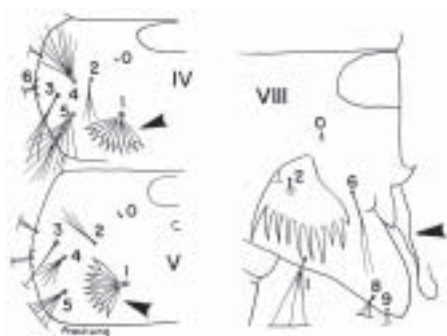


KEY TO THE SPECIES OF THE UMBROSUS GROUP FOURTH-INSTAR LARVAE

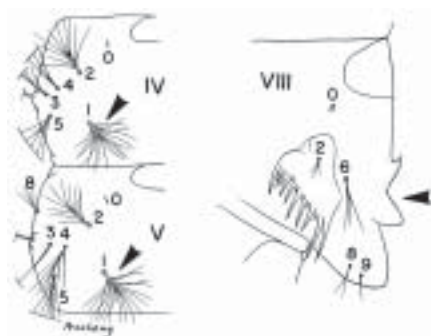
From PLATE 4: Dorsum of abdomen without palmate setae (seta 1), or only palmate on 2 or 3 segments

1. Setae 1-IV and 1-V palmate, with well developed leaflets
2. Median dorsal valve of spiracular apparatus on abdominal segment VIII with stigmal filament



An. umbrosus

1. Setae 1-IV and 1-V not palmate, but with filamentous branches
2. Median dorsal valve of spiracular apparatus on abdominal segment VIII without stigmal filament

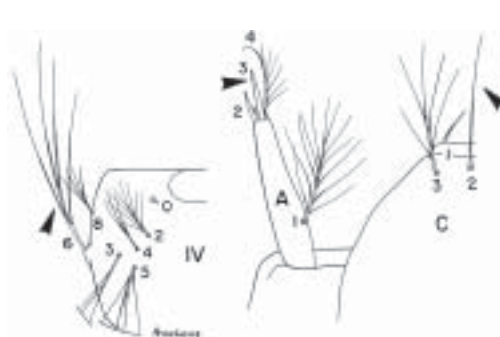


1. Seta 6-IV with 7 or more branches
2. Seta 2-C usually with 5 or more fine branches near tip
3. Seta 3-A with truncate tip



An. baezai

1. Seta 6-IV with fewer than 7 branches
2. Seta 2-C simple or with 4 or fewer branches near tip
3. Seta 3-A with pointed tip

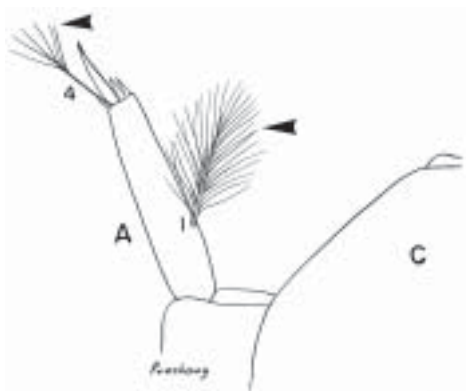


└─▶ To PLATE 12

PLATE 12

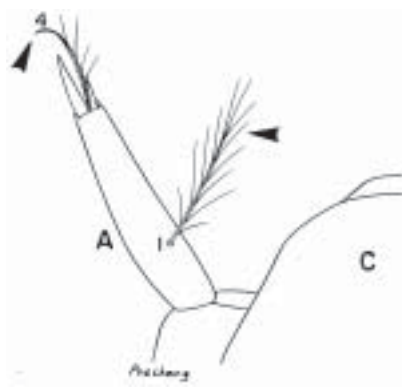
From PLATE 11: Seta 6-IV with fewer than 7 branches; seta 2-C simple or with 4 or fewer branches near tip; seta 3-A with pointed tip

1. Seta 1-A with 25 or more branches
2. Seta 4-A with simple fine branches, not hooked



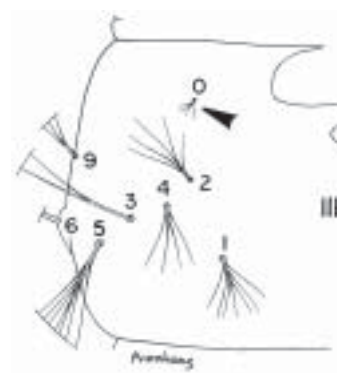
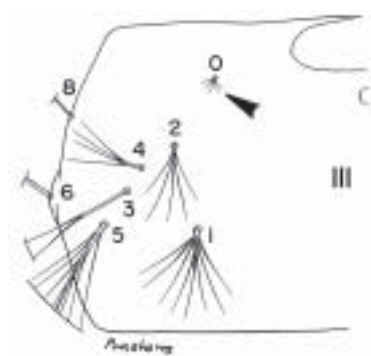
An. separatus

1. Seta 1-A usually with fewer than 20 branches
2. Seta 4-A with 1-2 stout, slightly hooked branches



An. roperi

- Seta 0-III with 5 or more branches
- Seta 0-III usually with fewer than 5 branches, at least on one side



An. letifer and *An. whartoni*

KEY TO THE SPECIES OF THE BARBIROSTRIS GROUP FOURTH-INSTAR LARVAE

From PLATE 4: Seta 1-P with 4 or more branches spreading from near base; seta 1-II palmate, usually pigmented

1. Median dorsal valve of spiracular apparatus on abdominal segment VIII with caudal, thumb-like stigmal process
2. Seta 9-C with 10-17 branches

