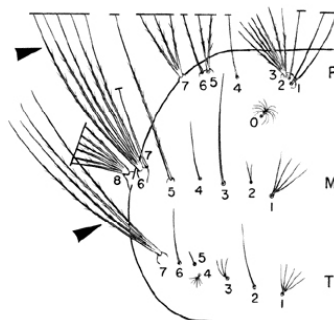
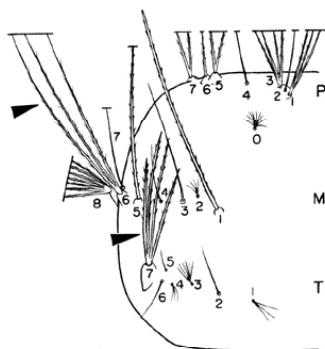


KEY TO THE SPECIES OF GENUS *HULECOETEOMYIA* FOURTH-INSTAR LARVAE

From PLATE 5: Comb scales spinelike with lateral fringes or strong denticles, if rounded with even fringe then; siphon usually with one or more larger distal pecten spines widely spaced, inserted at or below base of seta 1-S

Seta 7-T with rather short stout spinulate branches, distinctly different in shape and development from seta 6-M

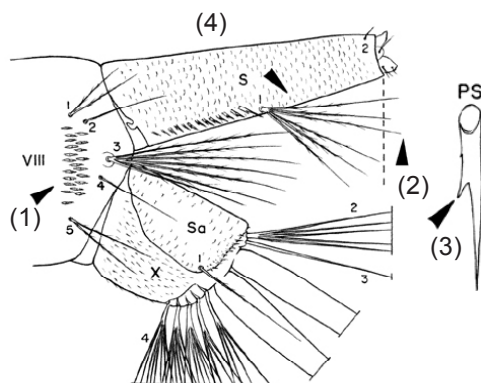
Seta 7-T with long slender aciculate branches, generally similar in shape and development to seta 6-M



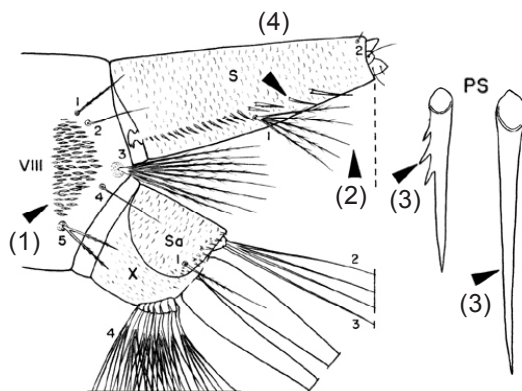
➔ To PLATE 59

1. Comb with 15–20 scales
2. Seta 1-S with tips of branches extending beyond apex of siphon
3. Pecten with one well-developed ventral denticle before midlength
4. Siphon with no pecten spines beyond base of seta 1-S

1. Comb with 50–70 scales
2. Seta 1-S with tips of branches not reaching apex of siphon
3. Pecten with 1–3 small ventral denticles medially, or with none
4. Siphon with 3–6 pecten spines beyond base of seta 1-S



Hl. jugraensis



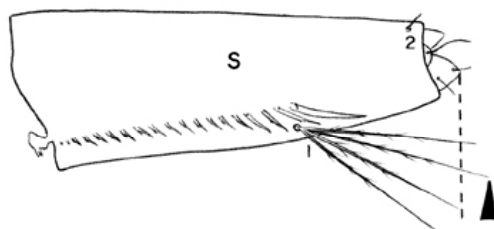
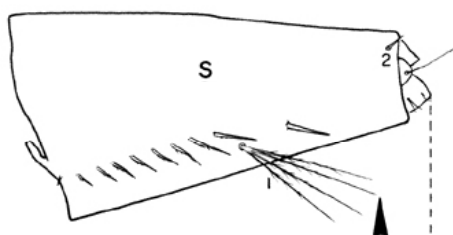
Hl. saxicola

PLATE 59

From PLATE 58: Seta 7-T with long slender aciculate branches, generally similar in shape and development to seta 6-M

Branches of seta 1-S not reaching apex of spiracular lobes

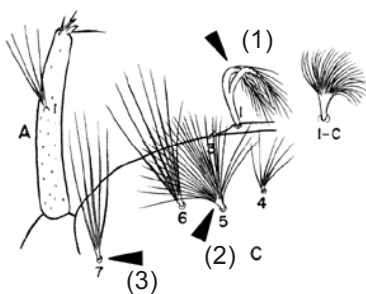
Some branches of seta 1-S reaching to or beyond apex of spiracular lobes



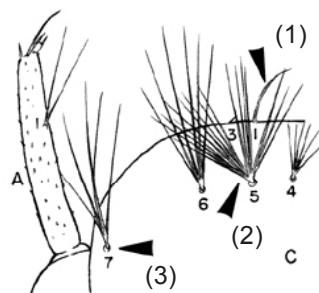
➞ To PLATE 60 (Above)

1. Seta 1-C long, very stout, usually bifid on basal 0.16, each branch brushlike or with long fine barbs
2. Seta 5-C with 17–34 branches (mode 25)
3. Seta 7-C inserted far posterior of antennal base

1. Seta 1-C short, single, slender and tapering beyond 0.50
2. Seta 5-C usually with fewer than 20 branches (usually 12–14)
3. Seta 7-C inserted on level with antennal base



Hl. reinerti



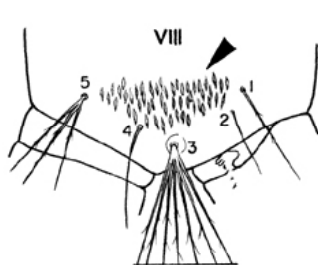
➞ To PLATE 60 (Below)

PLATE 60

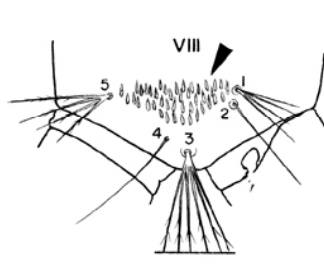
From PLATE 59: Some branches of seta 1-S reaching to or beyond apex of spiracular lobes

