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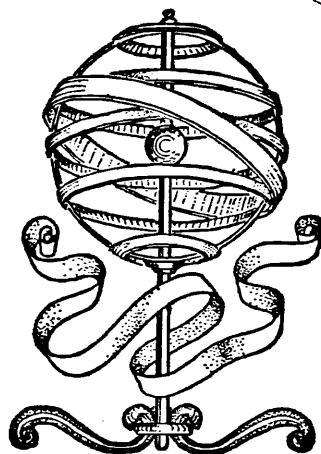
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L I S B O A

On the terrestrial and riverine fauna of the Democratic
Republic of São Tomé and Príncipe.
VII – Description of *Toxorhynchites capelai* sp. nov.
(Diptera, Culicidae) ⁽¹⁾

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On the basis of material collected in the Island of São Tomé, Democratic Republic of São Tomé and Príncipe, the female holotype and the male paratype of *Toxorhynchites capelai*, a new, apparently endemic species of the group *lutescens* of Edwards, is described. Within the group *lutescens*, the new taxon is nearer to *Tx. viridibasis* Edws., from which it can be separated, however, by some characters of the general external morphology as well as by genitalic characters.

Com base em material colhido na ilha de São Tomé, República Democrática de São Tomé e Príncipe, descreve-se a fêmea holótipo e o macho parátipo de *Toxorhynchites capelai*, uma nova espécie do grupo *lutescens* de Edwards, aparentemente endémica da ilha. Adentro do grupo *lutescens*, o novo taxon é mais próximo de *Tx. viridibasis* Edws., do qual se distingue, no entanto, por alguns caracteres da morfologia externa e da genitália masculina.

INTRODUCTION

During an expedition to the Island of S. Tomé, in 1984 (Mendes *et al.*, 1988), a female of an undetermined species of *Toxorhynchites* was obtained by Professor R. A. Capela from larvae in a bamboo stump. Later, in 1986, during a malaria control campaign supported by the European Economic Community, the present writer also collected in the Island of S. Tomé one more female and two males of *Toxorhynchites*. When compared, all the specimens were shown to be cons-

pecific and to belong to a new, undescribed species.

The terminology used for the description is that of Harbach and Knight (1980), while the format adopted is that of Ribeiro (1991).

Toxorhynchites (Toxorhynchites) capelai sp. nov.,
Fig. 1, A-D

HOLOTYPE. Female labelled "*Tx. capelai* sp. n. ♀; HOLÓTIPO; S.Tomé 529, L-52, 06.1984, R. A. Capela col."

(¹) This is the seventh paper of the Zoological Expedition of the "Departamento de Zoologia e Antropologia da Faculdade de Ciências de Lisboa e do Museu Nacional de História Natural (Museu Bocage)" to the Democratic Republic of São Tomé and Príncipe (13th June-7th July 1984).

DESCRIPTION. *Head.* Mainly golden scaled, with some bluish green and purplish scales in front; a few yellowish erect scales behind. One pair of dark brown ocular setae. Antenna: Pe dark, pulvinous, with a few small dark brown scales; Flm₁ with a small tuft of purple scales. Maxillary palpus (MPlp) mainly dark purple, with a line of lighter scales on distal margin of Plp₂. Proboscis dark purple.

Thorax. Mesonotum with broad metallic bluish green scales above which become mainly golden towards the margins and scutellum. Ap and Ppn entirely covered with broad golden scales. Setae mainly dark brown, except for those at the lower edge of Ap and the margin of scutum anteriorly to the wing root, all yellow. Mks with a broad stripe of silvery white scales in middle; a patch of golden scales with a slight greenish gloss above, including the prealar knob; below the silvery white stripe, there is a large bare area anteriorly, while the posterior half is covered again with golden scales. Mesepimeron with silvery white scales on about 3/4, bare below and behind. Without meskatepisternal setae but with 1 MeSL each side. All setae on pleura golden-yellow.

Wing. Length 6 mm. rm index 2; M₃₊₄ reaching M₁₊₂ almost in line with rm. Scales on veins mainly greenish golden. Halter pedicel pale yellow; capitellum dark.

Legs. Mainly dark purple. Coxae: CxI golden scaled; CxII with silvery white scales on the upper 1/3, golden scaled below; scales on CxIII all silvery white. Femora: FeI golden scaled on basal half, below and behind; FeII and FeIII more extensively golden scaled, almost to tip below and behind. Tibiae all dark purple. Tarsi: TaI and TaII all dark purple; TaIII₁ with a small, inconspicuous patch of whitish scales at the basal 1/3, behind and externally; TaIII₂ all dark purple; TaIII₃ white scaled on basal 1/2; TaIII₄ and TaIII₅ dark purple. Unguis small, equal and simple.

