

## Afrotropical species of the subgenus *Kalocheta* Becker (Diptera: Dolichopodidae: *Chrysosoma* Guerin-Meneville)

IGOR YA. GRICHANOV

Grichanov, I. Ya. 1995. Afrotropical species of the subgenus *Kalocheta* Becker (Diptera: Dolichopodidae: *Chrysosoma* Guerin-Meneville). *Int. J. Dipterol. Res.*, 6(4): 363—365.

The first descriptions of the females of *Chrysosoma* (*Kalocheta*) *collarti* and *C. (K.) cucana* from Kenya and Uganda, catalogue and a key to Afrotropical species of *Kalocheta* are given.

I. Ya. Grichanov, All-Russian Institute of Plant Protection, Poddelskogo 3, St. Petersburg-Pushkin, 189620, Russia.

**Key words:** Diptera, Dolichopodidae, *Chrysosoma* (*Kalocheta*), Africa, Kenya, Uganda.

The genus *Kalocheta* was established by Becker (1923) for two females of *Kalocheta passiva* Becker from Camerun, and is closely related to the genus *Chrysosoma* Guerin, distinguishing only by the widened lancet-shaped arista on the third antennal segment. As in original description, the strap-like part of the arista is four times as long as the hair-like portion. Later Curran (1925, 1927a, 1927b) and Parent (1929, 1933) found the species in Congo and Zaire mentioning females and males but without concise descriptions.

A further four new species were described, mostly by males. Males of *Kalocheta liberia* Curran (1929) have the hair-like part of arista as long as the strap-like portion. This proportion was not defined exactly for females. Males of *Kalocheta collarti* Parent (1933) have the hair-like part of arista as long as the strap-like part. Females were unknown. Males of *Kalocheta villiersi* Vanschuytbroeck (1970) have the hair-like part 1.5 times as long as the widened part, and females have filiform arista. The last statement is need confirmation because widened arista are characteristic of the genus. At last males of *Kalocheta cucana* Negrobov & Kulibali (1983) have the ratio of strap-like to hair-like parts of arista - 2.5:4.5. Females were unknown. Bickel (1994) synonymized *Kalocheta* with *Chrysosoma*. Here I consider *Ka-*

*locheta* as subgenus of *Chrysosoma* Guerin-Meneville, stat. nov.

Revising the collection of the Natural History Museum (London) I found two series of males and females of *C. (K.) collarti*, and one female that is most nearly related to male of *C. (K.) cucana*. It appeared that females had the strap-like part of arista 4 or more times as long as the hair-like part, and males had the same part twice as short as the filiform portion. The series of *C. (K.) collarti* specimens also showed the sex and/or individual variability of such characters as colour of antennae, halteres, coxae, femora and tibiae (from yellow in females to brown in males), shape and color intensity of brown spots on wings, number and strength of dorsocentral bristles (partly reduced in males) and postvertical bristles (partly reduced in females).

Below are the first descriptions of the females of *C. (K.) collarti* and *C. (K.) cucana*.

### *Chrysosoma (Kalochaeta) collarti* Parent

Female. Corresponds to male described by Parent (1933) with the exception of the following characters. Antennae yellowish-brown. Proportion of length to height of first flagellomere - 1.1:0.7. Proportion of length of lancet-shaped

shaped part to thread-like parts of arista — 8.4:1.2. Strap-like part of arista approximately 12 times as long as width of arista. One pair of strong postvertical bristles near the upper edge of eyes. 3 pairs of strong acrostichals and 5 pairs of strong dorsocentrals. Legs yellow; fore coxae in basal forth, middle and hind coxae and trochanters, hind tibiae near apex, hind tarsus, apical segments of fore and middle tarsi brown. Length ratio of fore coxae, femora, tibiae to tarsi (segments from first to fifth) — 7.4:11.0:12.2: 8.0:2.3:1.3:1.0:1.3. Middle tibiae with 3 dorsal, 3—4 anterior and 2—3 ventral bristles, without long bristles. Length ratio of middle femora, tibiae to tarsi (segments from first to fifth) — 14.2:18.0:14.5:3.7:2.2:1.1:1.1. Length ratio of hind femora, tibiae to tarsi (segments from first to fifth) — 18.0:23.0:9.2:4.1:2.5:1.4:1.4. Halteres yellow.

Length: body — 5.9–7.7 mm (with antennae — 9.0–10.7 mm), wing — 6.6–7.7 mm.

*Material examined:* 8 males, 15 females, **Kenya**: 18.XII.1970 (A. E. Stubbs), B.M. 1972—211. Kakamega, Forest, 5200 feet; 1 male, **Uganda** Prot., S. of L. George, 3200—3400 ft, 17—19 Oct. 1911 (S.A. Neave); 2 females, Uganda Prot., Tero Forest, S.E. Buddu, 3800 ft, 26—30 Sep. 1911 (S.A. Neave) [The last 2 females det. by C.E. Dyte, 1963 as *K. passiva* Beck.].

