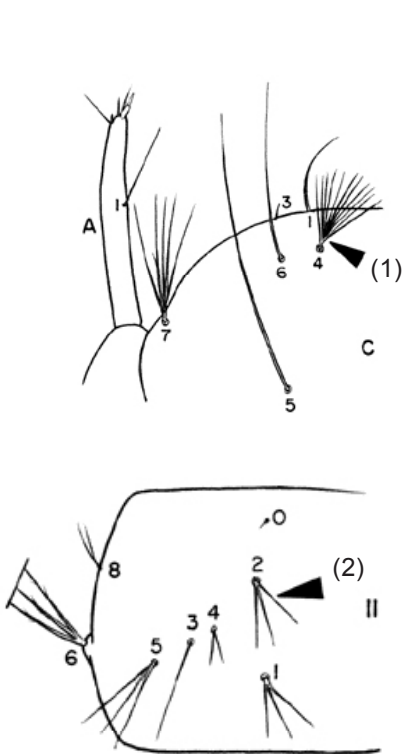


KEY TO THE SPECIES OF GENUS *BOTHAELLA* **FOURTH-INSTAR LARVAE**

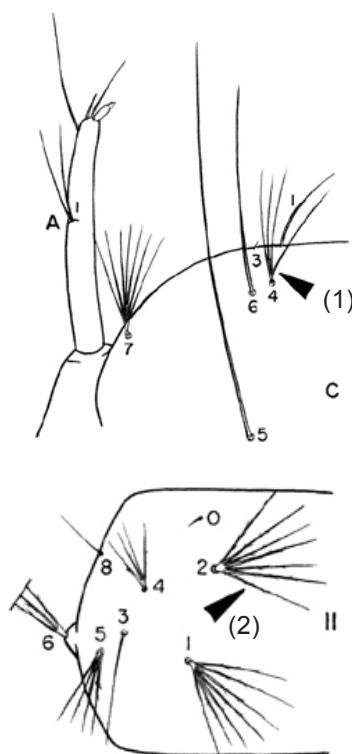
From PLATE 20: Seta 13-P present; distal pecten spine not widely separated from the other spines; seta 1-S branched; posterior marginal spicules of saddle conspicuous

1. Seta 4-C with 9–14 branches
2. Abdominal seta 2-II with 3–5 branches

1. Seta 4-C with 4–8 branches
2. Abdominal seta 2-II with 7–14 branches



Bo. eldridgei



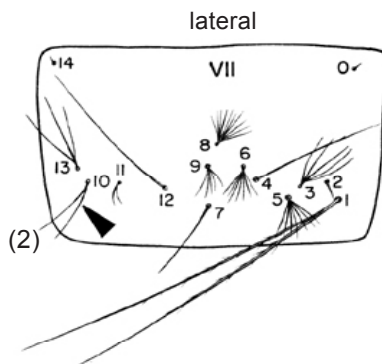
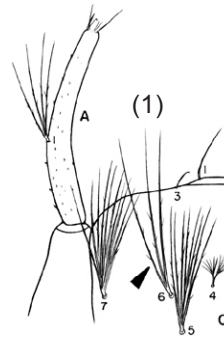
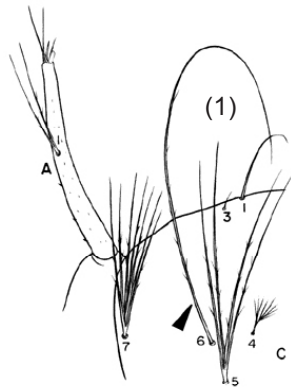
Bo. helenae

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

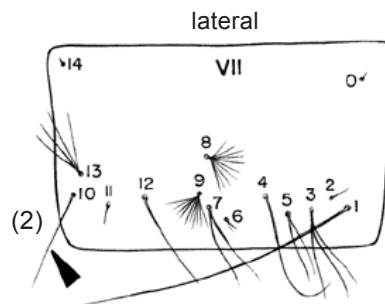
From PLATE 13. Ventral brush without grid bars; precratal setae absent; pecten spines evenly spaced

1. Seta 6-C single, very long
2. Seta 10-VII double

1. Seta 6-C double or triple
2. Seta 10-VII single



Cr. thomsoni

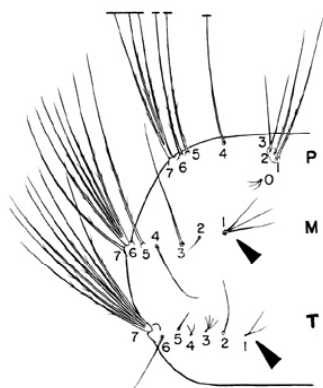


Cr. annulirostris and *Cr. ibis*

KEY TO THE SUBGENERA AND SPECIES OF GENUS *COLLESSIUS* FOURTH-INSTAR LARVAE^a

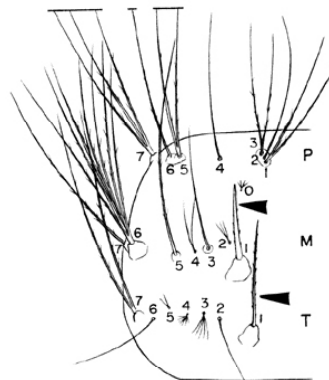
From PLATE 6: Seta 4-C inserted at same level or anterior to seta 6-C; seta 1-VIII shorter (usually) to slightly longer than seta 2-VIII

Seta 1-M,T not stout and spinulate and not borne on tubercles



Subgenus *Alloeomyia* (*Alo.*)

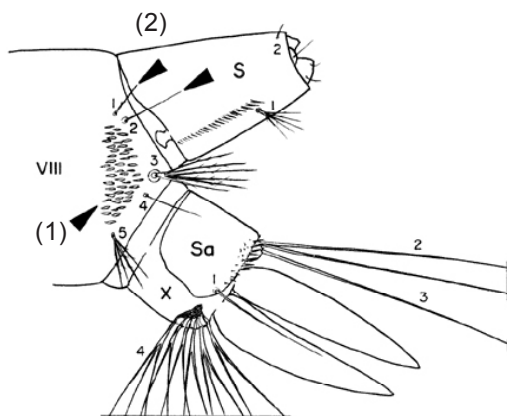
Seta 1-M,T stout and spinulate, borne on large sclerotized tubercles