Comb scales tapered to stout median apical spine

Comb scales expanded and rounded apically



Hl. chrysolineata

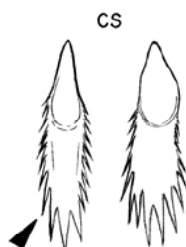
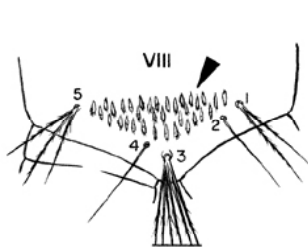


Hl. harveyi

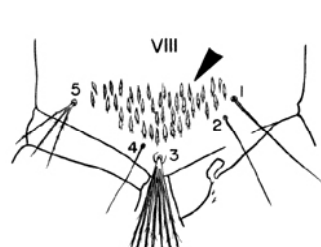
From PLATE 59: Seta 1-C short, single, slender and tapering beyond 0.50; seta 5-C usually with fewer than 20 branches (usually 12–14); seta 7-C inserted on level with antennal base

Comb scales with 2–5 large, prominent apical spines and coarse few fine spicules laterally

Comb scales with distinct median apical spine, with fine lateral spicules basally and coarser spicules along remainder of length



Hl. pallirostris

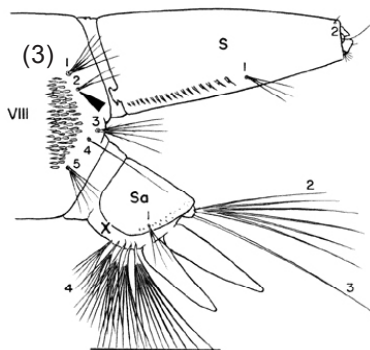
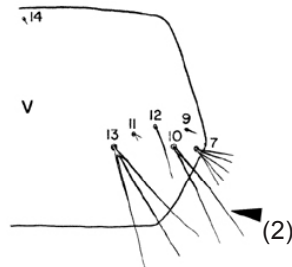
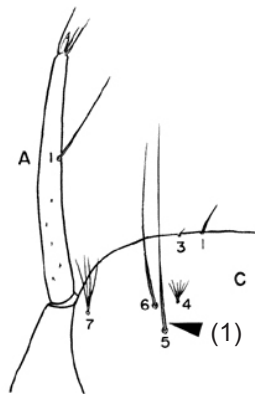


Hl. formosensis

KEY TO THE SPECIES OF GENUS *KENKNIGHTIA* **FOURTH-INSTAR LARVAE**

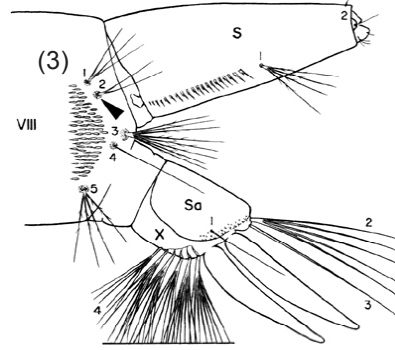
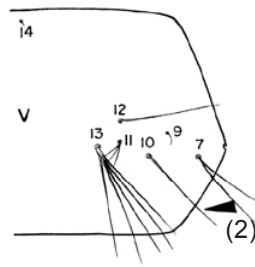
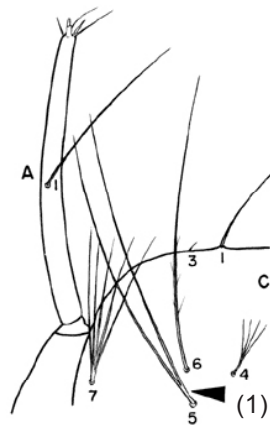
From PLATE 24: Setae 5- and 6-C shorter, not extending beyond apex of antenna; seta 4-VIII usually single; seta 2-X with 5 or more branches; pecten spines with 3–5 strong basal denticles arising close together

1. Seta 5-C single
2. Seta 10-III–V,VII with 2 or 3 branches
3. Seta 2-VIII with 2 or 3 branches, without basal tubercle



Ke. harbachi

1. Seta 5-C usually with 2–4 branches
2. Seta 10-III–V,VII single
3. Seta 2-VIII single or double, borne on basal tubercle

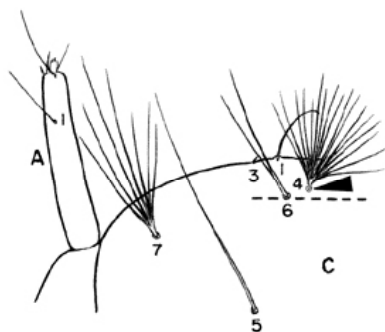


Ke. dissimilis

KEY TO THE SPECIES OF GENUS *LORRAINEA* FOURTH-INSTAR LARVAE

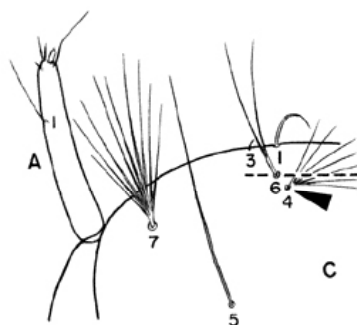
From PLATE 19: Seta 12-I absent; seta 1-S single; ventral brush on grid; saddle without marginal spicules

Seta 4-C inserted anterior to seta 6-C



Lo. fumida

Seta 4-C inserted posterior to seta 6-C

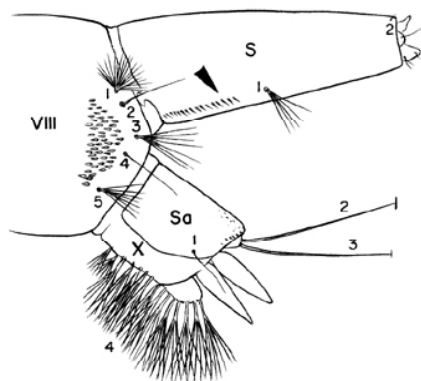


Lo. amesii

KEY TO THE SPECIES OF GENUS *MUCIDUS* FOURTH-INSTAR LARVAE

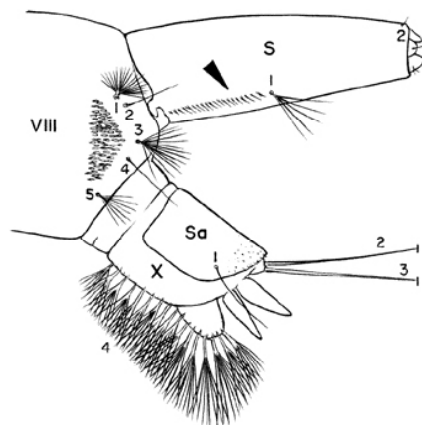
From PLATE 3: Ventral brush on boss and entire length of segment X; mouth brushes stout, serrate on the inner apical margins

