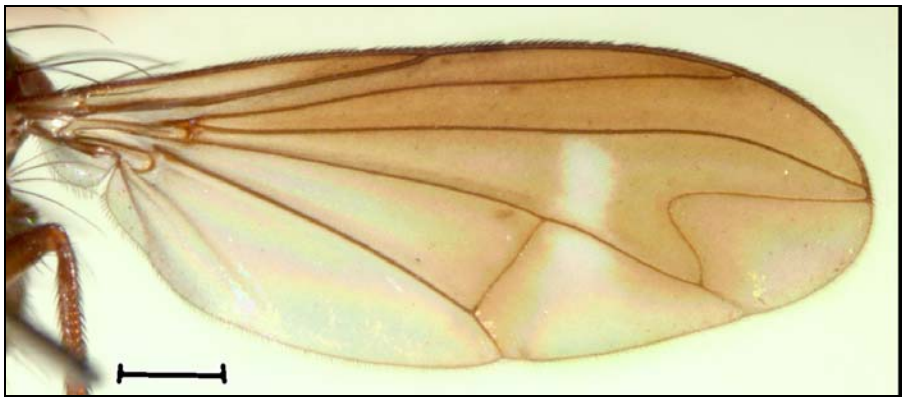

Fig. 2. *Condylostylus danieli* sp. n., wing. Scale bars: 0.5 mm.

DESCRIPTION. MALE. Frons metallic blue-green, shining. A strong front vertical bristle bends forward, arising from mound covered with blackish hairs; postvertical bristle is positioned as a linear continuation of the postocular setal row.

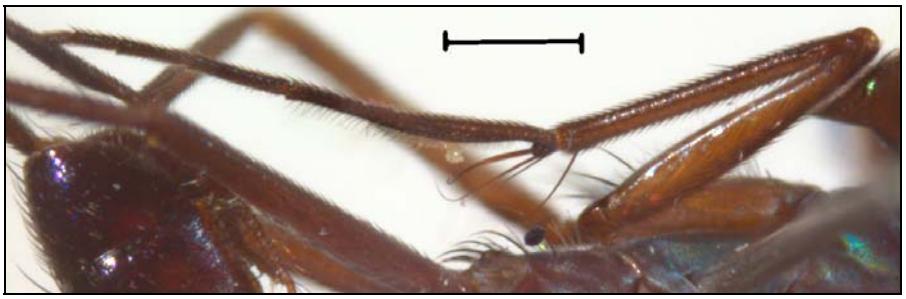

Fig. 3. *Condylostylus danieli* sp. n., fore leg. Scale bars: 0.5 mm.

