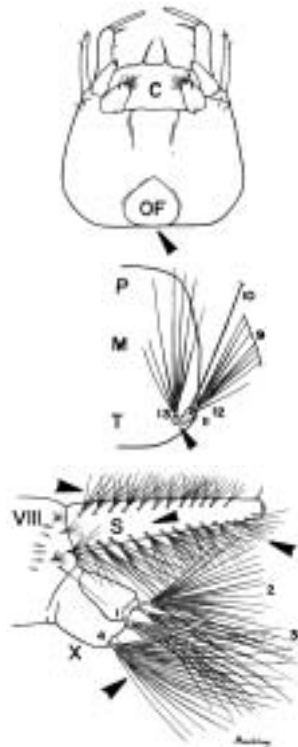


KEY TO THE SPECIES OF GENERA *KIMIA* AND *TOPOMYIA*
FOURTH-INSTAR LARVAE^a

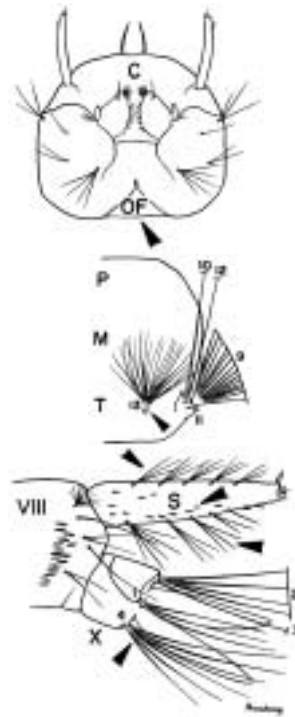
Characters: Ventral brush (seta 4-X) with 1 or 2 pairs of setae; setae 1-S represented by 2 or more pairs of setae; setae 5- and 6-P with branches; setae 6-M and 7-T never stout or spinelike; thorax and abdomen with or without stellate setae; maxillary palpus conspicuous, or if poorly developed then abdominal segments IV-VI with 1 or more pairs of stellate setae; seta 5-P 0.5 or more length of seta 6-P, branches aciculate

1. Occipital foramen (OF) more less oval
2. Seta 13-T on plate with 9-12-T
3. Seta 4-X highly branched
4. Siphon without pecten
5. Siphonal setae [setae 1a-S (ventral), 2a-S (dorsal)] numerous and highly branched

1. Occipital foramen (OF) transverse, slitlike
2. Seta 13-T not on plate with 9-12-T
3. Seta 4-X with fewer branched
4. Siphon with pecten
5. Siphonal setae [setae 1a-S (ventral), 2a-S (dorsal)] variable, but never so numerous or highly branched



Genus *Kimia*
(*Km. suchariti*)



Genus *Topomyia*

↳ To PLATE 2

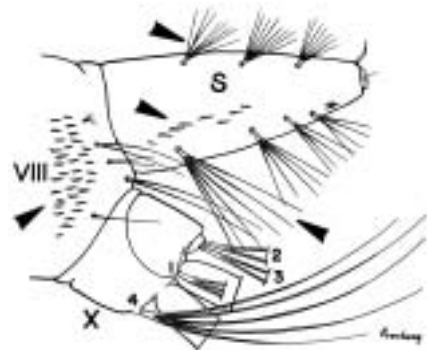
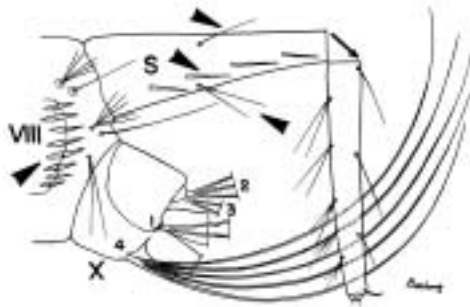
^aLarvae of *To. aenea*, *To. bifurcata*, *To. cristata*, *To. pseudoleucotarsis*, and *To. leucotarsis* are unknown.