Subgenus *Collessius* (*Col.*)

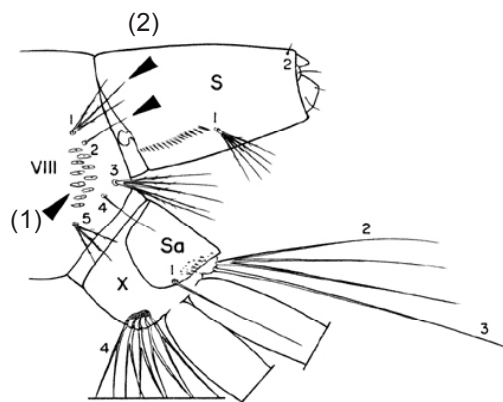
➔ To PLATE 43

1. Comb with 20 or more scales
2. Seta 1-VIII shorter than length of seta 2-VIII



Co. (Alo.) pseudotaeniatus

1. Comb with fewer scales, usually fewer than 20
2. Seta 1-VIII slightly longer than seta 2-VIII



Co. (Alo.) species 1

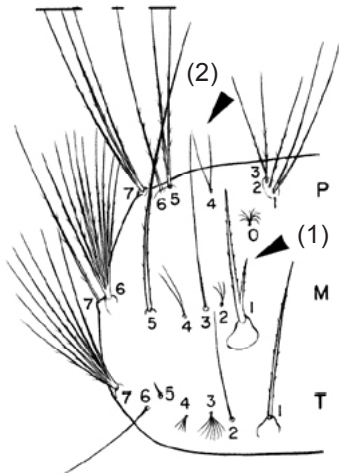
^a*Collessius* species 2 is not included.

PLATE 43

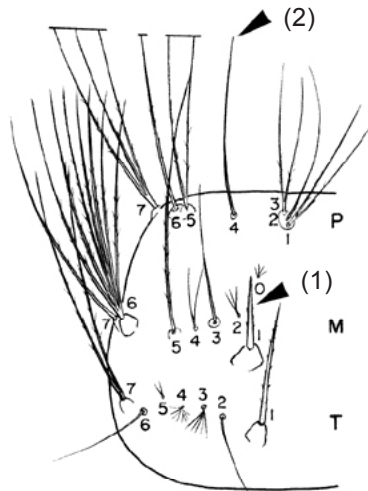
From PLATE 42: Seta 1-M,T stout and spinulate, borne on large sclerotized tubercles

1. Seta 1-M double with unequal branches
2. Seta 4-P shorter than seta 3-P

1. Seta 1-M single
2. Seta 4-P as long as or longer than seta 3-P



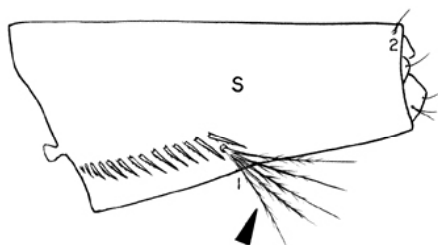
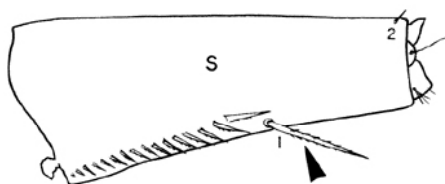
Co. (Col.) macfarlanei



Co. (Col.) elisiae

Seta 1-S stout, single or double

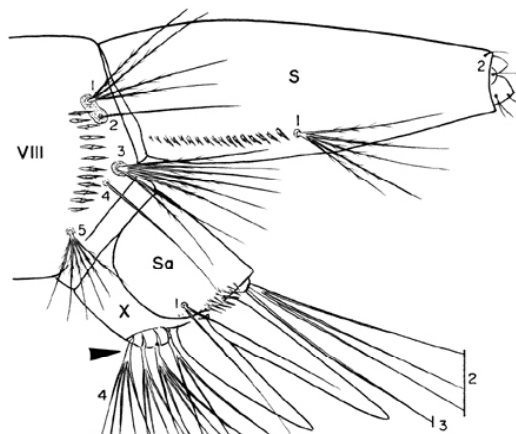
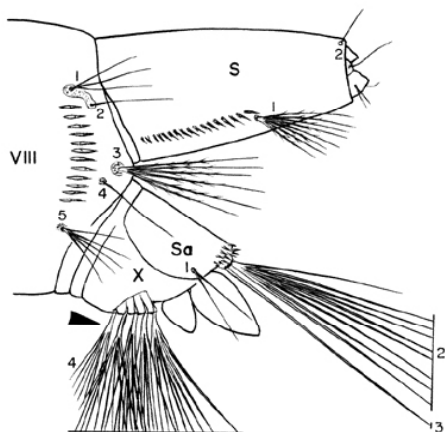
Seta 1-S with 3 or more branches



Co. (Col.) shortii

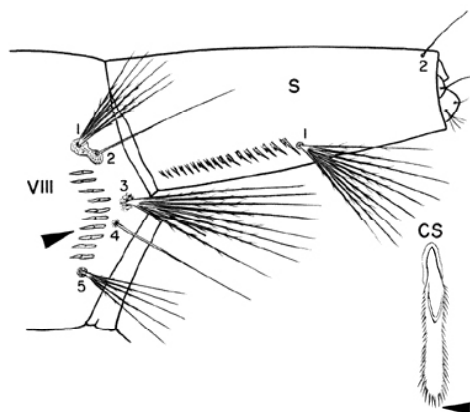
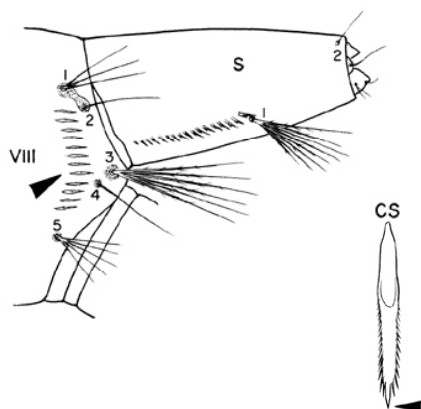
From PLATE 9: Comb with fewer than 19 scales in a single row; seta 12-I present