Pecten moderately long, with 17 or fewer spines



Mu. (Muc.) quasiferinus

Pecten longer, with more than 17 spines



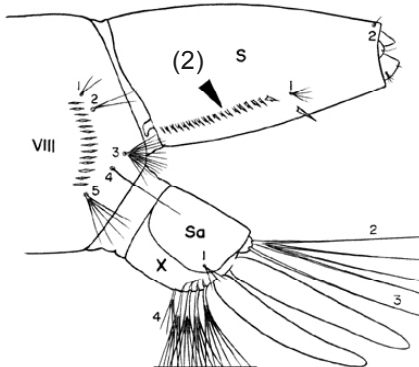
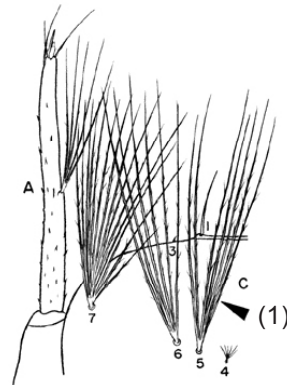
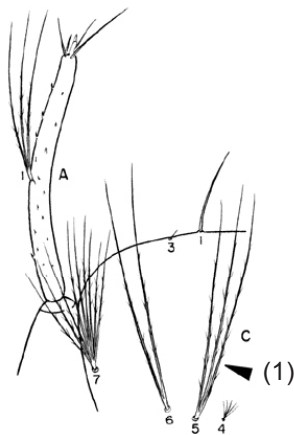
Mu. (Muc.) laniger

KEY TO THE SPECIES OF GENUS *PARAEDES* **FOURTH-INSTAR LARVAE**

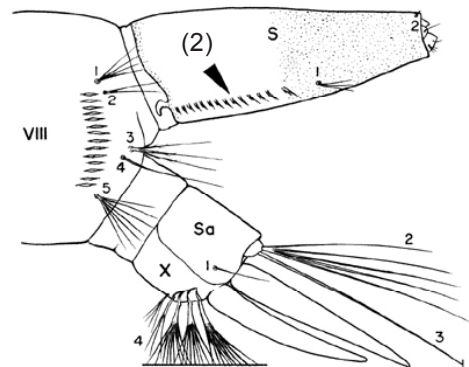
From PLATE 16: Seta 5-C inserted approximately at level of setae 4- and 6-C; apical 0.4 of siphon usually heavily pigmented (except *Pr. thailandensis*)

1. Setae 5- and 6-C with fewer than 4 branches
2. Pecten with 16 or more spines

1. Setae 5- and 6-C with 4 or more branches
2. Pecten with fewer than 16 spines



Pr. thailandensis



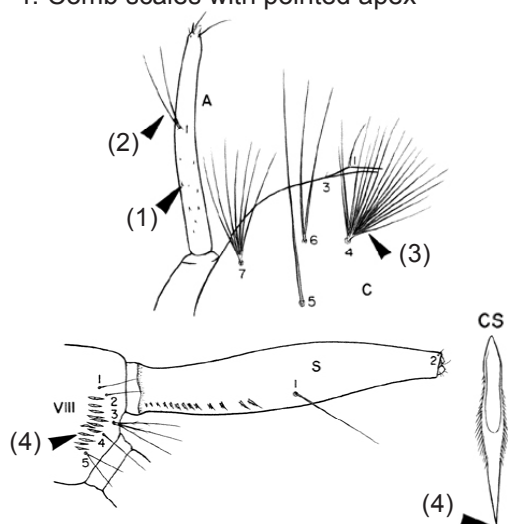
Pr. ostentatio

KEY TO THE SUBGENERA AND SPECIES OF GENUS *PETERMATTINGLYIUS*

FOURTH-INSTAR LARVAE^a

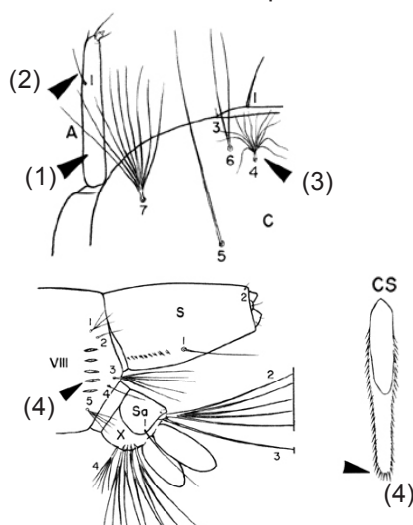
From PLATE 13: Comb scales blunt, with rounded apex (except spinelike in *Pe. whartoni*); seta 1-S single; pecten spines with ventral fringe or denticles along entire length

1. Antenna with spicules on basal 0.5
2. Seta 1-A double
3. Seta 4-C with 11–24 branches
4. Comb scales with pointed apex



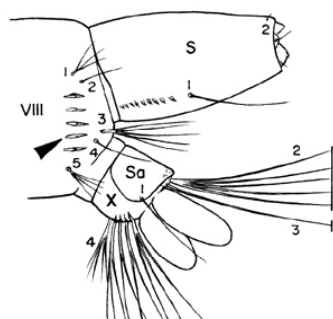
Subgenus *Aglaonotus* (Agl.)
Pe. (Agl.) whartoni

1. Antenna without spicules
2. Seta 1-A single
3. Seta 4-C with fewer branches
4. Comb scales with blunt apex



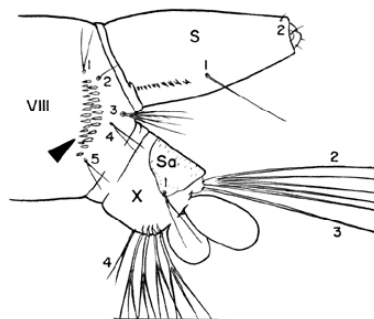
Subgenus *Petermattinglyius* (Pet.)