PLATE 2

From PLATE 1: Occipital foramen (OF) transverse, slitlike; seta 13-T not on plate with 9-12-T; seta 4-X with fewer branches; siphon with pecten; siphonal setae [setae 1a-S (ventral), 2a-S (dorsal)] variable, but never so numerous or highly branched

1. Dorsal and ventral setae of siphon weak, usually single (1-3)
2. Pecten spines long, moderately broad and flattened, arranged in single row
3. Comb with 5-10 scales

1. Dorsal and ventral setae of siphon strong, with well-developed branches
2. Pecten spines not long and broad, arranged in rows or patch
3. Comb with more than 10 scales



Species without subgeneric placement

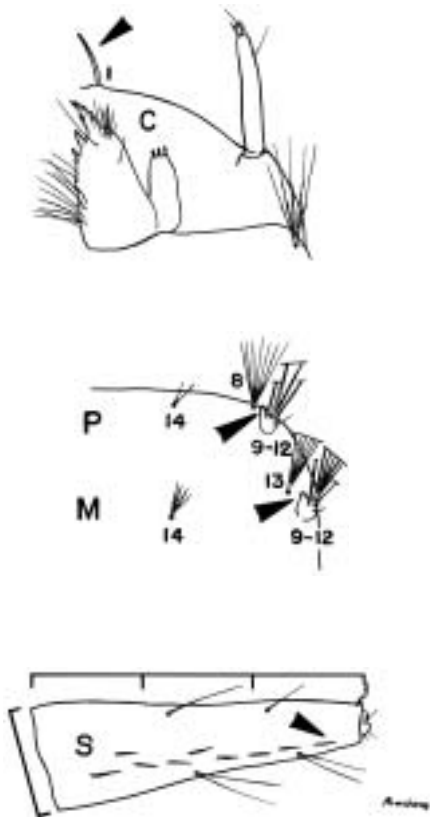
↳ To PLATE 3

↳ To PLATE 4

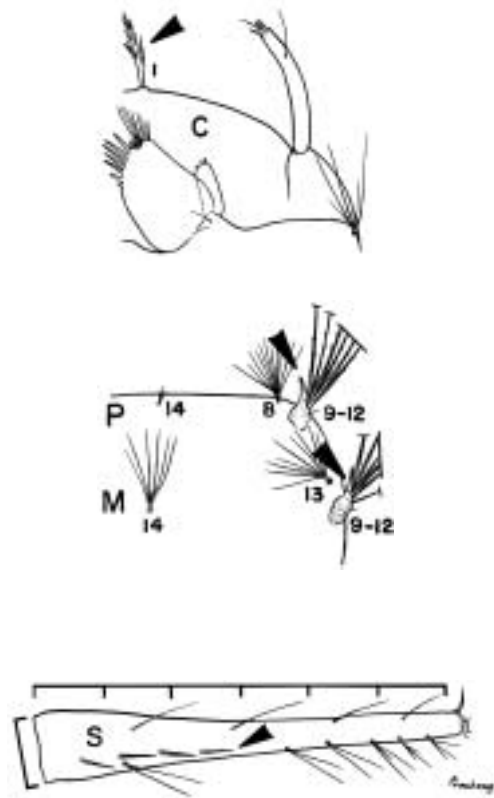
From PLATE 2: Dorsal and ventral setae of siphon weak, usually single (1-3); pecten spines long, moderately broad and flattened, arranged in single row: comb with 5-10 scales

1. Seta 1-C simple
2. Plates bearing setae 9-12-P and -M each with a short spine
3. Siphon not long and slender, length less than 5.0 times width at base, with 6-9 pecten spines extending to near apex

1. Seta 1-C stout with lateral barbs
2. Plates bearing setae 9-12-P and -M each with a long stout spine
3. Siphon broad at base and strongly tapered distally, length 5.0 or more times width at base, with 4-6 pecten spines on basal 0.3-0.5



To. yanbarensis



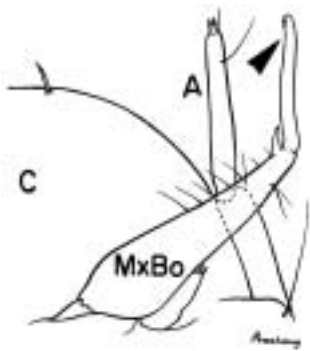
To. spathulirostris

PLATE 4

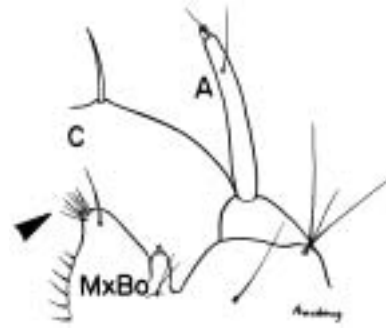
From PLATE 2: Dorsal and ventral setae of siphon strong, with well-developed branches; pecten spines not long and broad, arranged in rows and patch; comb with more than 10 scales