Ventral brush with 4 pairs of setae



└─▶ To PLATE 45

Comb scales rounded apically, fringed at sides and apex



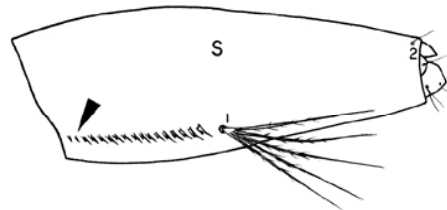
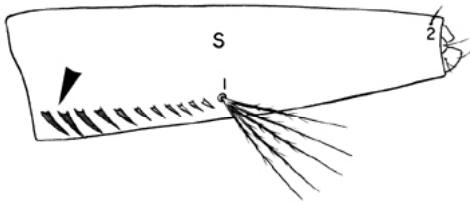
Do. litorea

195

From PLATE 44: Ventral brush with 4 pairs of setae

Pecten with longest spines at base of siphon

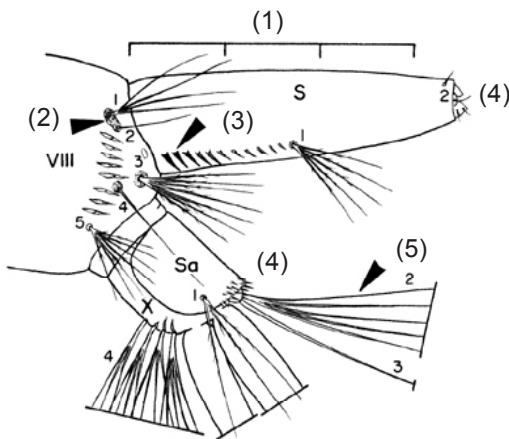
Pecten with shortest spines at base of siphon



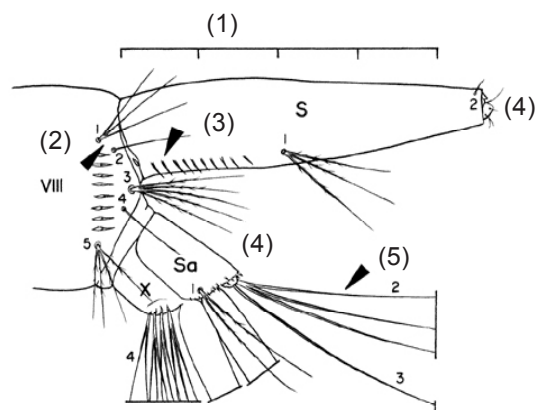
→ To PLATE 46

1. Siphon length usually less than 4 times width at base
2. Setae 1- and 2-VIII on common setal support plate
3. Pecten with 3 or more large, stout dark spines at base of siphon
4. Integument of siphon and saddle relatively smooth
5. Seta 2-X with 4 or more branches

1. Siphon length 4 or more times width at base
2. Setae 1- and 2-VIII not on common setal support plate
3. Pecten with smaller stout spines at base of siphon
4. Integument of siphon and saddle sometimes highly spiculate
5. Setae 2-X with fewer than 4 branches



Do. novonivea

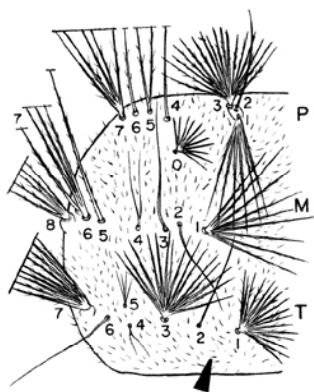


Do. niveoides

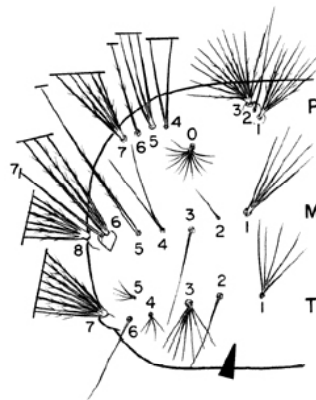
From PLATE 45: Pecten with shortest spines at base of siphon

Integument of thorax and abdomen covered with fine spicules

Integument of thorax and abdomen without fine spicules

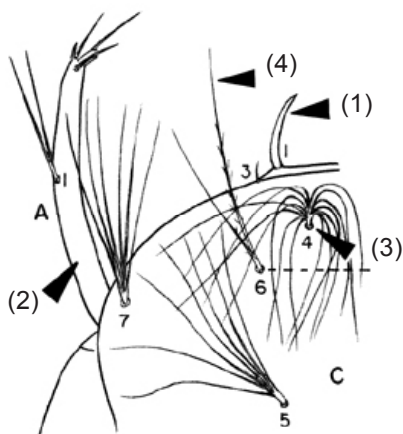


Do. pexa

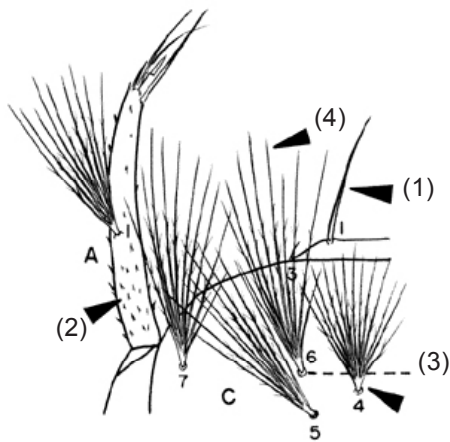


1. Seta 1-C stout and curved inwards
2. Antenna smooth
3. Seta 4-C inserted anterior to seta 6-C
4. Seta 6-C with few barbed branches

1. Seta 1-C long and tapered to a sharp point
2. Antenna with at least a few spicules
3. Seta 4-C inserted posterior to seta 6-C
4. Seta 6-C with multiple aciculate branches