Comb with 5–10 scales in a single row



Pe. (Pet.) iyengari

Comb with 15–25 scales in 2 irregular rows



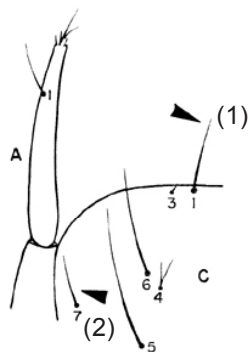
Pe. (Pet.) franciscoi

^aThe larva of *Pe. scanloni* is unknown.

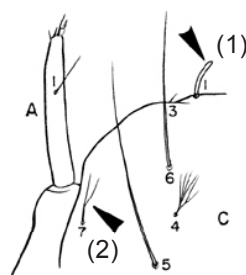
KEY TO THE SPECIES OF GENUS *PHAGOMYIA* **FOURTH-INSTAR LARVAE**

From PLATE 21: Seta 1-C slender or stout, spiniform; median labral plate indistinguishably fused with dorsal apotome; seta 4-C inserted posterior to seta 6-C; seta 7-C inserted far posterior of antennal base; seta 4-M branched; comb scales rounded apically, evenly fringed

1. Seta 1-C slender and tapering to fine point
2. Seta 7-C single

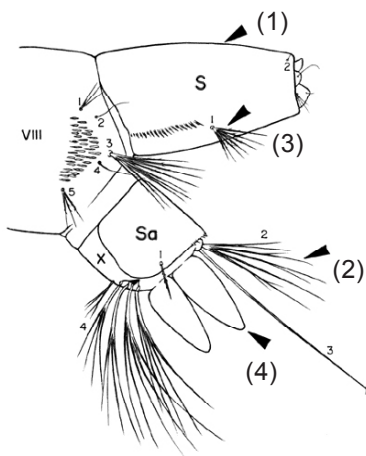


1. Seta 1-C stout and bluntly pointed
2. Seta 7-C with 2 or more branches



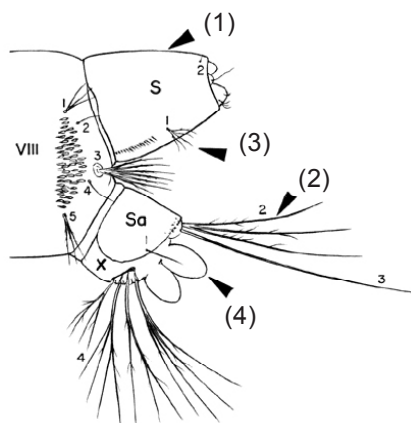
➔ To PLATE 66

1. Siphon length more than 1.25 width at base
2. Seta 2-X with 5 or more branches
3. Seta 1-S with 6 or more branches
4. Anal papillae as long as saddle



Ph. prominens

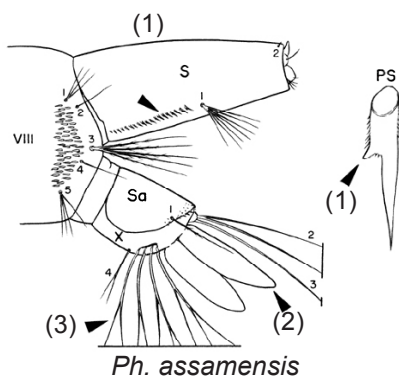
1. Siphon length equal or shorter than 1.25 width at base
2. Seta 2-X with fewer than 5 branches
3. Seta 1-S with fewer than 6 branches
4. Anal papillae shorter than saddle



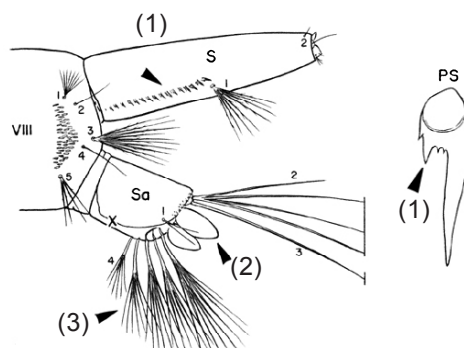
Ph. lophoventralis

From PLATE 65: Seta 1-C stout and bluntly pointed; seta 7-C with 2 or more branches

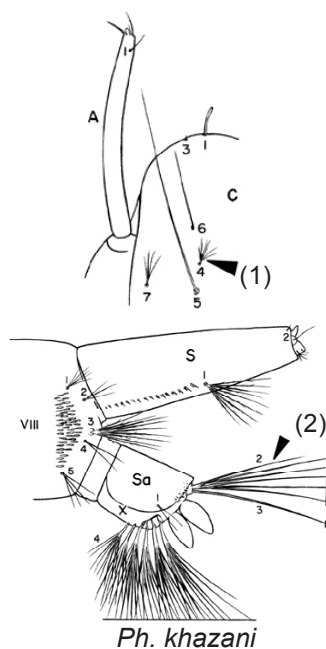
1. Pecten spines with fine basal denticles and one strong denticle inserted about 0.33 from base
2. Anal papillae as long or longer than saddle
3. Setae of ventral brush (seta 4-X) with fewer than 4 branches



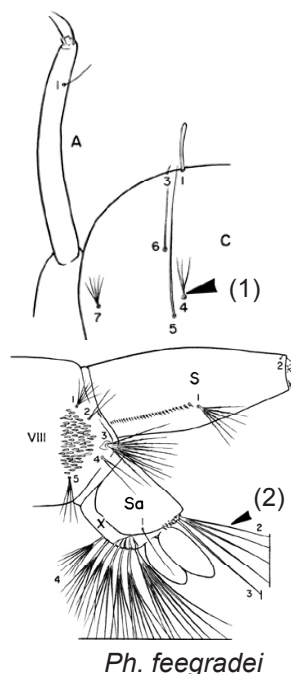
1. Pecten spines with strong denticle at base
2. Anal papillae usually shorter than saddle
3. Setae of ventral brush (seta 4-X) with 4 or more branches