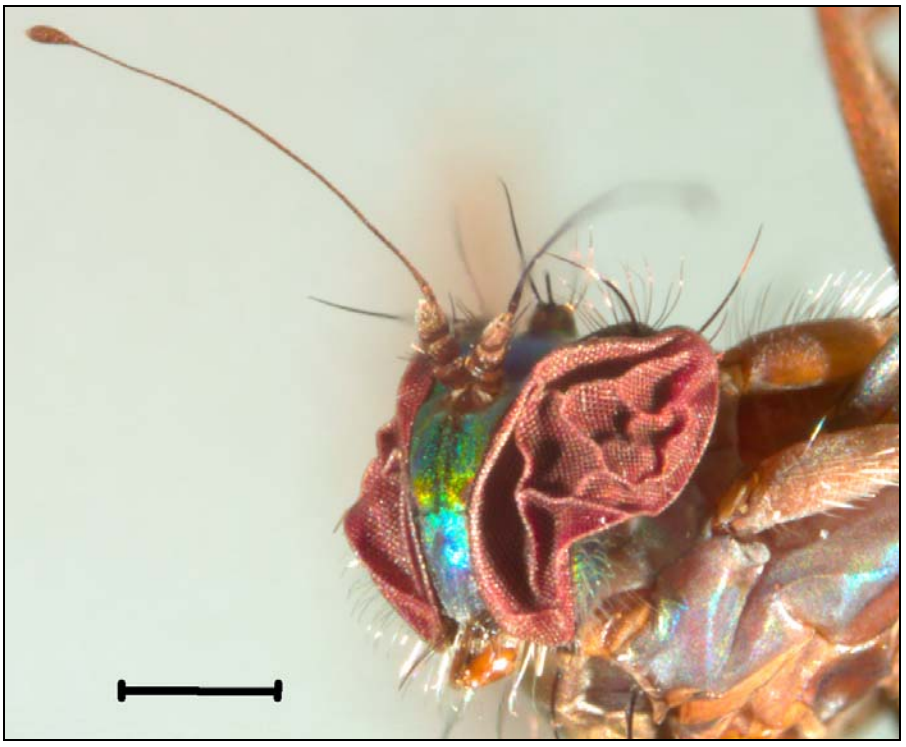

Fig. 4. *Condylostylus danieli* sp. n., head. Scale bars: 0.5 mm.

Ocellar tubercle with a pair of strong setae and pair of hairs. Ventral postcranium covered with irregular white hairs. Face greenish-blue, broad, narrowed apicad, 2 times as high as wide under antennae. Bulging clypeus covered with fine white hairs. Proboscis brown, palpi black, with yellow hairs and black setae. Antennae black. Pedicel with a ring of short bristles, longer on dorsal and ventral sides. Postpedicel subtriangular; stylus dorsoapical, with black oval apical flag as figured.

Mesonotum and scutellum metallic green. Pleura blue-green. Five pairs of dorsocentral bristles. Two or three pairs of acrostichals, restricted to anterior 1/2 of mesonotum. Scutellum with two pairs of strong setae.

Legs brown, with blackish brown mid and hind coxae and yellowish brown anterior femur and tibia; last tarsomeres black. Fore coxa from the front with numerous yellow hairs and 3 black subapical setae. Mid coxa anteriorly with light hairs and black cilia. Hind coxa with one black external seta and few light hairs. Femora without strong or long setae; all femora with posteroventral light hairs, about as long as femora diameter, black at apex. Fore tibia with dorsal seta at 1/3 and long fine apicoventral seta. Fore basitarsus slightly swollen in middle half, ventrally flattened along entire length, with one fine and two thick basoventral long setae, half as long as basitarsus. Mid tibia with 2 anterodorsal, 2 posterodorsal and 2-3 apical setae; tarsus simple. Hind leg simple. Fore leg length ratio (from femur to tarsomere 5): 85/85/65/27/20/13/9, mid leg: 100/135/95/27/22/9/7, hind leg: 110/85/41/15/10/6/5.

Wing suboval, widely brown, hyaline along posterior margin, with hyaline transverse stripe behind *m-cu*; veins brown. R_{4+5} gently curved to M_1 in apical fifth. M_{1+2} almost straight. M_1 strongly curved basad, forming acute angle with M_{1+2}. M_2 as a continuation of M_{1+2}. Ratio of part of costa between R_{2+3} and R_{4+5} to that between R_{4+5} and M_1, 57/5. Crossvein *m-cu* straight. Ratio of crossvein *m-cu* to apical part of M_{1+2} (fork-handle) to apical part of CuA_1, 40/58/18. Anal vein foldlike, anal lobe and alula developed. Anal angle acute. Lower calypter black, with black cilia. Halter (broken in holotype) black; halter stem thin, 2 times longer than knob, with row of setulae in front of knob.

Abdomen thin and long, metallic green-violet, posteriorly entirely violet, with short black hairs and fine setae. First tergite with membranous excavation, longitudinal dorsal furrow and white lateral hairs. 5-6th segments swollen, 7th tergite short. Unmodified segments combined 2 times as long as mesonotum. Hypopygium black, with short black hairs. Cercus brown, long, filiform, slightly swollen at base, covered with numerous fine hairs of equal length along entire length of cercus, and with several stronger basolateral cilia. Cercus 5 times longer than epandrium. Phallosome, surstylus and epandrial lobe small but distinct, typical of the genus.