Do. pseudonivea



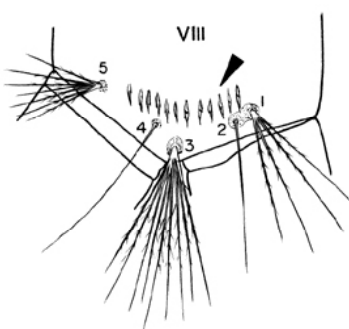
➞ To PLATE 47

PLATE 47

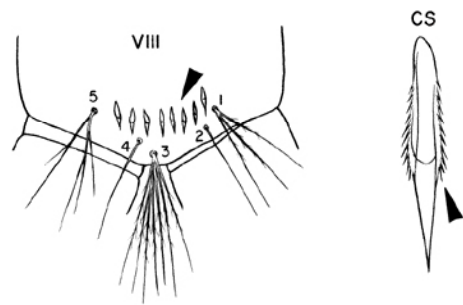
From PLATE 46: Seta 1-C long and tapered to a sharp point; antenna with at least a few spicules; seta 4-C inserted posterior to seta 6-C; seta 6-C with multiple aciculate branches

Comb scales with coarse basal fringe and 1 or 2 long strong denticles up to half as long as apical spine

Comb scales with fine fringe or, at most, inconspicuous denticles

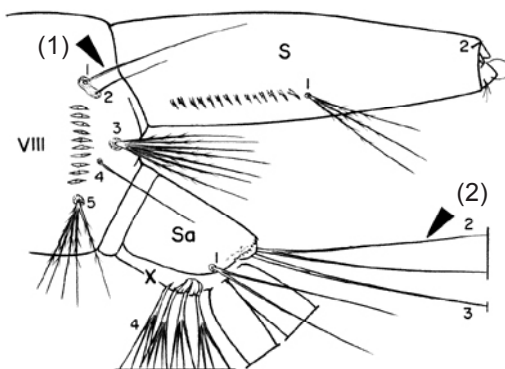


Do. vana

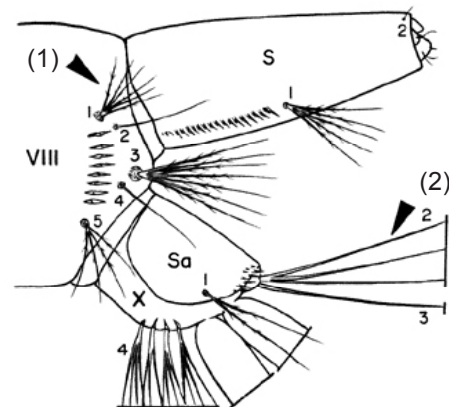


1. Seta 1-VIII single
2. Seta 2-X single or double

1. Seta 1-VIII branched
2. Seta 2-X with 2 or more branches



Do. mikrokopion



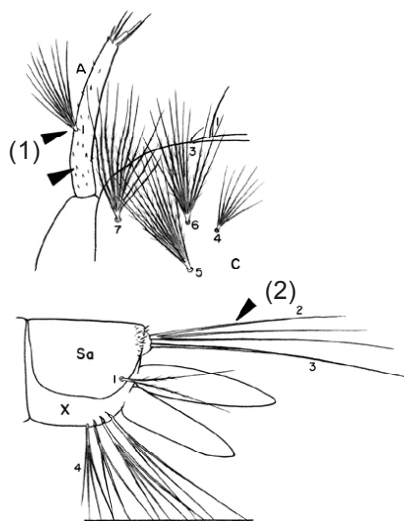
➡ To PLATE 48

From PLATE 47: Seta 1-VIII branched; seta 2-X with 2 or more branches

1. Antenna weakly spiculate, seta 1-A inserted on distal third of antenna
2. Seta 2-X usually with 4 or more branches

1. Antenna spiculate, seta 1-A inserted at or before middle of antenna
2. Seta 2-X with 2 or more branches

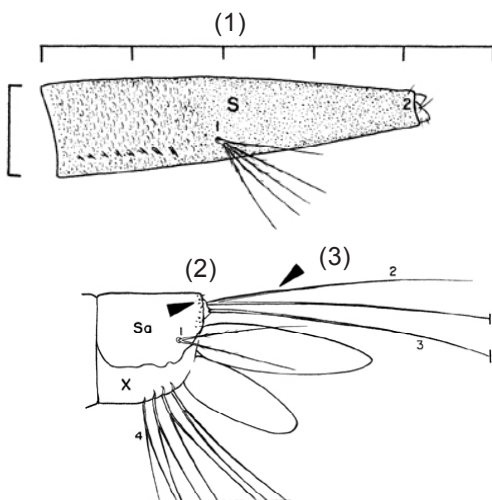
Specimens not available



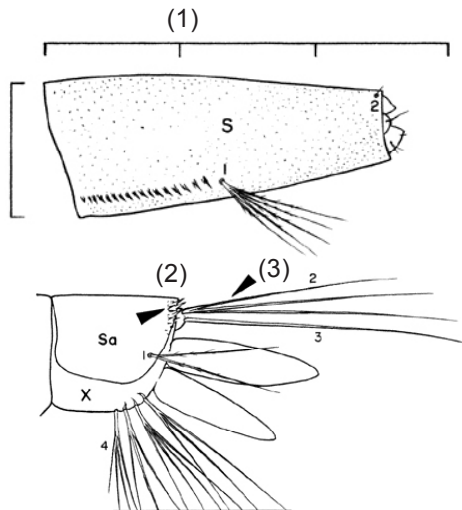
Do. inermis

1. Siphon long, 4 or more times width at base, moderately dark to darkly pigmented
2. Saddle with inconspicuous marginal spicules
3. Seta 2-X with 2 branches

1. Siphon shorter, equal to or less than 3 times width at base, lightly pigmented
2. Saddle with conspicuous marginal spicules
3. Seta 2-X with 3 or more branches



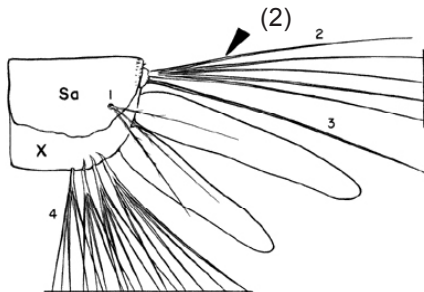
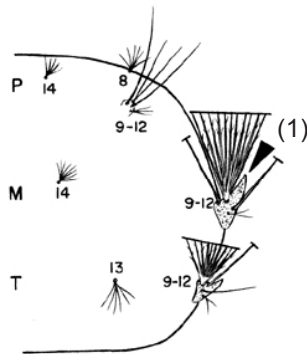
Do. harinasutai