Maxillary body (MxBo) long and narrow with maxillary bundle reaching beyond front of head

Maxillary body (MxBo) short and broad with maxillary brush



Subgenus *Suaymyia*

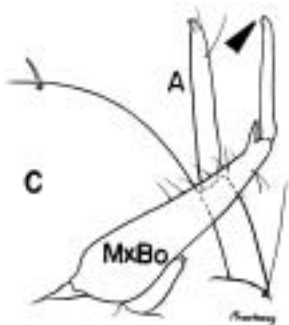


Subgenus *Topomyia*

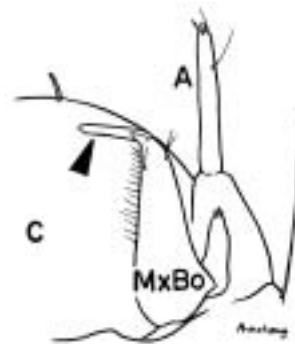
↳ To PLATE 7

Maxillary bundle as long or longer than 0.50 length of maxillary body

Maxillary bundle short, less than 0.50 length of maxillary body



↳ To PLATE 5

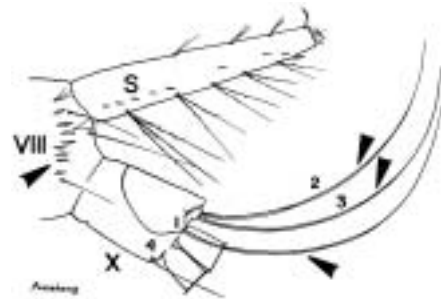
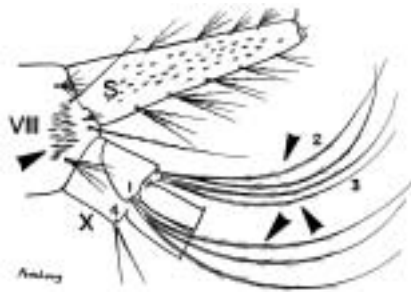


↳ To PLATE 6

From PLATE 4: Maxillary bundle as long or longer than 0.50 length of maxillary body

- 1. Comb with 11 or more scales
- 2. Setae 1-, 2-, and 3-X branched

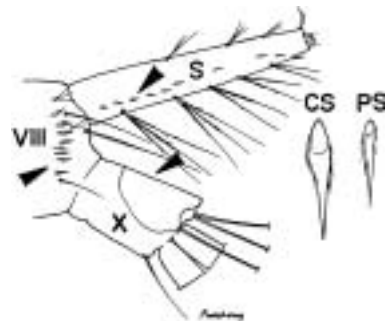
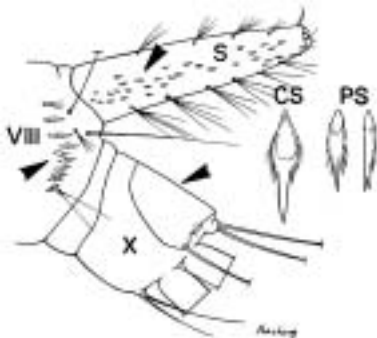
- 1. Comb usually with fewer than 11 scales
- 2. Setae 1-, 2-, and 3-X usually single



To. houghtoni

- 1. Siphon with numerous pecten spines
- 2. Comb scales and pecten spines with obvious denticles
- 3. Segment X as long as broad

- 1. Siphon with fewer pecten spines in single row
- 2. Comb scales and pecten spines with minute inconspicuous denticles
- 3. Segment X longer than broad



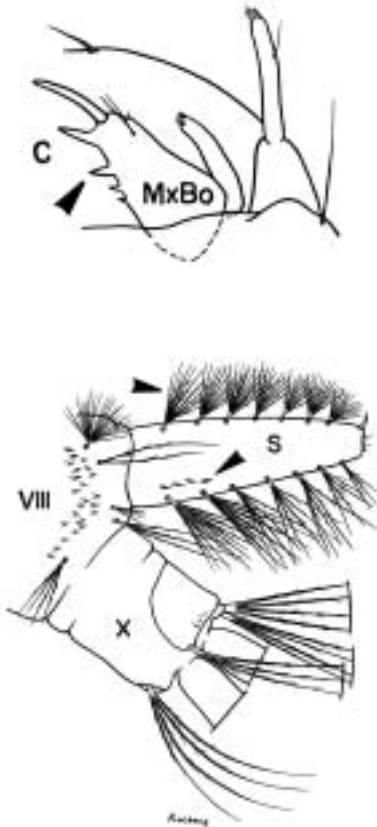
To. species 1
(near *To. houghtoni*)