FEMALE. Similar to male except lacking male secondary sexual characters. Antenna slightly longer than head height, simple; femora with posteroventral hairs, at most half as long as femora diameter; fore tibia with 1-2 dorsal setae in basal half; fore basitarsus with 2-3 short ventral setae; hind tibia with short but distinct dorsal and ventral setae.

Length (mm): male body 4.7; female body 4.3-4.8; antenna 1.7-2.0, postabdomen 2.1; wing 4.1/1.5.

DIAGNOSIS. New species is close to *Condylostylus pseudoparicoxa* Grichanov and *C. paricoxa* Parent as described by Grichanov (1996), but differs from both by entirely black antenna, by almost entirely brown legs, by leg setation, and by hypopygium morphology. Cercus of the new species is remarkably long and thin. Unfortunately, male of *C. paricoxa* was described without postpedicel. Other members of the group have simple antennal stylus. So, at present *C. danieli* is the only Afrotropical species of the genus, having apical flag on antennal stylus.

DISTRIBUTION. Tanzania.

ETYMOLOGY. The species is named for the Australian dipterologist Dr. Daniel Bickel.

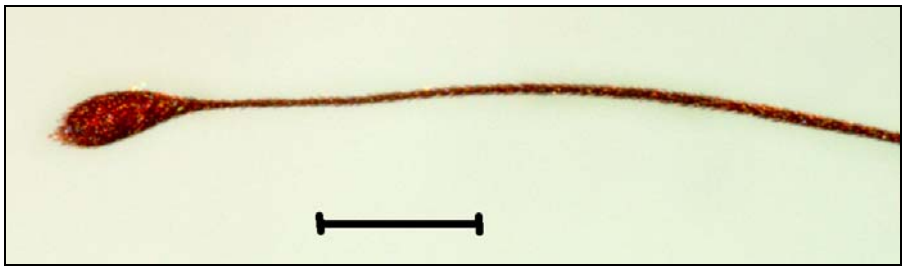

Fig. 5. *Condylostylus danieli* sp. n., apex of antennal stylus. Scale bars: 0.2 mm.

Fig. 6. *Condylostylus danieli* sp. n., apex of abdomen. Scale bars: 0.2 mm.

***Condylostylus pseudoparicoxa* Grichanov, 1999**

MATERIAL. **Tanzania:** 6♂, 3♀, W-Usambara Mts., Mazumbai for. res., 1500-1600 m, 25.XI 1996, 3-4.XII 1996 / Exp. O. Biström, M. Nieminen, J. Terhivuo, P. Vilkamaa [Finnish Museum of Natural History, Helsinki].

Key to the Arotropical species of the *paricoxa* species group

1. Fore tibia with 2 long apicoventral setae; fore basitarsus without long basoventral setae ……..… 2
– Fore tibia with 1 long apicoventral setae; fore basitarsus with long basoventral setae ……. 3
2. Fore tibia with a long apicoventral hair in addition to setae; cercus no longer than epandrium; body length 4.2 mm, wing length 4.7 mm …..... **C. *paricoxa* Parent**
– Fore tibia without additional apicoventral hair; cercus 2 times as long as epandrium; body length 4.4 mm, wing length 4.7 mm … **C. *sinclairi* Grichanov**
3. Cercus remarkably long and thin, filiform; male antennal stylus with apical flag; legs almost entirely brown; body length 4.3-4.8 mm, wing length 4.1 mm …… ……..……..….. ***C. danieli* sp. n.**
– Cercus hardly longer than epandrium, biapicate; antennal stylus simple; legs mostly yellow, with hind tibia brown and hind tarsus black; body length 6.8-6.9 mm, wing length 6.9 mm ……. **C. *pseudoparicoxa* Grichanov**

List of known Afrotropical species of the genus *Condylostylus*

basovi Grichanov, 1998: 90. HT et 61PT [IRSNB]. Type locality: Madagascar: Tamatave, Morarano-chrome. Distribution: Madagascar.