➡ To PLATE 49

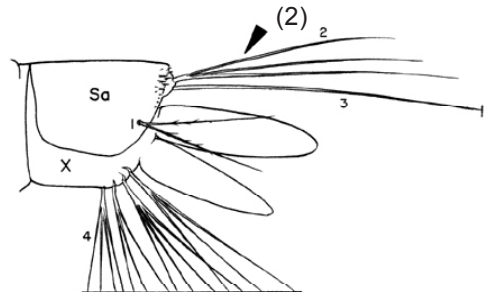
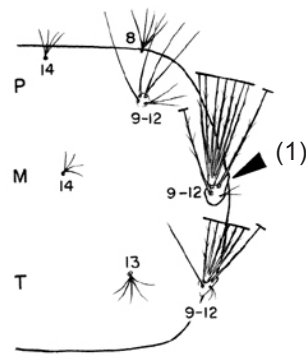
From PLATE 48: Siphon shorter, equal to or less than 3 times width at base, lightly pigmented; saddle with marginal spicules; seta 2-X with 3 or more branches

1. Lateral spine of plate bearing setae 9-12-M long and darkly pigmented
2. Seta 2-X with 5 branches



Do. species 1

1. Lateral spine of plate bearing setae 9-12-M short and lightly pigmented
2. Seta 2-X with fewer than 5 branches (usually 3)

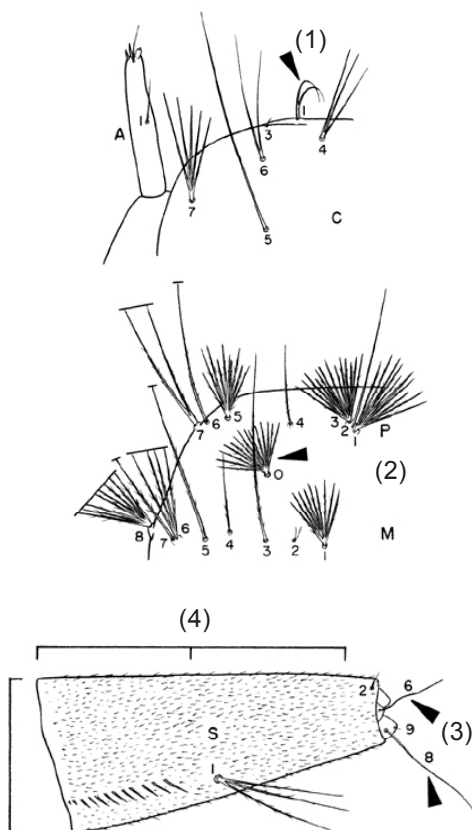


Do. albolateralis, Do. nipponica,
and Do. subnivea

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

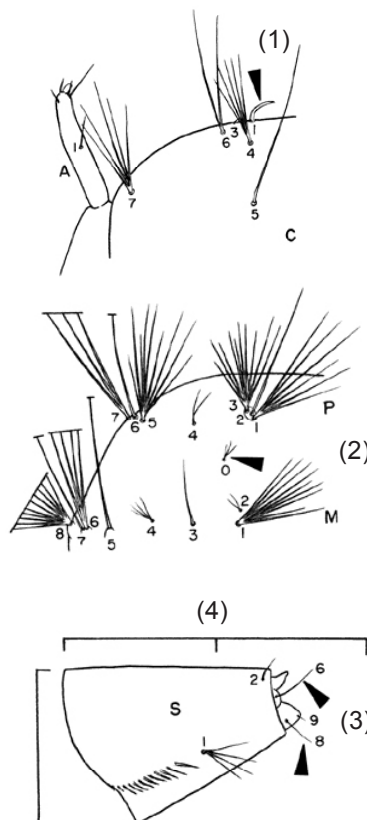
From PLATE 19: Seta 12-I present; seta 1-S branched; ventral brush on boss; saddle with long marginal spicules

1. Seta 1-C with 2 or more branches
2. Seta 0-P large, stellate, with 6 or more branches
3. Setae 6- and 8-S longer than apical diameter of siphon
4. Siphon long, 2 or more times width at base, surface spiculate



Fl. poicilia

1. Seta 1-C usually single
2. Seta 0-P small, not stellate, with 5 or fewer branches
3. Setae 6- and 8-S shorter than apical diameter of siphon
4. Siphon shorter than 2 times width at base, surface smooth



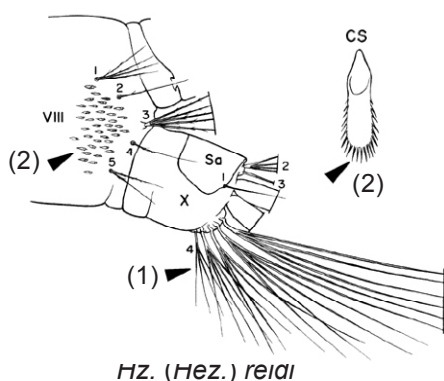
Fl. flavipennis^a
or species nr. *flavipennis*

^a*Finlaya flavipennis* in the Philippines and Malaysia has a dark siphon.

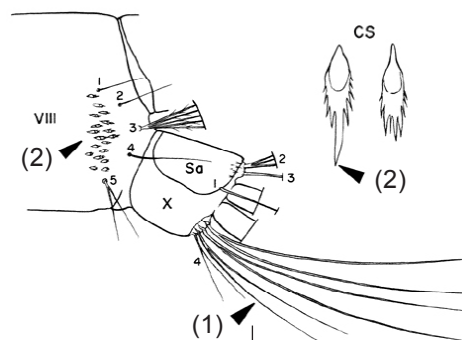
KEY TO THE SUBGENERA AND SPECIES OF GENUS *HEIZMANNIA* FOURTH-INSTAR LARVAE^a

From PLATE 2: Setae 4- and 7-C and usually 5-C with multiple branches; seta 6-C single or with 2 or 3 unequal branches, if more than 3 branches then; comb with mixture of spinelike and evenly fringed scales; each pecten spine usually with 1–3 stout basal denticles, occasionally simple