To. species 2
(near *To. houghtoni*)

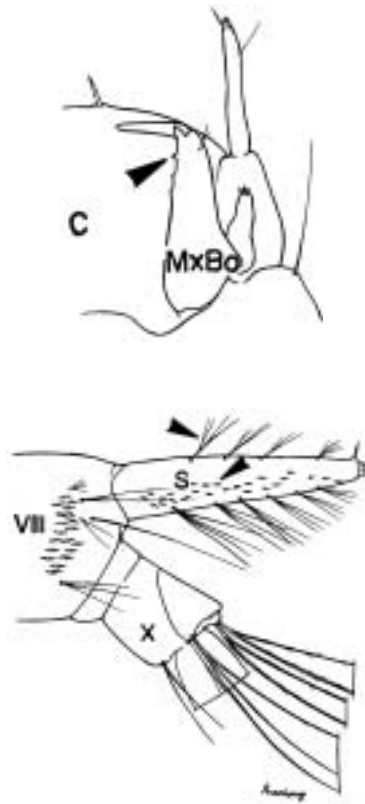
From PLATE 4: Maxillary bundle short, less than 0.50 length of maxillary body

1. Mesal margin of maxillary body (laciniarastrum) with long, stout denticles
2. Siphon with few pecten spines
3. Each dorsal seta on siphon with 8 or more branches

1. Mesal margin of maxillary body (laciniarastrum) with small spicules
2. Siphon with numerous pecten spines extending to near apex
3. Each dorsal seta on siphon with fewer than 8 branches



To. apsarae

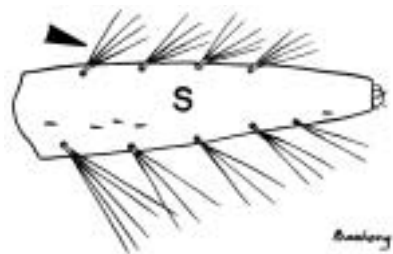
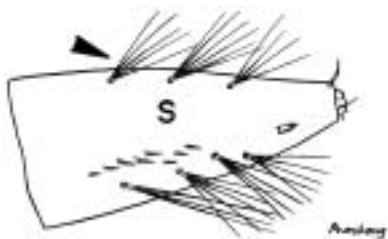
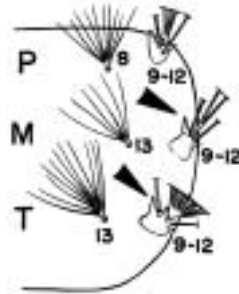
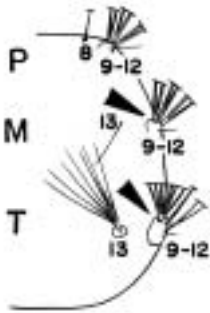
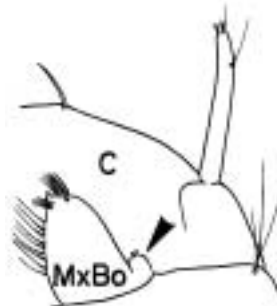
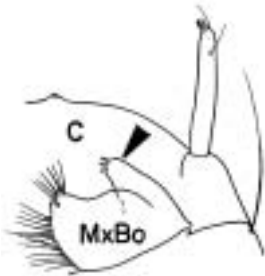


To. species 3
(near *To. pseudoleucotarsis*)

From PLATE 4: Maxillary body (MxBo) short and broad, with maxillary brush

1. Maxillary palpus long, more than 0.50 length of maxillary body (MxBo)
2. Plates bearing setae 9-12-M and -T each without obvious spine
3. Siphon with 3 pairs of dorsal setae

1. Maxillary palpus short, less than 0.50 length of maxillary body (MxBo)
2. Plates bearing setae 9-12-M and -T each with obvious spine
3. Siphon with 4 or more pairs of dorsal setae



