Toxorhynchites (Lyn.) gerbergi, a New Species from the Southern Lesser Antilles[1]

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It is a great pleasure to dedicate a new species of mosquito to my very good friends and colleagues Dr. Eugene Jordan Gerberg and Ms. Jo Betty Vick Gerberg. It is particularly appropriate that this species should be in the genus *Toxorhynchites.* In addition to other numerous important contributions to the biology of mosquitoes, the Gerbergs have recently pioneered the biological control of mosquitoes breeding in treeholes and artificial containers by a novel and promising method of utilizing species of *Toxorhynchites.*

Toxorhynchites (Lynchiella) gerbergi, n. sp.

TYPES: *Holotype* female (GR51-103) with associated larval and pupal exuviae mounted on slide, Industry Village, Union, St. Mark, Grenada, elev. 30m, saxicolous bromeliad in partial forest, 16 Oct 1963, Raymond Martinez [USNM]. *Allotype* male (GR31-102) with genitalia and associated larval and pupal exuviae mounted on 2 slides, Woodford Estate, Woodford, St. John, Grenada, elev. 100m, fallen cacao pod in cultivated area, 11 Oct 1963, Raymond Martinez [USNM]. *Paratypes:* 1 lpM (GR111-115) with genitalia mounted on slide, 1 lpF (GR111-119), Minorca Estate, Providence, St. David, Grenada, elev. 250m, fallen cacao pod in plantation, 1 Nov 1963, Raymond Martinez [BMNH]; 1 L, 3rd instar (GR27), Black Bay, Grand Roy, St. John, Grenada, near sea level, small treehole in *Annona* in mangrove area, 11 Oct 1963, Raymond Martinez, 1 L (GR52), Grand Etang, St. Andrew, Grenada, elev. 550m, epiphytic bromeliad in partial forest, 17 Oct 1963, Raymond Martinez [USNM].

FEMALE. Wing about 5.2mm. In general as described for *portoricensis* (von Röder) by Belkin, Heinemann and Page (1970:233) for the Jamaican population but smaller and with the following diagnostic combination of attributes. *Head:* Orbital line of light scales wider and more conspicuous; scales of orbital line and lateral light patch appearing silvery in anterior aspect, with a very light golden tinge in lateral aspect. Palpus shorter; segment 4 proportionally longer; distinct apical bands of silvery scales with azure tint present on segments 2, 3 and 4; segment 3 with a broad, submedian band of very light golden scales, band not involving dorsal surface of segment. *Thorax:* Light scales of mesonotum golden in lateral aspect, with a greenish blue tinge in anterior aspect. Scutellum with golden scales, a few whitish laterad. Pleural scaling and that of coxae and trochanters with a slight golden tinge. Haltere knob with dark and golden scales. *Legs:* Knee spots indistinct or not developed on all legs. Midtarsus without pale scales. Whitish scaling of hindtarsus restricted to basal 0.7 of segment 4. *Abdomen:* Laterotergite with light-golden scales. Dark scaling of tergites I-VIII with greenish blue reflections, more bluish on distal segments and laterally; lateral light scaling of tergites I-VII light-golden, extensive and broadened mesad near proximal part of tergites. Sternites with light-golden scales.

MALE. In general as described and figured for *portoricensis* from Jamaica (Belkin, Heinemann and Page 1970) with the following diagnostic combination of attributes. Essentially similar to the female in color except that light scaling of abdominal tergites more extensive. Antennal flagellar segment 1 with only a few scales. Palpus shorter than proboscis; segment 3 with extensive but variable submedian band of golden scales. Hindtarsal segment 4 with whitish scales in basal 0.7.

MALE GENITALIA (fig. 1). As figured; without obvious distinctive features, not studied in detail. In general very similiar to those of *portoricensis* from Jamaica (Belkin, Heinemann and Page 1970).

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PUPA (fig. 1). In general as described and figured for *portoricensis* from Jamaica (Belkin, Heinemann and Page 1970). Chaetotaxy as figured, based on 4 specimens only; not studied in detail. Seta 9-I absent in both *portoricensis* from Jamaica (not as figured) and the present species. Trumpet characteristic; index slightly less than 6.0; distal part cylindrical, without marked flaring; pinna very small, about 0.125 of meatus.

LARVA (fig. 2). In general as described and figured for *portoricensis* from Jamaica (Belkin, Heinemann and Page 1970). Chaetotaxy as figured, based on 5 specimens only; not studied in detail. Following combination of attributes appears to be diagnostic: siphon index slightly greater than 3.0; 6, 7-V single; 4-III, IV single, 4-V multiple; 1-IV triple; 11-IV triple; 13-II-VI weak and short.