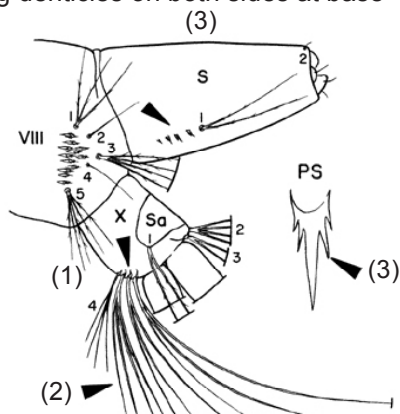
1. Individual setae of ventral brush with numerous branches
2. Comb with 30–60 scales, scales evenly fringed at apex



1. Individual setae of ventral brush with 1–3 branches, if more branches then comb with fewer scales
2. Comb with variable number of scales, scales variously developed

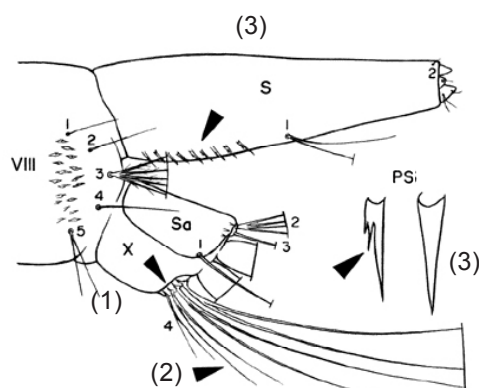


1. Ventral brush on grid with transverse bars only
2. Individual setae of ventral brush with 3 or more branches
3. Pecten with 4 or 5 small spines, each with strong denticles on both sides at base



HZ. (Mat.) achaetae and *HZ. (Mat.) catesi*

1. Ventral brush on grid with both lateral and transverse bars
2. Individual setae of ventral brush single or double
3. Pecten spines otherwise



➡ To PLATE 52

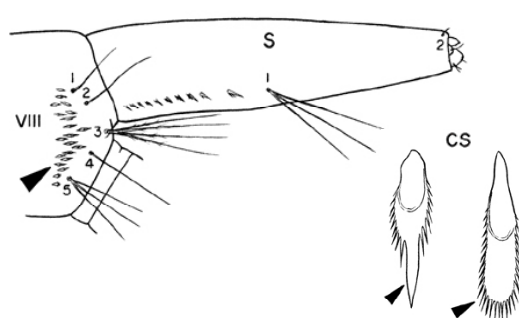
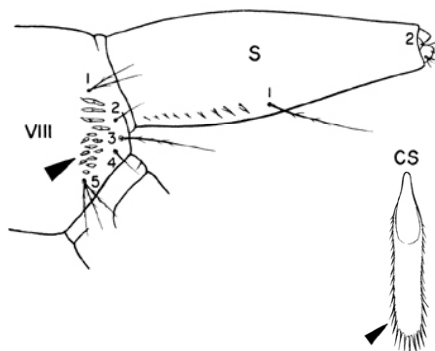
^aLarvae of *HZ. mattinglyi* and *HZ. scanloni* are unknown.

PLATE 52

From PLATE 51: Ventral brush on grid with both lateral and transverse bars; individual setae of ventral brush single or double; pecten spines otherwise

Comb scales rounded apically, evenly fringed at sides and apex

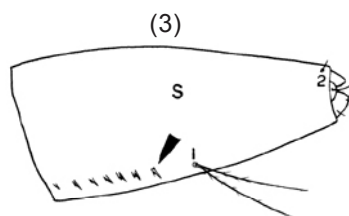
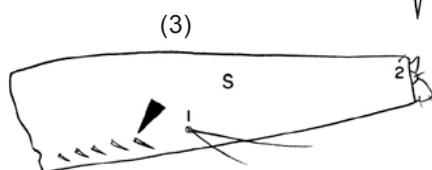
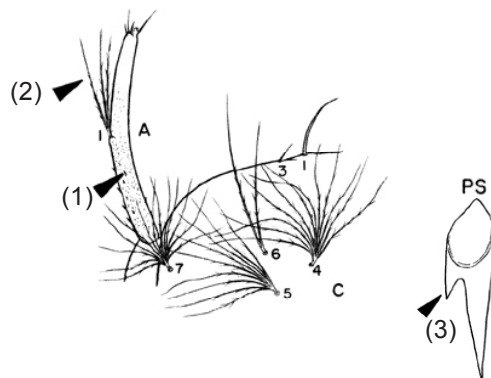
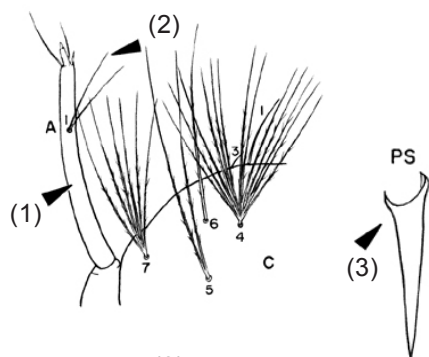
Comb with spinelike scales or with both apically rounded and pointed scales



➔ To PLATE 54

1. Antenna smooth, without spicules
2. Seta 1-A single or double
3. Distal pecten spines strong, at least 2 or 3 spines without basal denticles

1. Antenna with spicules
2. Seta 1-A with 2–4 branches
3. Distal pecten spines with strong basal denticles



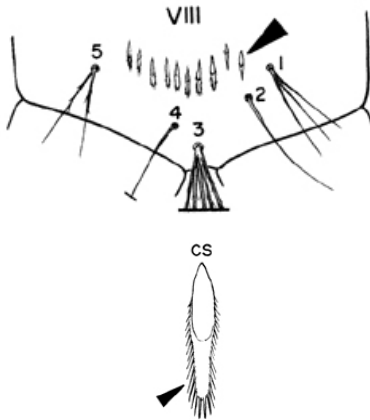
H. (Hez.) complex

➔ To PLATE 53

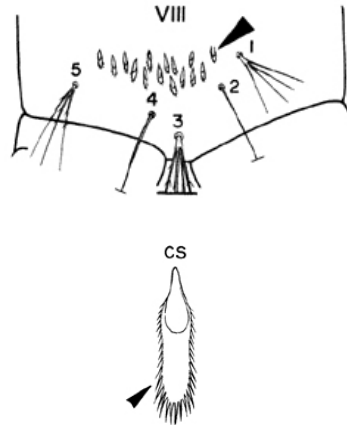
From PLATE 52: Antenna with spicules; seta 1-A with 2–4 branches; distal pecten spines with strong basal denticles