To. (Top.) angkoris

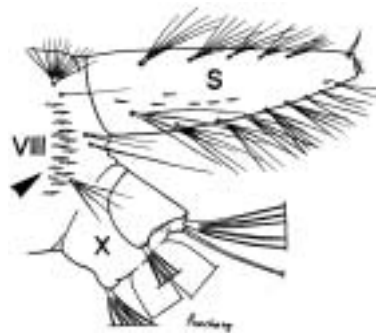
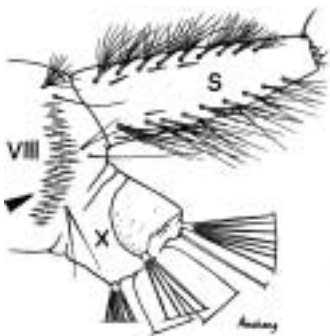
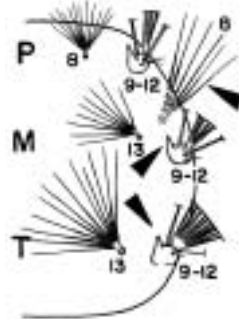
↳ To PLATE 8

PLATE 8

From PLATE 7: Maxillary palpus short, less than 0.50 length of maxillary body (MxBo); plates bearing setae 9-12-M and -T each with obvious spine; siphon with 4 or more pairs of dorsal setae

1. Seta 8-M strongly developed, with 7-10 branches, each branch strongly aciculate (barbed) beyond middle
2. Plates bearing setae 9-12-M and -T each with long, stout spine
3. Comb with 20 or more scales

1. Seta 8-M not strongly developed, with fewer branches, each branch weak, aciculate nearly entire length
2. Plates bearing setae 9-12-M and -T each with relatively short spine
3. Comb scales variable



↳ To PLATE 11

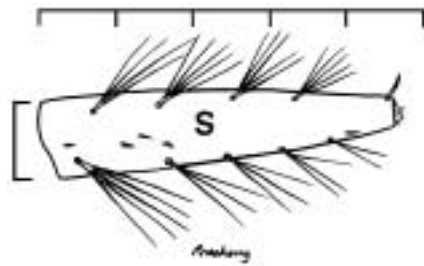
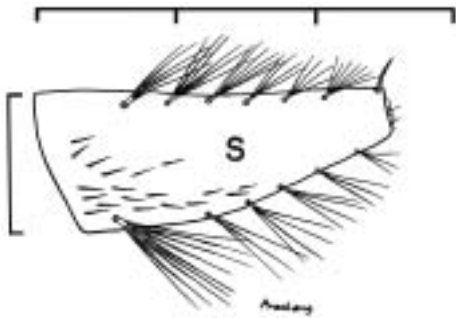
↳ To PLATE 9

PLATE 9

From PLATE 8: Seta 8-M not strongly developed, with fewer branches, each branch weak, aciculate nearly entire length; plates bearing setae 9-12-M and -T each with relatively short spine; comb scales variable

Siphon short, length less than 4.0 times width at base, if longer then broader in basal 0.3-0.5

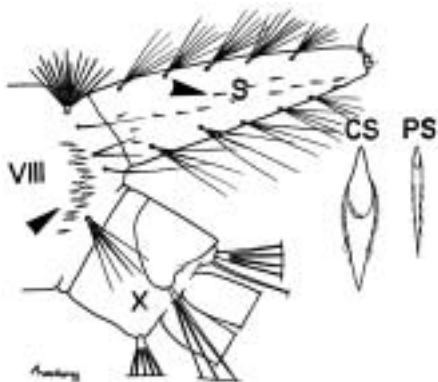
Siphon long, length 4.0 or more times width at base



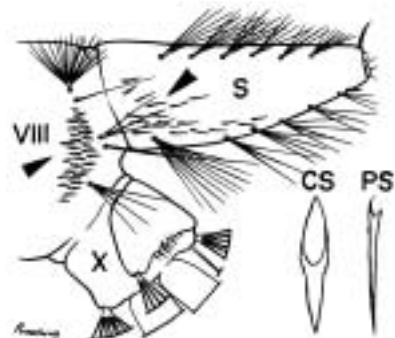
➔ To PLATE 10

- 1. Comb with fewer than 18 scales
- 2. Siphon with pecten spines in one or 2 rows

- 1. Comb with 18 or more scales
- 2. Siphon with pecten spines in patch on basal 0.5 of siphon



