

# NEW SPECIES OF THE GENUS Rhaphium LOEW (DIPTERA, DOLICHOPODIDAE) FROM ZAIRE

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The first notice of the genus *Rhaphium* (= *Xiphandrium*) in Africa is contained in the works of Loew (1858, 1960), in the description of the female of *R. triste*. Apparently this South African species does not belong to *Rhaphium*, because Loew states that the 3rd antennal segment is short and rounded. The type of *R. triste* has not been found in the Loew collection in the Berlin University. The placement of this species remains dubious, the more so because females of the genus are difficult to determine.

Curran (1926) described *R. triste* Curran, which Parent (1939) renamed as *R. currani* Parent. This species is known from Nigeria, Zaire, Zimbabwe, and South Africa. Vanschuytbroeck (1951) described *R. rweruensis* and *R. sexsetosum* from Zaire and recorded the Palearctic species *R. macrocerum* Mg.

We here describe 3 new species of *Rhaphium* from Zaire.

*Rhaphium vanschuytbroeckii* Negrobov, Grichanov, and Bakary, sp. n. (Fig. 1-3).

Male. Front black, with metallic sheen. Face silvery white, convergent to lower margins; its width below antennae 1.5 times height of 3rd antennal segment. Palpus and proboscis brown. Antenna black, 3rd segment long and narrow, strap-shaped. Its length and height at base with reference to length of arista, are as 6.2 : 0.6 : 1.1. Arista not broadened. Postocular cilia white. Thorax dark brown, shining. Pleura white-tomentose. Dorsocentral bristles in 5 pairs, 1st and 4th pairs short. Acrostichal bristles short, biseriate, present on anterior part of mesoscutum. Scutellum with 2 strong bristles. Legs yellow, midcoxa darkened a little at base, ultimate tarsal segments darkened. Coxae with yellow hairs, fore- and midcoxae with a few dark apical bristles, mid- and hindcoxae with 1 strong lateral bristle. Forefemur with long bristles. Foretibia with row of 5-6 short, strong dorsal bristles and 2 rows of ventral hairs hardly longer than width of tibia. Foretarsus simple, basal segment without spines. Lengths of foretibiae and 1st to 5th tarsal segments as 4.5 : 2.7 : 1.8 : 1.3 : 0.9 : 0.6. Midfemur with slender anterior and posterior apical bristles. Midtibia with 2 strong anterodorsal and 1 short posterodorsal bristle. Lengths of midtibia and 1st to 5th tarsal segments as 6.1 : 3.2 : 1.6 : 1.3 : 0.9 : 0.7. Hindfemur without strong preapical bristles. Hindtibia with short bristles. Lengths of hindtibiae and 1st to 5th tarsal segments as 8.1 : 2.0 : 2.2 : 1.5 : 1.0 : 0.8. Wing slightly darkened, with yellow-brown veins. Lengths of costal sections between  $r_{2+3}$  and  $r_{4+5}$  and  $m_{1+2}$  as 2.8 : 1.1; apical half of latter 2 veins parallel. Apical part of vein  $m_{1+2}$  weakly curved. Lengths of apical and basal sections of vein  $m_{1+2}$  as 6.9 : 9.2. Lengths of hindcrossvein and apical section of vein  $m_{3+4}$  as 1.1 : 3.4. Postalar squama yellow with bright-colored hairs. Halter yellow. Abdomen dark brown with dark hairs. Cerci and gonopods brown. Cerci long and narrow, with short bristles and with short, oval basal appendage. Gonopod as in Fig. 2.

Length of body 2.2-2.4 mm, of wing 2.6-2.7 mm.