Abdomen. Laterotergite without scales. Terga: scales on TeI metallic greenish golden; TeII and TeIII greenish golden anteriorly with admixture of purplish scales posteriorly, above; TeIV-TeVIII purple, above. All terga golden scaled on lateral aspect. Without obvious caudolateral tufts on TeVI-TeVIII. Sterna: mainly golden scaled, with median triangles of dark purple scales, more developed on distal segments.

Female genitalia not examined.

ALLOTYPE labelled: "Tx. *capelai* sp. n. c ALÓTIPO; S. Tomé 957, Missão CEE/CVP, L-2: Ió Grande, 86.05.15". Genitalia mounted on slide.

DESCRIPTION. *Head.* Much as in the holotype. Antenna: Pe without scales; a well-developed tuft of brown scales on Flm₁, with iridescent reflexion: MPlp mainly dark purple: Plp₂ with an apical whitish spot above; Plp₃ with a small pale violet apical dot; Plp₄ with 2 or 3 small strong setae on the external ventral border.

Thorax and wing as in the female holotype. wing length 5.5 mm.

Legs. Front leg: FeI golden scaled on about basal 1/4, in front, and on basal 1/2, behind; tibia and tarsi all dark purple. Midleg missing. Hindleg FeIII extensively golden scaled, dark purple only apically and on dorsal border for about the distal 3/5; tibia all dark purple; TaIII₃ with a white spot on about basal 1/2-2/3, externally, other tarsomere entirely dark purple. Unguis: UI unequal, one of them stronger and toothed; UII missing; UIII equal small and simple.

Abdomen. Similar to that of the female holotype with minor differences in colour. Terga: TeI metallic greenish golden; TeII, above, mainly with greenish golden scales in middle, purple scales laterad; TeIII much as in TeII but with greater admixture of purple scales; other terga purple scaled above. All terga golden scaled on lateral borders. Without evident caudolateral tufts on TeVI-TeVIII, reduced on TeVI to 2 or 3 rows of moderately developed yellow setae. Sterna: SI almost entirely golden scaled; SIII-SVII mainly golden, with a narrow longitudinal stripe of purple scales, wider on SIII and SIV.

Male genitalia as in Fig. 1, A-D. Lobes of tergum IX (TLIX) with 12/13 setae; interlobar space moderately wide. Aedeagus long and narrow, without evident apical tooth. Paraprocts with transverse unsclerotized band, appearing divided. 3 cercal setae present. Gonostylus widened in middle, with a long gonostylar claw, about 1/3 of gonostylus.

MATERIAL EXAMINED. 2 females and 2 males, all from the Island of São Tomé, DEMOCRATIC REPUBLIC OF SÃO TOMÉ AND PRÍN-

