

do not appear as long as they actually are. To Jobling's description, the following may be added:

*Abdomen*.—Posterior margin of sternum II nearly straight in both sexes, and nearly identical to that illustrated for *maai* n.sp. (fig. 109). *Female*: Lateral lobes of tergum I+II with about 18 coarse setae; dorsal inner margin with three to five short setae, usually in a single row. Connexivum on each side, posterior to tergum I+II, with a cluster of 12 very long setae, most of them as long as the shorter macrosetae of the lateral lobes of tergum I+II, some of them more than half as long as the longest macrosetae; medial to each of spiracles IV and V on each side of mid-line, are one or more coarser setae. Seventh tergites each with six to eight macrosetae, four of them in a transverse row across middle. *Male*: Inner margins of lateral lobes of tergum I+II with three or four, rarely five setae in a single row on each side. Genital apparatus very similar to that of *maai* n.sp. (fig. 107A).

<i>Measurements</i> :	BL	TL
Male	1.65–1.76	0.55–0.58
Female	1.95–2.20	0.60–0.66

TYPE MATERIAL: Holotype male and allotype female (slides) from *Noctilio l. leporinus*, Manzanilla, TRINIDAD, 13 March 1957, T. H. G. Aitken. In the collection of Chicago Natural History Museum.

Paratypes.—55, same data as the holotype [TVL]; 3 Scotland Bay, TRINIDAD, September 1954, C. C. Sanborn, CNHM Trinidad Zoological Field Trip (1954); 2, Monos Island, B. W. I. [FCUCV]; 16, Kaiserberg Airstrip, east of Zuid River, SURINAM, 12 October 1960, H. A. Beatty, CNHM Guianan Zoological Expedition (1960–62), 2, same expedition, Saramacca River, Loksie Hattie (Brokopondo), SURINAM, 5 January 1962, P. Hershkovitz; 8, Quebrada Esperanza, Río Yauari-Mirim, Maynas (Loreto), PERU, 23 September 1957, C. Kalinowski, CNHM Peru Zoological Expedition (1956–57). Paratypes in the collections of Chicago Natural History Museum; the United States National Museum; the Bernice P. Bishop Museum, Honolulu; Facultad de Ciencias, Universidad Central de Venezuela, Caracas; Departamento de Zoología, Secretaria da Agricultura São Paulo, Brazil; and the Trinidad Regional Virus Laboratory, Port-of-Spain.

REMARKS: This species is named for Dr. Thomas G. Aitken, of the Trinidad Virus Laboratory (Rockefeller Foundation), in recognition of his valuable contributions to medical entomology.

*Noctiliostrebala maai* Wenzel, new species. Figures 107A, 109.

Closely related to *N. aitkeni* n.sp., but differing as indicated under that species.

DESCRIPTION: *Abdomen*.—*Female*: Lateral lobes of tergum I+II with 10–14 coarse setae, and on dorsal inner margin with seven to nine short setae in a double row. Connexivum on each side posterior to tergum I+II with a cluster of 14–16 setae that are coarser than other dorsal and lateral connexival setae, but none more than twice as long as other connexival setae and less than half as long as macrosetae of tergum I+II; a longer seta sometimes present medial to spiracle V; between sixth spiracles is a row of four long setae; seventh tergites with four or five setae, four of them macrosetae. Supra-anal plate as in *N. aitkeni* n.sp. (fig. 107C). *Male*: Inner margin of each lateral lobe of tergum I+II with six to nine, rarely 10 setae in a double row.

<i>Measurements</i> :	BL	TL
Male	1.54–1.63	0.47–0.51
Female	1.87–1.98	0.49–0.55

**TYPE MATERIAL:** Holotype male and allotype female (slides) from *Noctilio labialis labialis* (host no. 6376), Río Tuira (Darién), 3 March 1958, Pedro Galindo. In the collection of Chicago Natural History Museum.

**Paratypes.**—From *Noctilio labialis labialis*: 19, same data as holotype; 2, Río Chucanaque (Darién), L. H. Dunn [MCZ]; 10, Juan Mina (Canal Zone), 16 August 1945, H. Trapido [CNHM]; 7, Chilibrillo Caves (Panamá), L. H. Dunn [MCZ]. From *Noctilio labialis*: 7, Playo del Medio (Bolívar), VENEZUELA, 19 April 1961, T. Ojasti [FCUCV]. Paratypes in the collection of Chicago Natural History Museum; the United States National Museum; the Museum of Comparative Zoology at Harvard; the Gorgas Memorial Laboratory; the Environmental Health Branch, USAFSC at Corozal (Canal

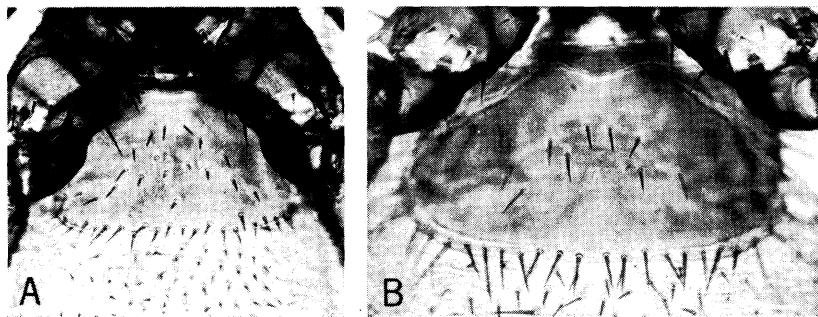


Fig. 109. *Noctiliostrebla maa*, new species, sternum II. A, male holotype. B, female allotype.