1. Seta 4-C inserted more or less equidistant between setae 5- and 6-C
2. Seta 2-X with 6 or more branches



1. Setae 4-C inserted closer to seta 5-C than 6-C
2. Seta 2-X with fewer than 6 branches

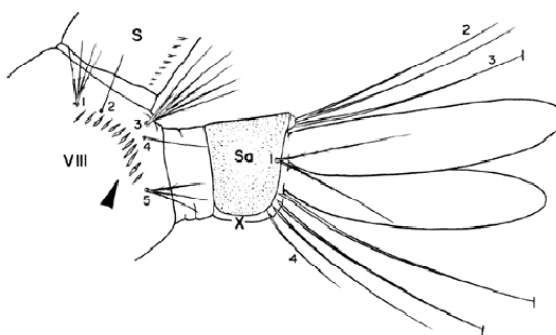
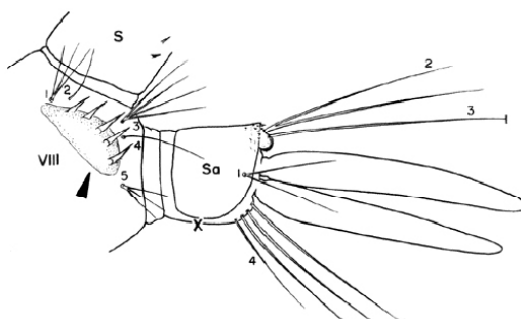


KEY TO THE SUBGENERA AND SPECIES OF GENUS *STEGOMYIA* FOURTH-INSTAR LARVAE

From PLATE 12: Seta 1-A weakly developed, no longer than diameter of antenna; seta 5-C inserted at level of seta 7-C

Comb scales arise from a sclerotized plate

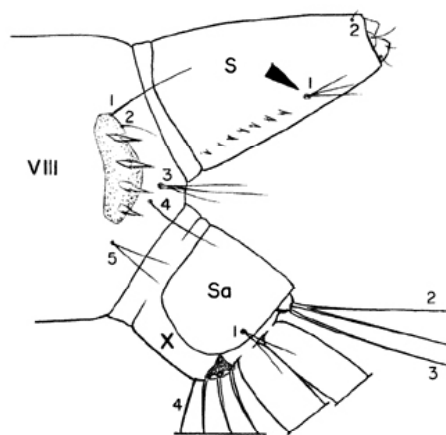
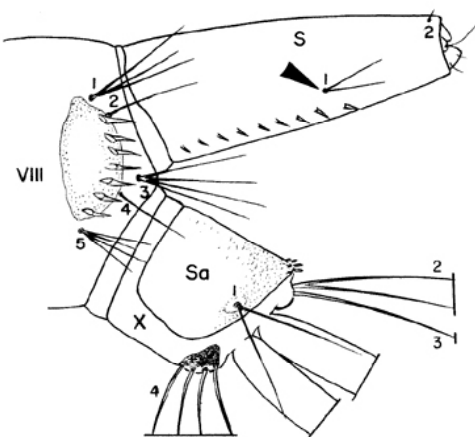
Comb scales arise from integument,
sclerotized plate absent



➡ To PLATE 69

Seta 1-S inserted at or before level of distal pecten spine, on anterior side of pecten

Seta 1-S inserted beyond distal pecten spine, in line with pecten



Subgenus *Heteraspidion* (Het.)

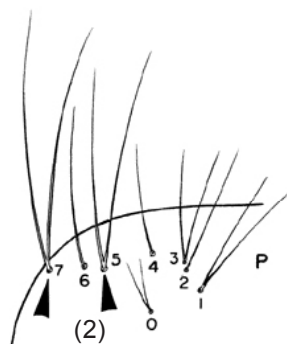
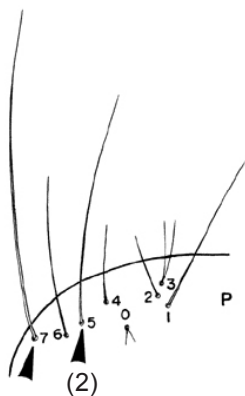
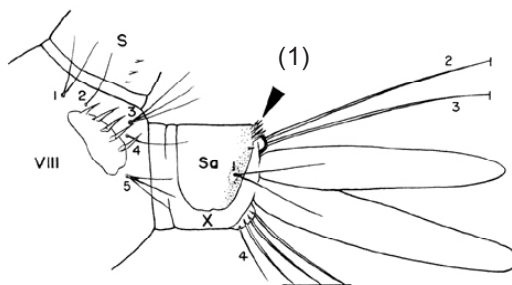
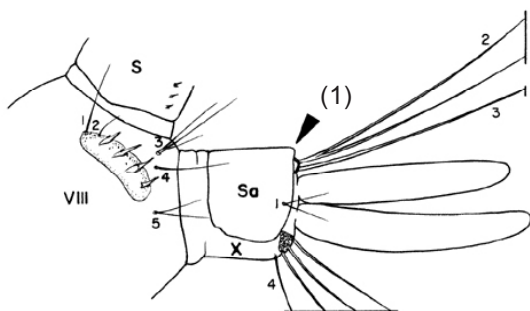
St. (Het.) annandalei and *St. (Het.) craggi*