### *Chrysosoma (Kalocheta) cucani* Negrobov et Kulibali

Female. Corresponds to male described by Negrobov and Kulibali (1983) with the exception of following characters. Antennae red-brown. Proportion of length and height of first flagellomere — 1.1:0.7. Proportion of length of lancet-shaped and thread-like parts of arista — 8.5:1.4. Strap-like part of arista approximately 11 times as long as width of arista. One pair of strong postvertical bristles near the upper edge of eyes. 3 pairs of strong acrostichals and 5 pairs of strong dorsocentrals. Legs light-yellow; fore coxae in basal forth, middle and hind coxae and trochanters, apical segments of tarsi brown. Femora without long hairs. Length ratio of fore coxae, femora, tibiae to tarsi (segments from first to fifth) — 6.2:10.8:12.9:7.9:1.9:1.4: 0.9:1.0. Middle tibiae with 3—4 postero-dorsal, 5 antero-dorsal, 2 antero-ventral and 2 postero-ventral bristles, without long hairs. Length ratio of middle femora, tibiae to tarsi (segments from first to fifth) — 13.2:17.8:10.4:3.4: 1.5:1.0:0.8. Length ratio of hind femora, tibiae to tarsi (segments from first to fifth) — 15.0:21.3:8.3:2.4:3.3:1.2:1.3. Halteres yellow.

Length: body — 5.5 mm (with antennae — 8.5 mm), wing — 6.4 mm.

*Material examined:* 1 female, Uganda, Kigezi dist. Kayonza, 2—4.XI.1964 (R.W. Crosskey).

Analysis of sex variability in species of the subgenus *Kalocheta*, especially analysis of ratio of parts of arista, leads to supposition, that references of *C. (K.) passiva* from Congo and Zaire should refer to other *Kalocheta* species, and the female description of *C. (K.) villiersi* has nothing to do with *Kalocheta*. A

new key to the species of *Kalocheta* is proposed below, with the exception of variable characters.

### A List of the known species of *Chrysosoma (Kalochaeta)*

Subgenus *Kalocheta* Becker, 1923: 41. Type-species: *Kalocheta passiva* Becker, 1923, by monotypy.

*collarti* Parent, 1933: 35. — Zaire, Tanzania, Kenya, Uganda.

*cucani* Negrobov et Kulibali, 1983: 1121. — Zaire, Uganda.

*liberia* Curran, 1929: 5. — Liberia.

*passiva* Becker, 1923: 42. — Camerun, Congo(?), Zaire(?).

*villiersi* Vanschuytbroeck, 1970: 267. — Congo.

### Key to the species of the subgenus *Kalocheta*

#### Males and females

1. Wings transparent, slightly darkened along veins . . . . . *cucana* Negrobov & Kulibali  
— Wings with brown spots . . . . . 2
2. Squamae with white hairs . . . . .  
 . . . . . *villiersi* Vanschuytbroeck  
— Squamae with black hairs or bristles . . . . . 3
3. Face thinly whitish pollinose, propleural hairs black, fore coxae with white hairs and black bristles . . . . . *liberia* Curran  
— Only epistome greyish pollinose, clypeus metallic green . . . . . 4
4. Fore coxae without hairs, only with black bristles; apical and median brown spots have crosspiece along R 4+5 and M 1+2 wing veins . . . . . *passiva* Becker  
— Fore coxae with white hairs and black bristles; apical and median brown spots have crosspiece near junction of M 3+4 and posterior transverse wing veins . . . . . *collarti* Parent

#### Males

1. Strap-like part of arista as long as hair-part of arista . . . . . *liberia* Curran  
— Hair-like part of arista 1.5—2 times as long as strap-like portion . . . . . 2
2. Wings transparent, slightly darkened along veins . . . . . *cucana* Negrobov & Vanschuytbroeck  
— Wings with brown spots . . . . . 3
3. Hair-like part of arista 1.5 times longer than strap-like part, squamae with white hairs . . . . .  
 . . . . . *villiersi* Vanschuytbroeck  
— Hair-like part of arista twice as long as strap-like part, squamae with black hairs . . . *collarti* Parent

## Acknowledgement

I am sincerely grateful to Dr Brian Pitkin for his kindness in giving me the opportunity to study the collection of the Natural History Museum (London).

## References

- Becker, Th.** 1923. Dipterologische Studien: Dolichopodidae. D. Aethiopische Region. *Entomol. Mitteilungen*, **12**(1): 1—50.
- Bickel, D. G.** 1994. The Australian Sciapodinae (Diptera, Dolichopodidae), with a review of the oriental and australasian faunas, and a world conspectus of the subfamily. *Rec. Austr. Mus.*, **46**(3), suppl. 21: 1—394.
- Curran, C. H.** 1925. The Dolichopodidae of the South African Museum. *Ann. S. Afr. Mus.*, **23**(1): 377—418.
- Curran, C. H.** 1927a. Diptera of the American Museum Congo Expedition. *Bull. Amer. Mus. Nat. Hist.*, **57**(2): 33—89.
- Curran, C. H.** 1927b. Records and description of Ethiopian Dolichopodidae. *Rev. Zool. Afr.*, **15**(2): 241—266.
- Curran, C. H.** 1929. New Dolichopodidae from Liberia and the Belgian Congo. *Amer. Mus. Novit.*, **391**: 1—10.
- Negrobov, O. P. & Kulibali, B.** 1983. A new species of the genus *Kalochaeta* (Diptera, Dolichopodidae) from Zaire. *Zool. Zhurn.*, **62**(7): 1120—1122 (in Russian).
- Parent, O.** 1929. Les Dolichopodides de la Region Ethiopienne. *Etude Systematique. Bull. Soc. Roy. Entomol. d'Egypte*, **13**(4): 151—190.
- Parent, O.** 1933. Etude sur les Dipteres Dolichopodides de Musee du Congo (Tervueren). *Rev. Zool. Bot. Afric.*, **24**(1): 1—49.
- Vanschuytbroeck, P.** 1970. Contribution a la faune du Congo (Brazzaville). Mission A. Villiers et A. Descarpentries. XCVI. Dipteres Dolichopodidae et Sphaeroceridae. *Bull. de l'I.F.A.N.*, **32A**(1): 262—268.

*Received 12.IV.1995*