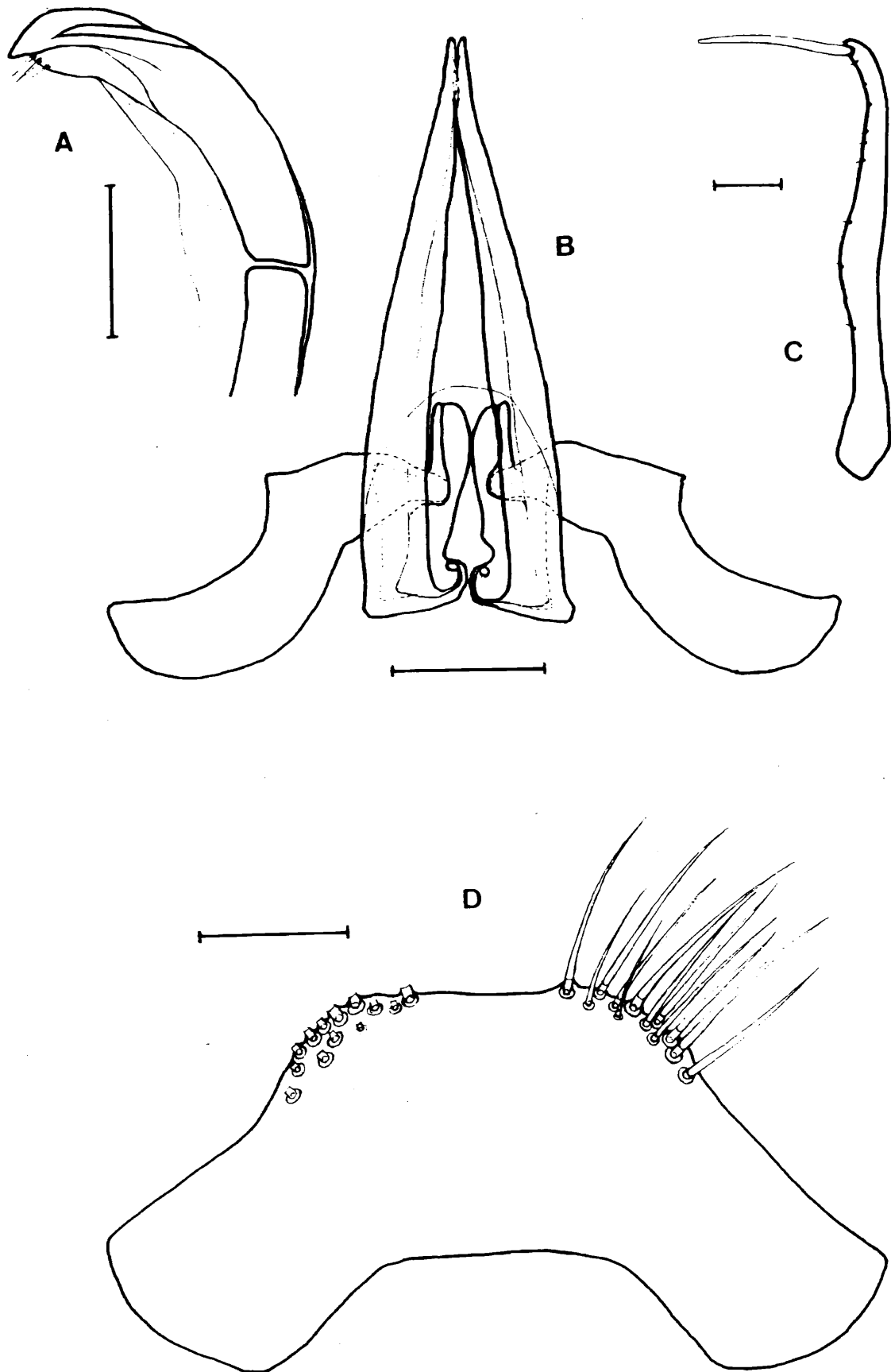


Fig. 1 — *Toxorhynchites capelai* sp. nov., male genitalia. A — Paraproct, allotype. B — Aedeagus, basal pieces and parameres, allotype. C — Gonostylus and gonostylar claw, paratype. D — Tergum IX, allotype. The bars are 0.1 mm long.

CIPE (Gulf of Guinea). The female holotype in the “Faculdade de Ciências de Lisboa/Museu Bocage”; the male allotype and 1 female and 1 male paratypes in the “Instituto de Higiene e Medicina Tropical”, Lisboa.

REMARKS. The extensive areas of golden scales on meskatepisternum, forecoxa, hindfemur, sterna and lateral aspect of terga, the entirely dark second hindtarsomere and the laterotergite devoid of scales, in both sexes, and the unsclerotized transverse band on paraproct, the widening of gonostylus at middle and the long gonostylar claw, in the male genitalia, all show that *Tx. capelai* sp. n. belongs to Edwards' group *lutescens* (Edwards, 1941; Ribeiro, 1991). Within group *lutescens*, the new species is nearer to *Tx. viridibasis* Edws., on account of its general ornamentation and to the presence of more or less extensive areas of metallic greenish scales on the first three abdominal terga. However, *Tx. capelai* sp. n. can be easily

separated from *Tx. viridibasis* Edws. namely the presence of a well-developed patch of white scales on TiIII in both sexes of the latter, absent in *capelai* sp. n., and also by male genitalic characters, e. g., the greater number of setae on lobe of TeIX in *viridibasis* (unpublished data). Moreover, in spite of the poor condition of the abdomens of the *capelai* specimens, it seems there be also a striking difference in the development of abdominal caudolateral tufts in both species those of *viridibasis* being red or orange-red in colour and quite conspicuous in both sexes (Edwards, 1935, 1941; Ribeiro, unpublished data).

Tx. capelai sp. n. seems to be endemic to the Island of São Tomé, as no *Toxorhynchites* could be found during a mosquito survey of the Island of Príncipe, carried out by the present writer and coworkers also in 1986.

The species is named in honour of Professor Rúben A. Capela, “Faculdade de Ciências de Lisboa”, collector of the female holotype.

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