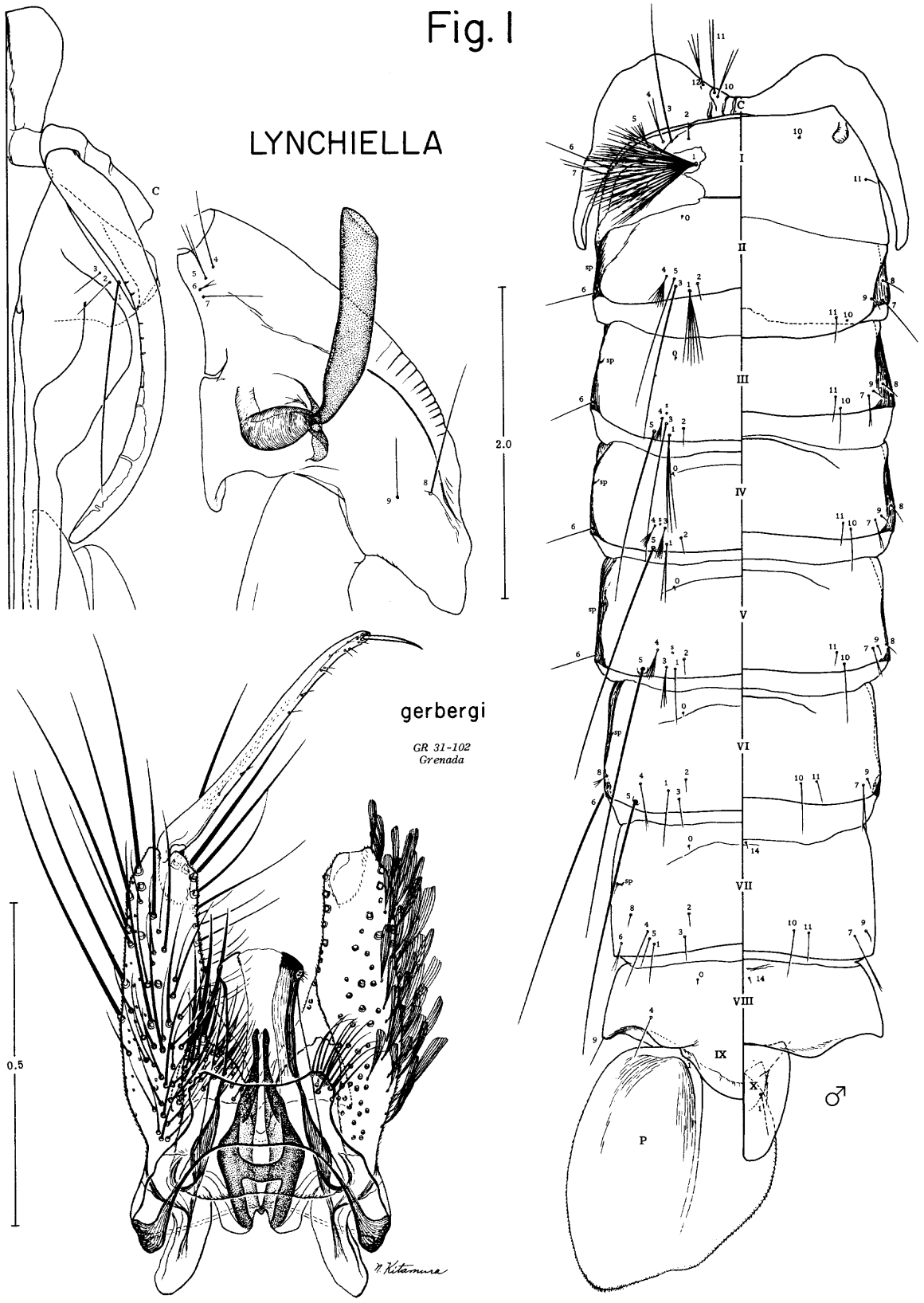
BIONOMICS. The immature stages of *gerbergi* have been collected in an epiphytic and a saxicolous bromeliad, a treehole and in fallen cacao pods at elevations from near sea level in a mangrove area to about 550m in a partial forest. All 4 adults were reared. The species appears to be uncommon and has not been reported from Grenada before.

SYSTEMATICS. *Toxorhynchites gerbergi* is a member of the Portoricensis Complex which is now represented in the West Indies by *portoricensis* (von Röder) proper from Puerto Rico and apparently also Jamaica, possibly Cuba, Hispaniola and Montserrat. A form similar to *gerbergi* occurs in St. Vincent; this may not be conspicific with *gerbergi* but the material from both Grenada and St. Vincent is so meager that the obvious differences can not be evaluated properly. For the present the population from St. Vincent is assigned questionably to *gerbergi.*

REFERENCE

Belkin, J. N., S. J. Heinemann and W. A. Page. 1970. The Culicidae of Jamaica (Mosquito Studies XXI). Am. Entomol. Inst., Contrib. 6(1). 458p. (Also published as Inst. Jam., Bull. Sci. Ser. 20).