Comb with fewer than 14 scales, scales narrow

Comb with 14 or more scales, scales broader

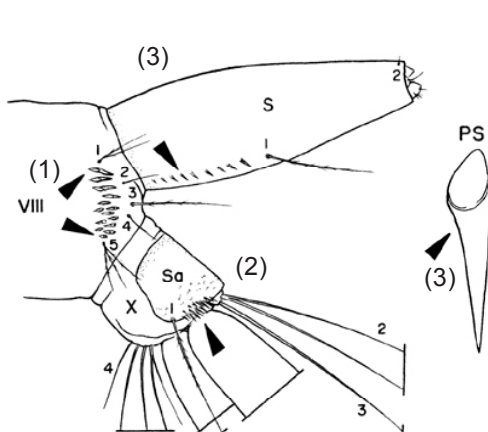


Hz. (Hez.) covelli

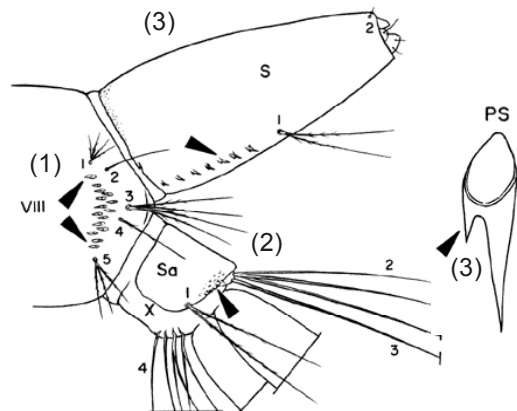


1. Dorsal scales of comb larger than ventral scales
2. Saddle with conspicuous spines on distal margin
3. Proximal pecten spines simple, distal spines with basal denticles

1. Comb scales more or less equal in size
2. Saddle with fine spicules on distal margin
3. All pecten spines with one or more strong basal denticles

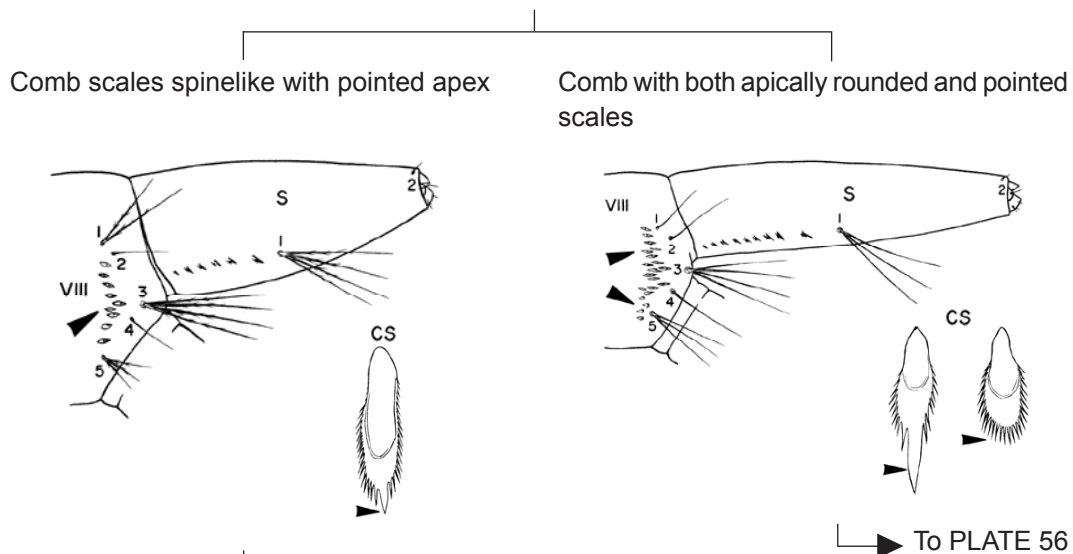


Hz. (Hez.) chengi



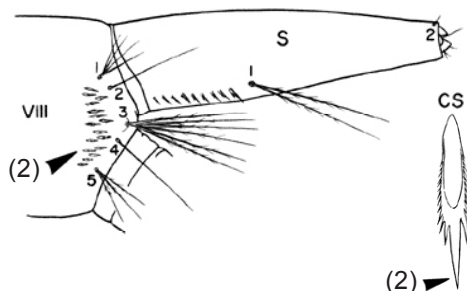
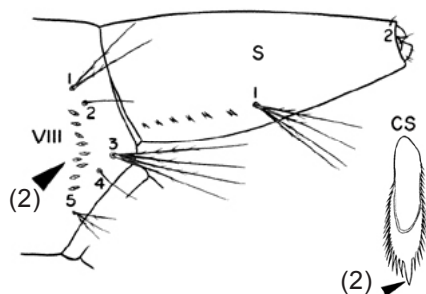
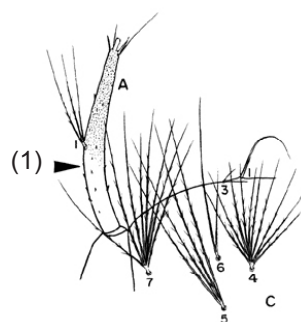
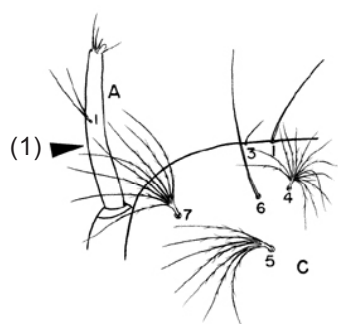
Hz. (Hez.) taiwanensis

From PLATE 52: Comb with spinelike scales or with both apically rounded and pointed scales



1. Antenna short, relatively broad and more or less straight
2. Comb scales with very short median apical spine

1. Antenna moderately long, relatively thin and distally curved
2. Comb scales with long median apical spine

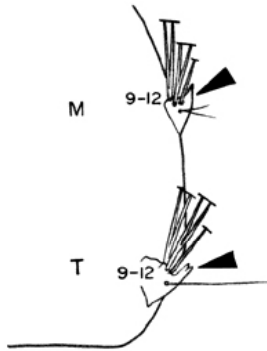


H. (Hez.) aureochaeta

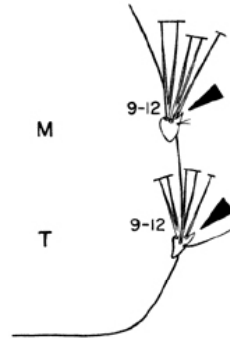
From PLATE 54: Antenna moderately long, relatively thin and distally curved; comb scales with long median apical spine