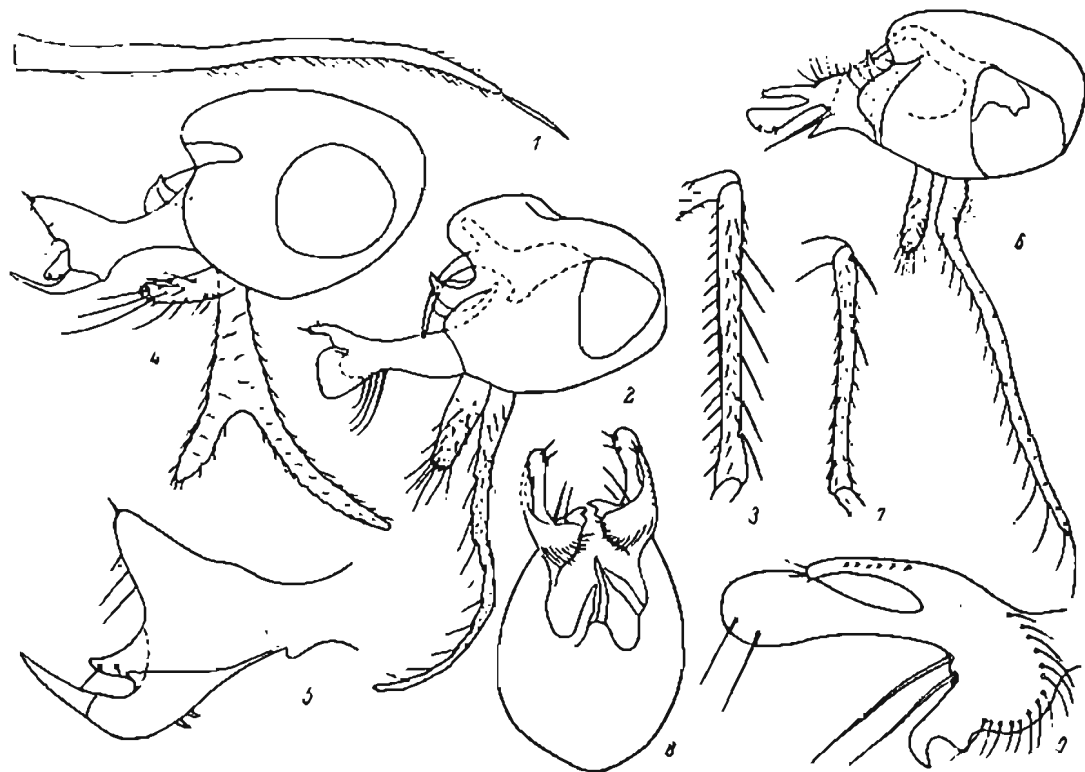


Fig. 1-9. *Rhaphium* spp.

1-3. *R. vanschuytbroeckii*, sp. n.: 1 - 3rd antennal segment; 2 - hypopygium, lateral view; 3 - foretibia. 4-5, *R. grootaerti*, sp. n.: 4 - hypopygium, lateral view; 5 - gonopod, dorsolateral view. 6-9, *R. zairensis*, sp. n.: 6 - hypopygium, lateral view, 7 - foretibia; 8 - hypopygium, ventral view; 9 - gonopod, ventral view.

Holotype: ♂, Congo Belge: PNA\*, 25-29.VIII.1952. V-K, 840-43; MR, Kalonge, 2480 m (étage bambous), riv. Nyamwamba-Ihongerero.

Paratypes: 1 ♂, Congo Belge: env. de Rutchuru, 13.XII.1937, J. Ghesquiere; R. Mus. Hist. Nat. Belg. I. G. 10.482. 3♂, Congo Belge: PNA, 17.VIII.1952, V-K, 779-80; MR, Kalonge, 2100 m, riv. Nyamwamba, aff. Butahu. 1 ♂, 23-31.VII.1952, V-K, 607; MR, 2210 m. 1 ♂, 8.VIII.1952, V-K, 725-27; MR, Kalonge, 2100 m, riv. Nyamwamba, aff. Butahu. 1 ♂, 9.VIII.1952, V-K, 731-32; MR, Kalonge, 2100 m, riv. Nyamwamba, aff. Butahu. 1 ♂, 31.VI - 3-5.VIII.1952, V-K, 668-69; MR, Kalonge, 221 m. 2 ♂, 5.II.1952, V-K, 2033-34; MR, Kalonge, 2010 m, riv. Kamahoro, aff. Butahu. 2 ♂, 17.II.1953, V-K, 2107-15; MR, Kalonge, 2060 m, riv. Katauleko, aff. Butahu. 1 ♂, 19.II.1953, V-K, 2116-23; MR, Kalonge, 2030 m, riv. Kiondo ya Kwanza,

The species is named after Dr. P. Vanschuytbroeck in token of his great accomplishments in the study of African Dolichopodidae.

*Rhaphium grootaerti* Negrobov, Grichanov, and Bakary, sp. n. (Fig. 4-5).