Fig. 1


LYNCHIELLA
gerbergi
GR 31-102
Grenada
2.0
0.5
C
I
II
III
IV
V
VI
VII
VIII
IX
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sp
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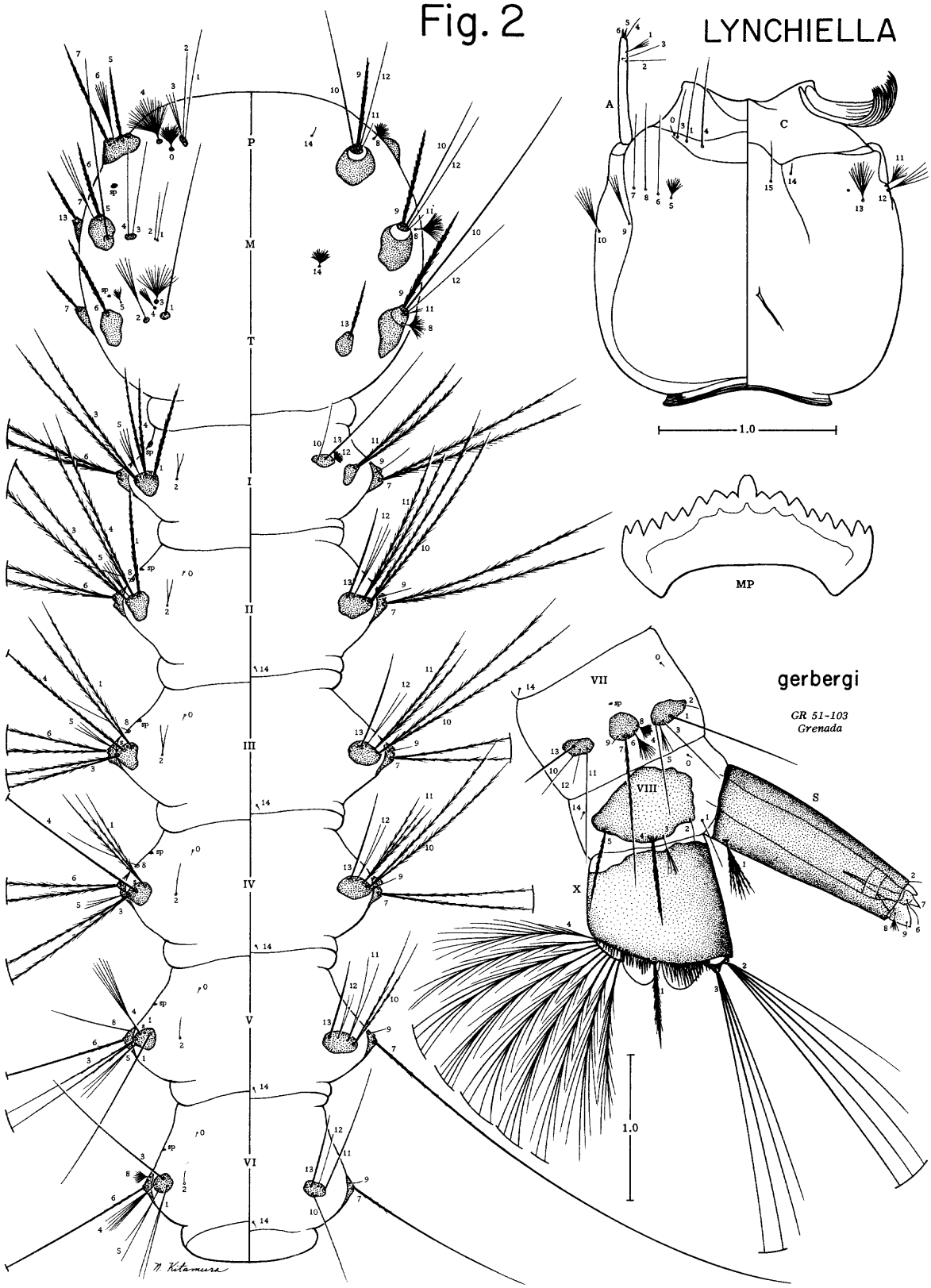
H. Kitamura

Fig. 2


LYNCHIELLA
gerbergi
GR 51-103
Grenada
A
C
MP
P
M
T
I
II
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IV
V
VI
VII
VIII
X
S
sp
1.0
1.0
N. Kitamura