➡ To PLATE 68

From PLATE 67. Seta 1-S inserted beyond distal pecten spine, in line with pecten

1. Saddle without marginal spicules
2. Setae 5- and 7-P single

1. Saddle with well-developed, conspicuous marginal spicules
2. Setae 5- and 7-P double



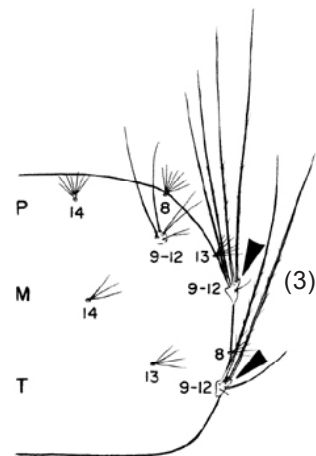
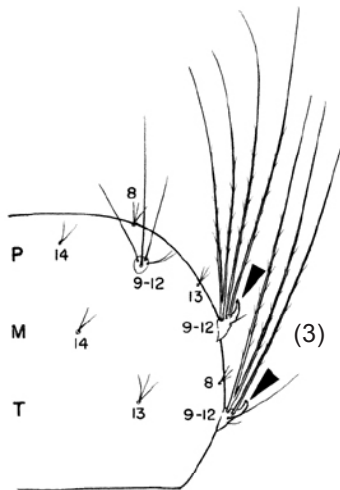
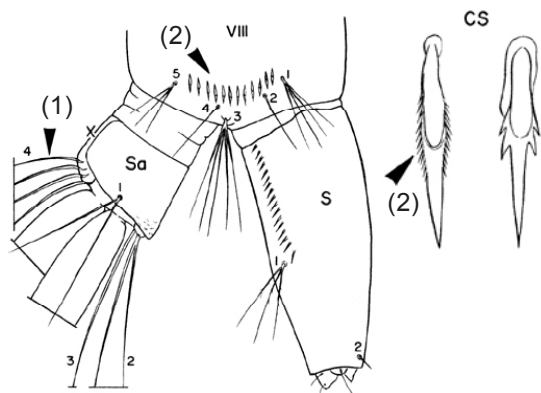
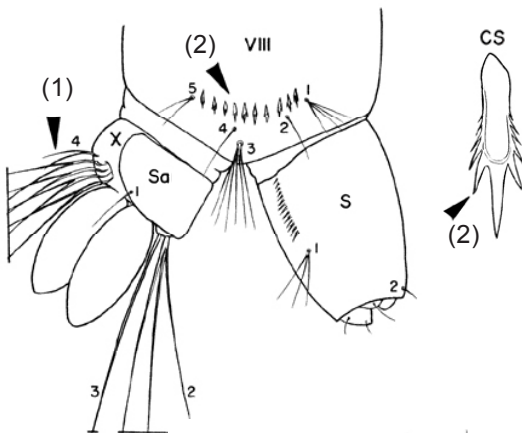
Subgenus *Xyle* (Xye.)
St. (Xye.) *desmotes*

Subgenus *Huangmyia* (Hua.)
St. (Hua.) *malikuli* and St. (Hua.) *perplexa*

From PLATE 67: Comb scales arise from the integument, sclerotized plate absent

1. Ventral brush (seta 4-X) with 5 pairs of setae
2. Comb scales with very strong lateral denticles
3. Plates supporting setae 9–12-M, T with long, stout, apically hooked spine

1. Ventral brush (seta 4-X) with 4 pairs of setae
2. Comb scales usually without strong lateral denticles, if with strong denticles then
3. Plates supporting setae 9–12-M, T with short, slender, more or less straight spine



Subgenus *Stegomyia* (Stg.)
St. (Stg.) aegypti

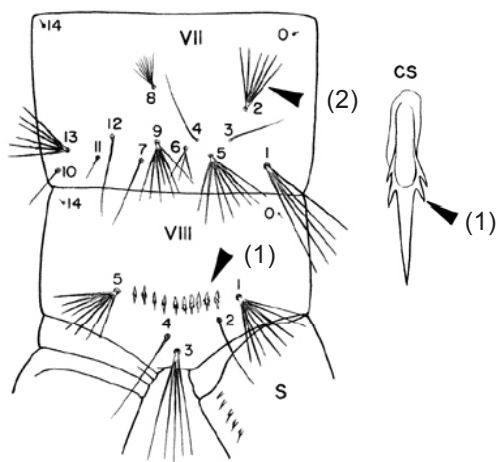
Unassigned to subgenus

➡ To PLATE 70

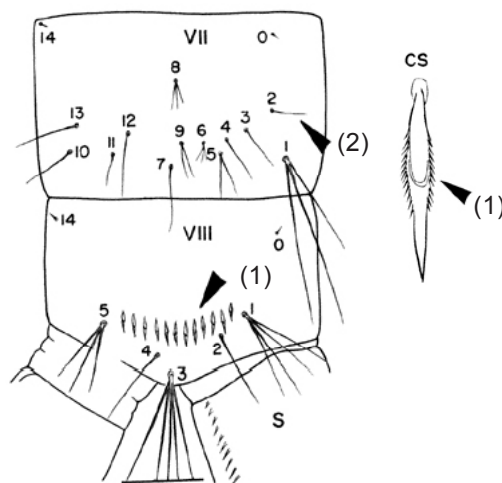
PLATE 70

From PLATE 69: Ventral brush with 4 pairs of setae; comb scales usually without strong lateral denticles, if with strong denticles then; plates supporting setae 9–12-M,T with short, slender, more or less straight spine

1. Comb scales with conspicuous lateral denticles
2. Seta 2-VII usually with 6 or more branches (5-8)

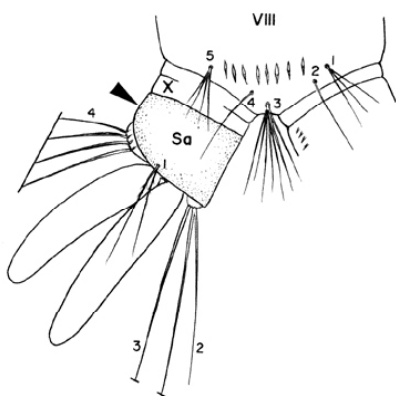
*St. seatoi*

1. Comb scales with fringe, but no lateral denticles at base
2. Seta 2-VII usually with fewer branches



Abdominal segment X with complete saddle

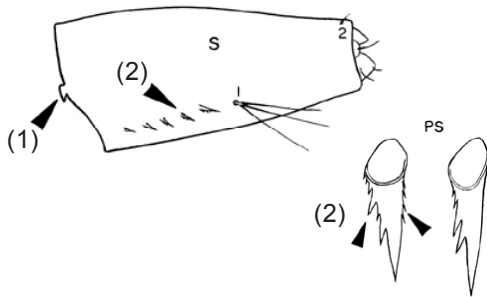
Abdominal segment X with incomplete saddle

*St. novalbopicta*

➞ To PLATE 71

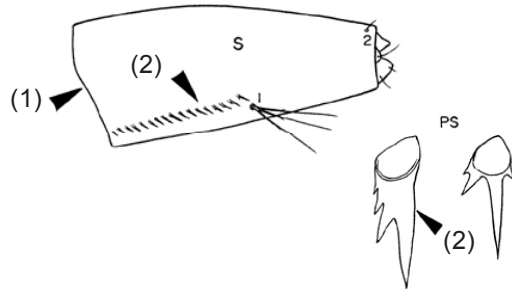
From PLATE 70: Abdominal segment X with incomplete saddle