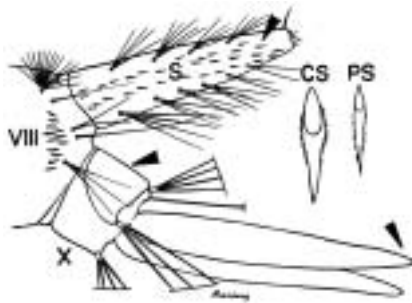
To. (Top.) gracilis (in part)



To. (Top.) species 4
(near *To. tenuis*)

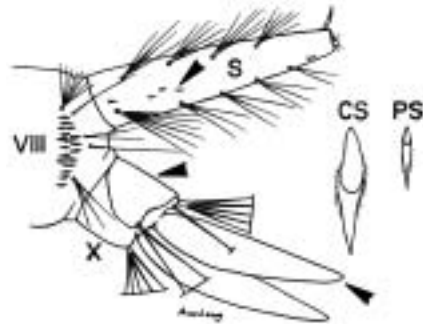
From PLATE 9: Siphon long, length 4.0 or more times width at base

1. Siphon with numerous pecten spines extending to apex
2. Anal papillae usually long, 4 or more times length of saddle

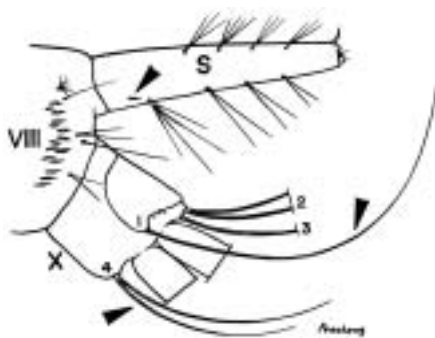


To. argyropalpis^a

1. Siphon with fewer pecten spines
2. Anal papillae short, length 2,3 times length of saddle

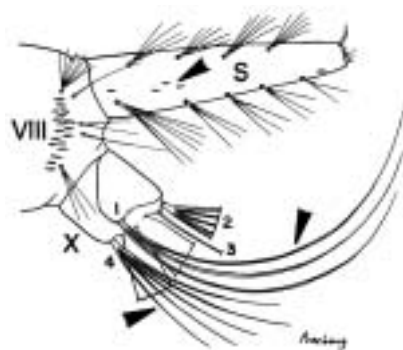


1. Siphon with fewer than 4 pecten spines
2. Seta 1-X single or double
3. Seta 4-X double



To. vijayae and *To. tenuis*?^b

1. Siphon with 4 or more pecten spines in one or two rows
2. Seta 1-X with 2 or 3 branches
3. Seta 4-X with 5 or more branches



To. tipuliformis^c and *To. gracilis*^c (in part)

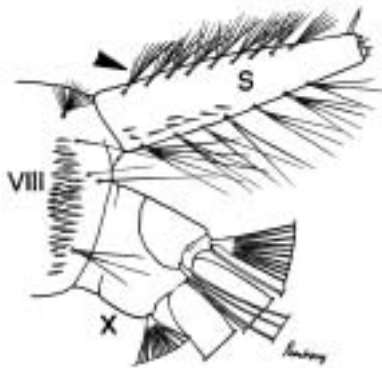
^a Some unknown species with short anal papillae may key to this couplet.

^b One specimen of *To. tenuis* in the USNM has 5 pairs of dorsal setae, setae 1-3-X single, and no pecten spines.

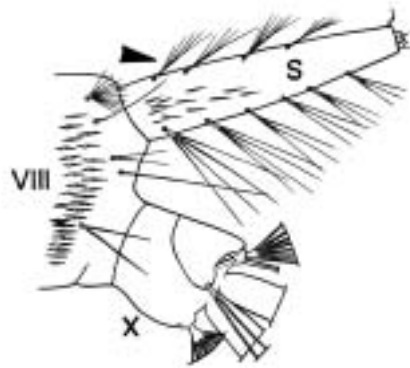
^c *Topomyia tipuliformis* has 6 pairs of dorsal setae and *To. gracilis* has 4 pairs (Brug, 1931).

From PLATE 8: Seta 8-M strongly developed, with 7-10 branches, each branch strongly aciculate (barbed) beyond middle; plates bearing setae 9-12-M and -T each with long, stout spine; comb with 20 or more scales

Siphon with more than 7 pairs of dorsal setae Siphon with fewer than 6 pairs of dorsal setae



To. (Top.) lindsayi



To. (Top.) inclinata^a

^a Larvae with a shorter siphon may belong to an unknown species.