Plates bearing setae 9-12- M, T with large conspicuous spine

Plates bearing setae 9-12- M, T with small and inconspicuous spine



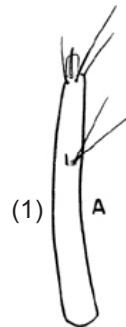
Hz. (Hez.) proxima



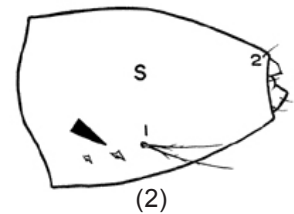
1. Antenna long, distinctly curved and spiculate
2. Pecten with 3-7 rather long spines with well-developed basal denticles

1. Antenna short, more or less straight and smooth
2. Pecten with fewer shorter spines

No specimens available



Hz. (Hez.) demeilloni

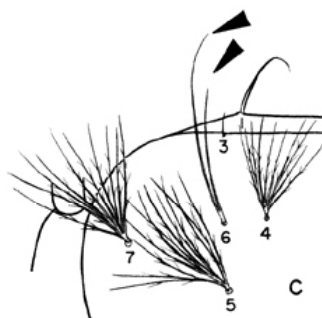
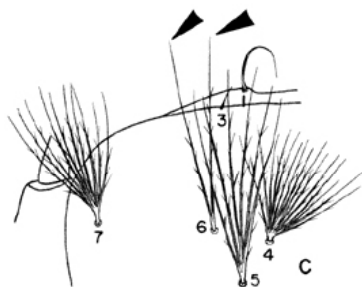


Hz. (Hez.) thelmae

From PLATE 54: Comb with both apically rounded and pointed scales

Seta 6-C with 2 or more branches of approximately same length

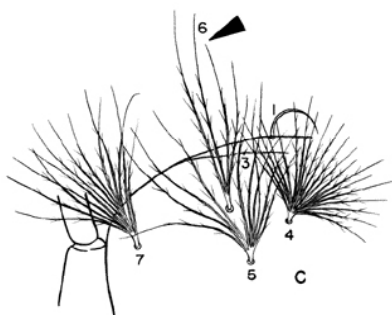
Seta 6-C single or double with one branch distinctly longer than the other



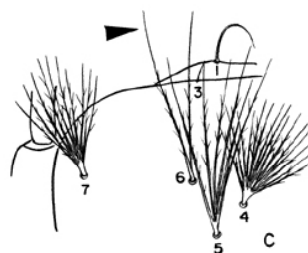
➤ To PLATE 57

Seta 6-C usually with 3 or more branches

Seta 6-C normally double, rarely triple



Hz. (Hez.) macdonaldi^a



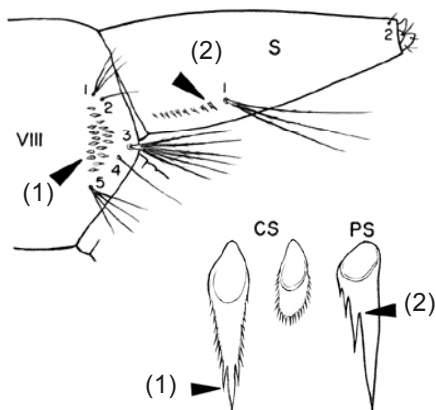
Hz. (Hez.) communis^b

^aThe siphon of *Hz. macdonaldi* is 5–8 times as long as wide at the base.

^bThe siphon of *Hz. communis* is less than 4 times as long as wide at the base, and is occasionally distinctly swollen.

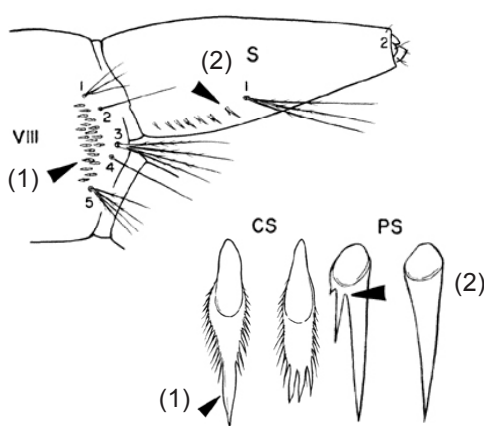
From PLATE 56: Seta 6-C single or double with one branch distinctly longer than the other

1. Comb scales not distinctly spinelike, all more or less evenly fringed
2. Most pecten spines with well-developed denticles arising beyond base

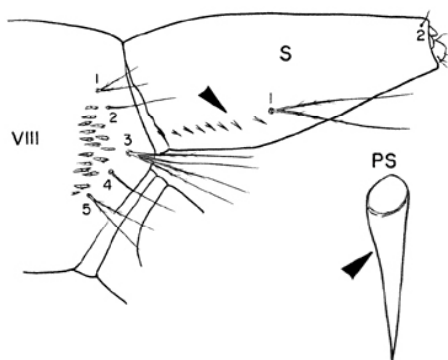


Hz. (Hez.) propinqua

1. Some comb scales distinctly spinelike, others more or less evenly fringed
2. Pecten spines with well-developed denticles at base or absent

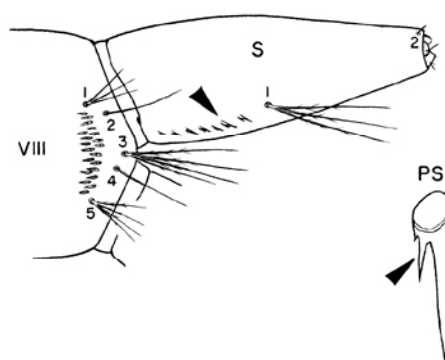


Pecten spines usually simple and smooth, 1 or 2 distal spines sometimes with inconspicuous basal denticles



Hz. (Hez.) scintillans

Pecten spines usually with at least 2 simple basal spines, 3 distal spines with basal denticles



Hz. (Hez.) persimilis