1. Siphon with acus
2. Pecten with 3–6 stout spines, each usually with denticles on both sides

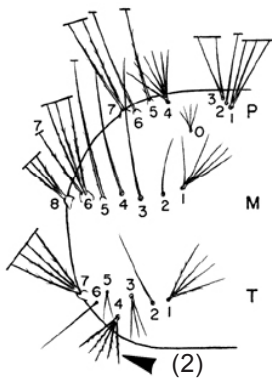
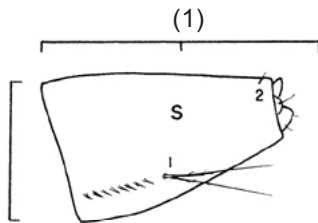


St. pseudalbopicta

1. Siphon without acus
2. Pecten with more than 6 spines with variously developed denticles

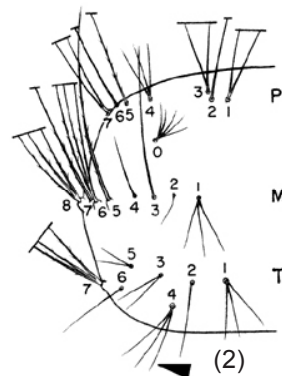
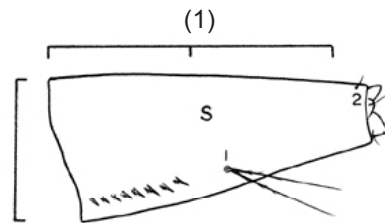


1. Siphon length less than 2 times width at base
2. Seta 4-T stellate



W-albus Group
St. w-alba

1. Siphon length more than 2 times width at base
2. Seta 4-T otherwise

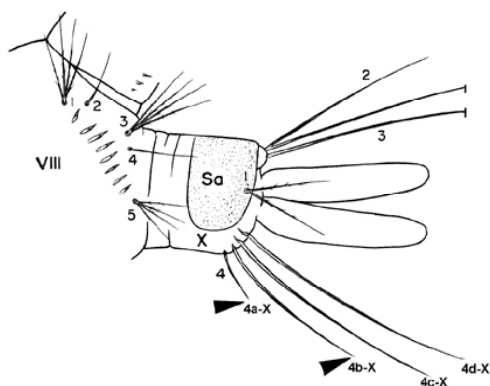


➔ To PLATE 72

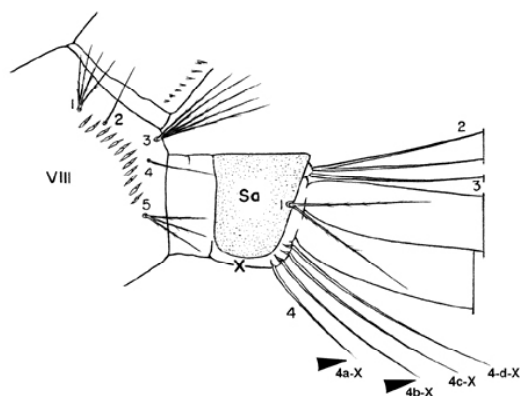
From PLATE 71: Siphon length more than 2 times width at base; seta 4-T otherwise

Seta 4a-X shorter than 0.5 length of 4b-X

Seta 4a-X longer than 0.75 length of 4b-X



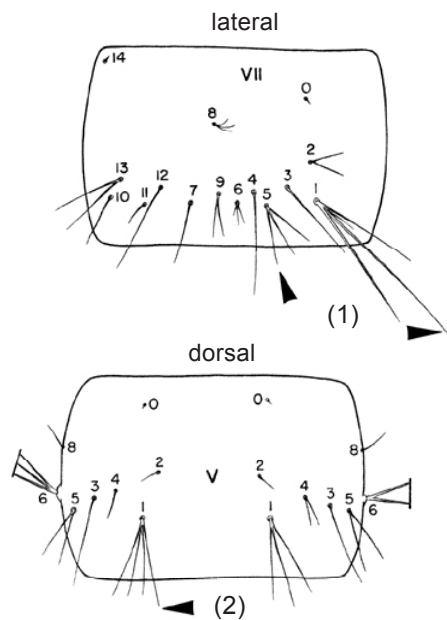
Gardnerii Group
St. gardnerii imitator



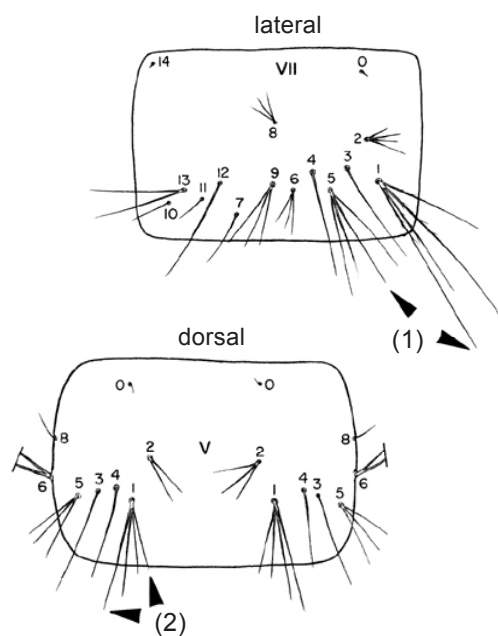
Scutellaris Group

1. Seta 1-VII with 2 or 3 branches (usually 2), at least 2.5 times length of seta 5-VII
2. Seta 1-V with branches of nearly equal length

1. Seta 1-VII with 3 or 4 branches (usually 4), about 2 times or less length of seta 5-VII
2. Seta 1-V with 1 or 2 branches much longer than the others