Male. Front black, with metallic sheen. Face silvery white, convergent to lower margin; width below antennae twice height of 3rd antennal segment. Palpus and proboscis brown. Antenna black, 3rd segment long and narrow, strap-shaped. Its length and height at base relative to length of arista as 5.9 : 0.6 : 0.9. Arista not broadened. Postocular cilia white. Thorax dark brown, shining. Pleura with white tomentum. Dorsocentral bristles in 5 pairs, 1st and 4th pairs short. Acrostichal bristles short, biseriate, present on anterior part of mesoscutum. Scutellum with 2 strong bristles. Legs yellow; midcoxa a little darkened at base. Coxae with yellow hairs, fore- and midcoxa with a few dark bristles at apex, and mid- and hindcoxae with 1 strong lateral bristle. Forefemur without long bristles. Foretibia with row of 5-6 short, strong dorsal bristles and 2 rows of ventral hairs hardly longer than width of tibia. Basal segment of foretarsus with row of very fine ventral spines. Lengths of foretibia and 1st to 5th tarsal segments as 4.5 : 2.7 : 1.6 : 1.1 : 0.7 : 0.6. Midfemur apically with slender anterior and posterior bristles. Mandible with 2 anterior and 2 posterodorsal bristles. Lengths of midtibiae and 1st to 5th tarsal segments as 6.4 : 3.2 : 1.8 : 1.3 : 0.8 : 0.6. Hindfemur without strong preapical bristles. Hindtibia with 2 anterodorsal and 1 posterodorsal bristles. Lengths of hindtibia and 1st to 5th tarsal segments as 8.5 : 2.1 : 2.3 : 1.4 : 1.0 : 0.7. Wing slightly darkened, with yellow-brown veins. Lengths of costal sections between  $r_{2+3}$  and  $r_{4+5}$  and between  $r_{4+5}$  and  $m_{1+2}$  as 2.8 : 1.1; apical half of latter 2 veins parallel. Apical part of  $m_{1+2}$  weakly curved. Lengths of apical and basal sections of  $m_{1+2}$  as 7.7 : 9.9. Lengths of posterior crossvein and apical section of vein  $m_{3+4}$  as 1.4 : 3.4. Postalar squama yellow and bright-colored hairs. Halter yellow. Abdomen dark brown with dark hairs. Cerci and gonopods brown. Cerci furcate, one branch long and narrow, the other short and relatively broad. Cerci at base with short, oval appendage. Gonopod as in Fig. 5.

Length of body 2.2-2.4 mm, of wing 2.7-2.8 mm.

Holotype: ♂, Congo Belge; PNA. 7-15.X.1952, V-K, 1275-84; MR, Kyandolire, 1700 m, Camp de Gardes.

Paratypes: 2 ♂, same; 1 ♂, 30.I - 3.II.1952, V-K, 2005-10; MR, Kalonge, 2060 m, riv. Katauleko, aff. Butahu. 1 ♂, 31.VII.1952, V-K, 605-06; MR, Kalonge, 2030 m, riv. Kiondo, aff. Butahu. 1 ♂, 19.II.1953, V-K, 2116-23; MR, Kalonge, 2030 m, riv. Kiondo ya Kwanza. 2 ♂, 17.II.1953, V-K, 2107-15; MR, Kalonge, 2060 m, riv. Katauleko, aff. Butahu. 1 ♂, 9.II.1953, V-K, 2093; MR, Kalonge, 2030 m, riv. Kiondo ya Kwanza.

\*Abbreviations: PNA - Parc National Albert; V-K - P. Vanschuytbroeck and J. Kekenbosch; MR - Massif Ruwenzori.



7. Gonopod with cluster of long bristles . . . . . *R. macrocerum* Mg.  
 -- Gonopod without such bristles . . . . . 8.  
 8. Cerci divided . . . . . *R. currani* Parent.  
 -- Cerci simple, filamentose . . . . . *R. zairensis*, sp. n.  
 9. Foretibia with row of 5-6 short dorsal bristles . . . . . *R. grootaerti* and *R. vanschuytbroeckii*, spp. n. (not distinguishable in female sex).  
 -- Foretibia with only 2-3 dorsal bristles . . . . . 10.  
 10. Foretibia with 1 anterior and 2 posterodorsal bristles, simple and fine . . . . . *R. macrocerum* Mg.  
 -- Foretibia with 2 strong spinose bristles in basal third . . . . . 11.  
 11. Hindtibia and base of hindtarsus yellow . . . . . *R. zairensis*, sp. n.  
 -- Hindtarsus and apex of hindtibia dark (only female known) . *R. currani* Parent.

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