Zone); Facultad de Ciencias, Universidad Central de Venezuela; Departamento da Zoologia, Secretaria da Agricultura, São Paulo, Brazil; and the Bernice P. Bishop Museum at Honolulu.

**REMARKS:** This species is named for Dr. Tsing C. Maa, in appreciation of the valuable assistance given by him, and in recognition of his important contributions to our knowledge of the batflies.

#### KEY TO PANAMANIAN SPECIES OF *NOCTILIOSTREBLA*

- Median wing vein usually with one or two (rarely none) setae near middle. Posterior margin of sternum II (fig. 109) straight or nearly so, in both sexes, the marginal setae rather uniformly distributed. *Female*: Supra-anal plate much as in *aitkeni* (fig. 107C) with a pair of short setae on each side, one inserted at middle of lateral margin, the other on dorsal surface of plate at about lateral fourth. *Male*: Gonapophyses (fig. 107A) similar to those of *aitkeni*; aedeagus with a dorsal subapical spine. Host: *Noctilio labialis labialis* ..... *maai* n.sp.
- Median wing vein without setae near middle. Posterior margin of sternum II broadly emarginate (fig. 106B) in female; outwardly arcuate or angulate (fig. 106A) in the male, the median marginal setae subspiniform and more closely set, so as to form a false ctenidium. *Female*: Supra-anal plate (fig. 107D) typically with a strong seta on each side along lateral margin and a very short one ventral to it. *Male*: Gonapophyses as in fig. 107B; aedeagus without a dorsal subapical spine. Host: *Noctilio leporinus mexicanus* ..... *traubi* n.sp.

series. Sternum II (fig. 106B) very long, emarginate at middle with very few discal setae, marginal setae longer toward sides, but short along lateral margins. Seventh sternites very small, irregularly oval, usually with three or four shorter but conspicuous setae along apical margin, three long coarse setae just anterior to them and two to four very short (often thorn-like) setae anteriorly. *Male*: Tergum I+II generally similar to that of female, but macrosetae not as long; short setae along inner margin relatively

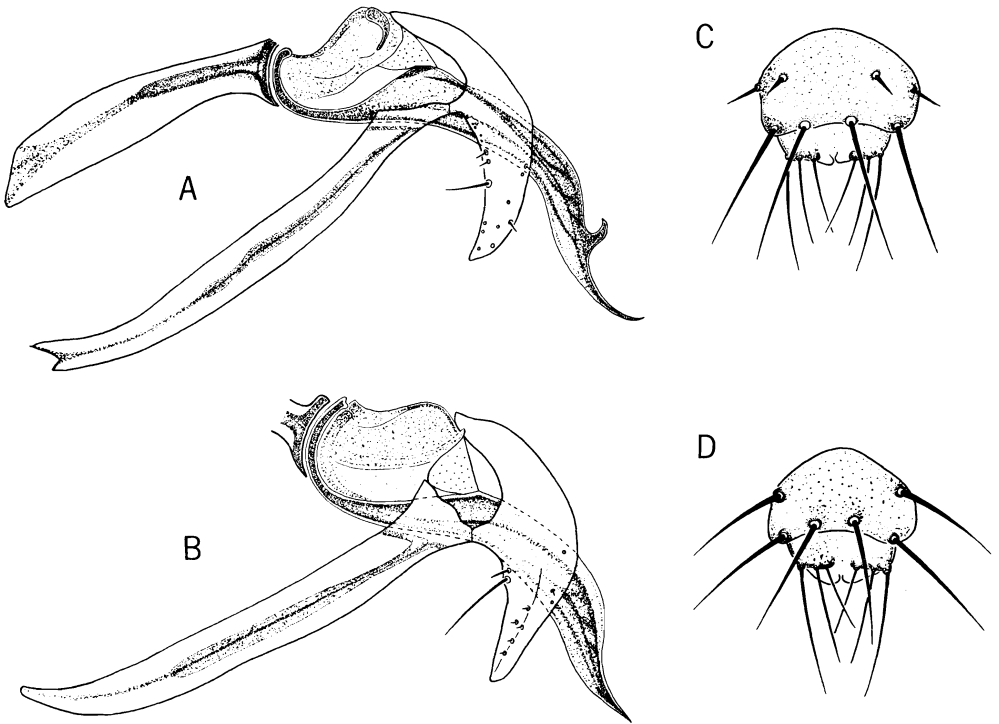


Fig. 107. Terminalia of species of *Noctiliostrebla*. A and B, male genital apparatus, lateral view: A, *Noctiliostrebla maai*, new species, paratype from *Noctilio l. labialis* (no. 6376), Río Tuira (Darién); B, *N. traubi*, holotype. C and D, terminal cone, female abdomen: C, *Noctiliostrebla aitkeni*, new species, female paratype from *Noctilio l. leporinus*, Manzanilla, TRINIDAD; D, *N. traubi*, new species, female from *Noctilio leporinus*, (CNHM 81166), Huásimo (Tumbes), PERU.

longer than in the female. Sternum II (fig. 106A) posteriorly strongly produced or rounded at middle, with few discal setae, the median marginal setae longer than the median discal setae and more closely placed than the marginals towards the sides so as to form a false ctenidium. Gonapophyses (fig. 107B) shorter, more strongly curved than in *maai* and *aitkeni*, the aedeagus strongly laterally compressed as in those species but without a dorsal recurved subapical spine.

Measurements:	BL	TL
Male	1.59-1.65	0.49-0.55
Female	2.06-2.28	0.60-0.63

TYPE MATERIAL (from *Noctilio leporinus mexicanus*): Holotype male and allotype female (slides) from host no. 5113, cativo trees, Fort Sherman