St. malayensis

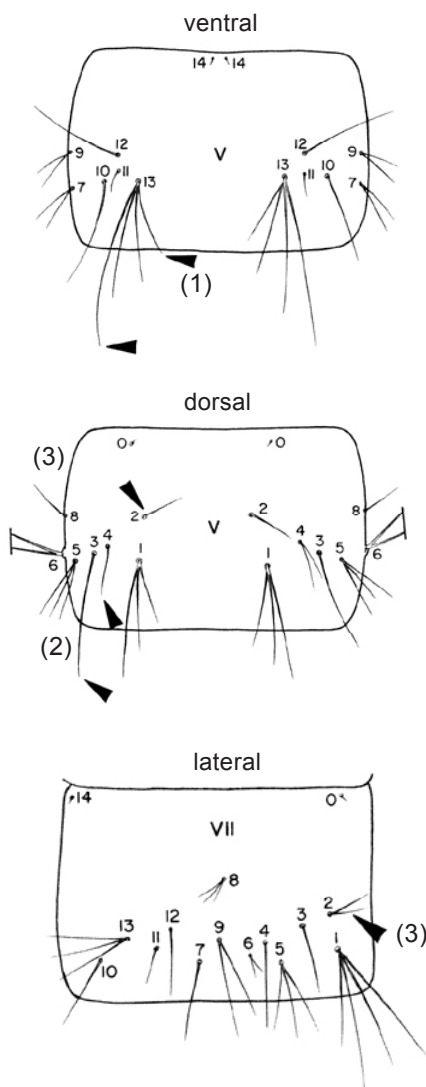


➔ To PLATE 73

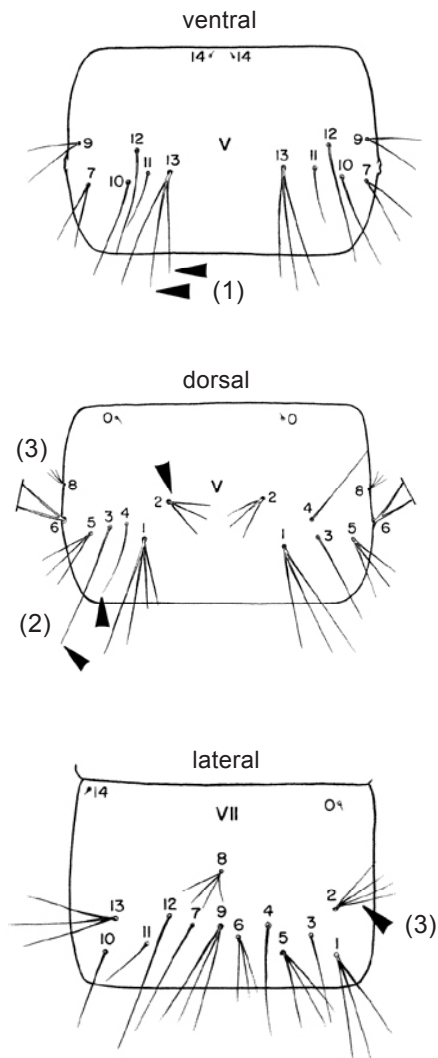
From PLATE 72 : Seta 1-VII with 3 or 4 branches (usually 4), about 2 times or less length of seta 5-VII; seta 1-V with 1 or 2 branches much longer than the others

1. Seta 13-III-V with unequal branches, with one branch distinctly longer than the others
2. Seta 4-V less than 0.5 length of seta 3-V
3. Seta 2-VII and usually 2-IV-VI single or double

1. Seta 13-III-V with branches more or less equal in length
2. Seta 4-V about 0.5 or more length of seta 3-V
3. Seta 2-VII and usually 2-IV-VI with 3 or 4 branches (rarely 2)



St. albopicta

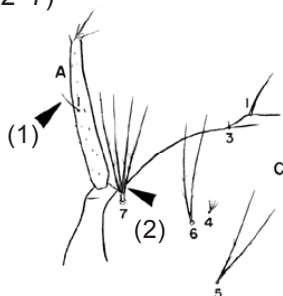


St. patriciae

KEY TO THE SUBGENERA AND SPECIES OF GENUS *VERRALLINA* FOURTH-INSTAR LARVAE

From PLATE 16: Comb scales with median apical spine only slightly longer than lateral denticles; seta 4-VIII single or branched in some species

1. Seta 1-A single or double
2. Seta 7-C usually double to 4-branched (range 2–7)

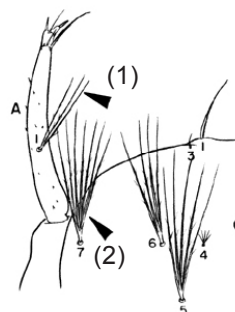


Subgenus *Harbachius* (Har.)

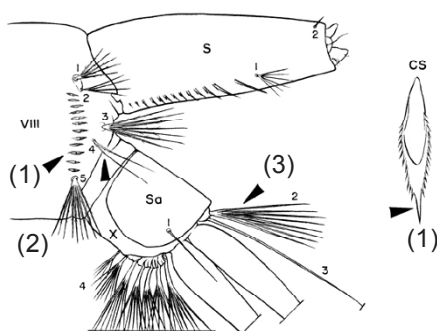
Ve. (Har.) indecorabilis

and *Ve. (Har.) yusafi*

1. Seta 1-A with 3 or more branches
2. Seta 7-C with 5–17 branches

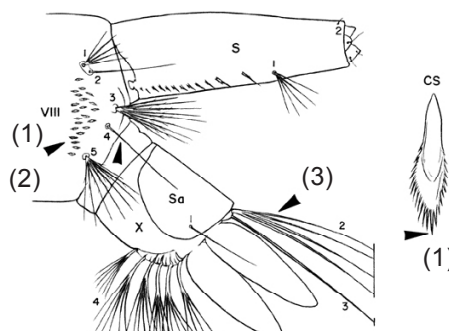


1. Comb scales with stout median apical spine and small denticles on basal and lateral areas
2. Seta 4-VIII double
3. Seta 2-X with 5 or more branches



Subgenus *Neomacleaya* (Nma.)^{a,b}

1. Comb scales with indistinct median apical spine (except in *Ve. butleri*)
2. Seta 4-VIII single
3. Seta 2-X with 2–4 branches (except *Ve. butleri*)



Subgenus *Verrallina* (Ver.)^a

Ve. butleri, *Ve. dux*, and *Ve. lugubris*

^aLarvae of *Verrallina* (Nma.) *adusta*, *andamanensis*, *atria*, *clavata*, *cretata*, *cryptolabis*, *gibbosa*, *incerta*, *latipennis*, *sohni*, *torosa*, *uncus*, *vallistris*, and *Verrallina* (Ver.) *butleri*, *dux*, and *lugubris* cannot be distinguished with confidence.

^bLarvae of *Verrallina* (Nma.) *hispida*, *notabilis*, *phnoma*, *protuberans*, *pseudodiurna* are unknown.