beckeri Speiser, 1920: 218. Type locality: Cameroon. Distribution: Cameroon.

burgeoni Parent, 1935: 115. HT [RMCA]. Type locality: Congo-Kinshasa: Kivu: Tshibinda. Distribution: Congo-Kinshasa, Tanzania, Kenya, Rwanda, Burundi, Uganda.

chaineyi Grichanov, 1998: 91. HT et 107PT [IRSNB]. Type locality: Madagascar: Fort Dauphin. Distribution: Madagascar.

congensis Curran, 1927: 263. HT [RMCA]. Type locality: Congo-Brazzaville: Mayumbe Lemba. Distribution: Cameroon, Congo-Kinshasa, Congo-Brazzaville, Uganda, Tanzania, Kenya, Rwanda, Burundi, Ethiopia, RSA.

imitans (*nec* Curran, 1925): Parent, 1935: 117 (Grichanov, 1998: 81).

danieli Grichanov, **sp. n.** HT et 5PT [ZMUC]. Type locality: Tanzania: East Usambara, Amani. Distribution: Tanzania.

erroneus Grichanov, 2003: 340 (replacement name for *C. imitans* Curran, 1926, nec Curran 1925). LT [NMSA]. Type locality: Mozambique: Inhambane. Distribution: Angola, Malawi, Mozambique, Namibia, RSA, Swaziland, Zimbabwe.

imitans Curran, 1926, *nec* Curran, 1925.

galinae Grichanov, 1996: 218. HT et 3PT [BMNH]. Type locality: Uganda: Ruwenzori Range, Namwamba Valley. Distribution: Uganda, Congo-Kinshasa.

imitator Curran, 1924: 221 (unnecessary replacement for *imitator* Curran) (Grichanov, 1999: 116). HT [NMSA]. Type locality: Zimbabwe: Kandahar. Distribution: Zimbabwe, Botswana, Namibia, RSA.

imitans Curran, 1925:114 ([unnecessary] new name for *C. imitator* Curran).

kivuensis Vanschuytbroeck, 1964:136. HT [RMCA]. Type locality: Congo-Kinshasa: Kamogobe (Sud Masisi). Distribution: Congo-Kinshasa.

paricoxa Parent, 1939:267. 1PT [MNHN]. Type locality: Kenya, Rabai. Distribution: Kenya, Zimbabwe, Tanzania.

pateraeformis Becker, 1923: 38 (Curran, 1926: 393). Type locality: Uganda. Distribution: Uganda, Cameroon, ?Madagascar, Nigeria, Congo-Kinshasa, RSA, Tanzania, Kenya.

alter Becker, 1923: 38. Type locality: South Africa; Uganda.

plagiochaeta (Meuffels et Grootaert), 2007: 31 (*Aldabromyia*), **comb. n.** HT, 3PT [IRSNB]. Type locality: Aldabra: Picard. Distribution: Seychelles.

pseudoparicoxa Grichanov, 1999: 117. HT et 16PT [RMCA; NMK]. Type locality: Kenya: Taita Hills, Mbololo forest. Distribution: Kenya, Tanzania.

selectus Parent, 1931: 43. Type locality: Malawi. Distribution: Malawi, Zimbabwe, Congo-Kinshasa.

selitskayae Grichanov, 1998: 94. HT [IRSNB]. Type locality: Congo-Kinshasa: Kasai, Port Francqui. Distribution: Congo-Kinshasa.

sinclairi Grichanov, 2000: 401. HT et 36PT [NMN]. Type locality: Namibia: Rundu, Katara Okavango River. Distribution: Namibia.

skufjini Grichanov, 1998: 95. HT et 40PT [IRSNB]. Type locality: Madagascar: Fenerive. Distribution: Madagascar.

ulrichi Grichanov, 2000: 403. HT [RMCA]. Type locality: Kenya: Taita Hills, Macha. Distribution: Kenya.

yaromi Grichanov, 1999: 119. HT [TAU]. Type locality: Uganda: S.W., Semiliki Forest. Distribution: Uganda.

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