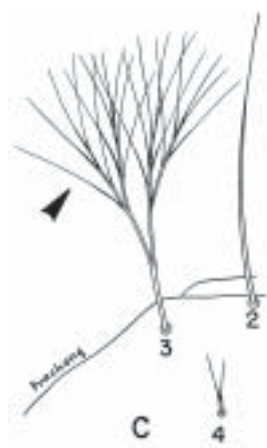
1. Median dorsal valve of spiracular apparatus on abdominal segment VIII with small clear caudal knob, no stigmal process
2. Seta 9-C with 5-11 branches



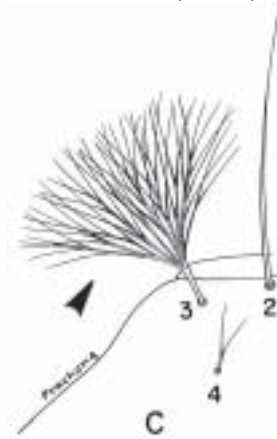
An. pollicaris

Seta 3-C with 12-36 thin attenuated branches, usually flexible and spread out

Seta 3-C with thick branches, usually stiff and crowded together (broom-like), and usually more numerous (19-95)



An. barbumbrosus

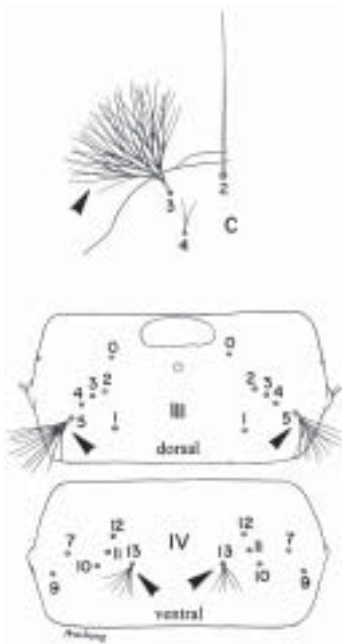


└─▶ To PLATE 14

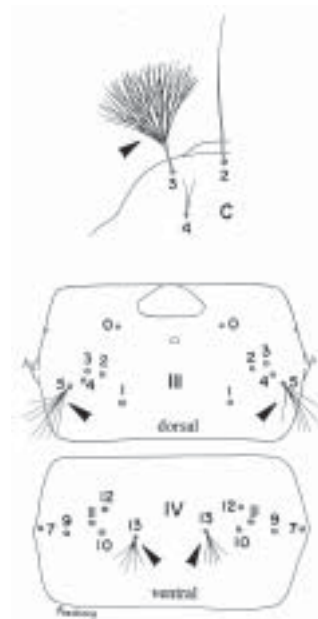
PLATE 14

From PLATE 13: Seta 3-C with thick branches, usually stiff and crowded together (broom-like), and usually more numerous (19-95)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Seta 3-C with 19-44 branches, rarely more than 40 2. Sum of branches of both seta 5-III plus those of both seta 13-IV usually total 25-38 (5-III+5-III) + (13-IV+13-IV) = 25-38 branches | <ol style="list-style-type: none"> 1. Seta 3-C with 30-95 branches, rarely fewer than 40 2. Sum of branches of both seta 5-III plus those of both seta 13-IV rarely more than 24 (5-III+5-III) + (13-IV+13-IV) = fewer than 25 branches |
|--|---|



An. hodgkini



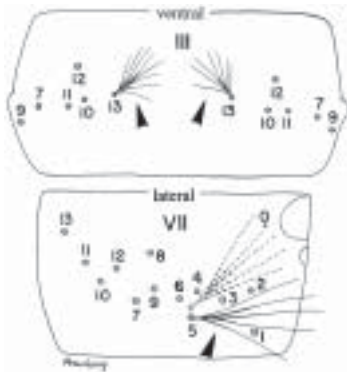
➡ To PLATE 15

PLATE 15

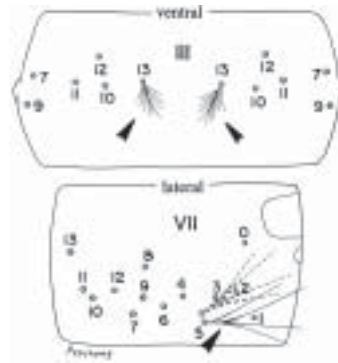
From PLATE 14: Seta 3-C with 30-95 branches, rarely fewer than 40; sum of branches of both seta 5-III plus those of both seta 13-IV rarely more than 24

Difference between sum of branches on both seta 13-III and that of both seta 5-VII is 0-10
 $(13\text{-III} + 13\text{-III}) - (5\text{-VII} + 5\text{-VII}) = 0\text{-}10$ branches

Difference between sum of branches of both seta 13-III and that of both seta 5-VII is 9-23
 $(13\text{-III} + 13\text{-III}) - (5\text{-VII} + 5\text{-VII}) = 9\text{-}23$ branches

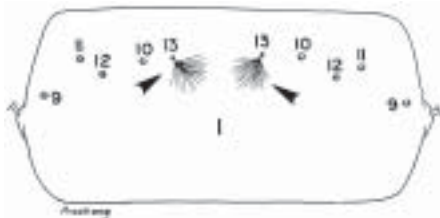


An. barbirostris^a
 (A, B, and C)

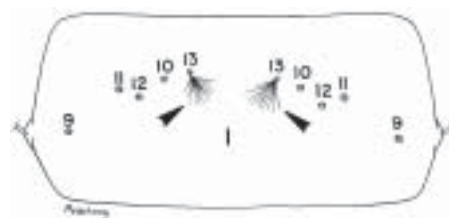


Sum of branches of both seta 13-I is 27-45
 $[(13\text{-I} + 13\text{-I}) = 27\text{-}45 \text{ branches}]$

Sum of branches of both seta 13-I is 18-27
 $[(13\text{-I} + 13\text{-I}) = 18\text{-}27 \text{ branches}]$



An. campestris^a



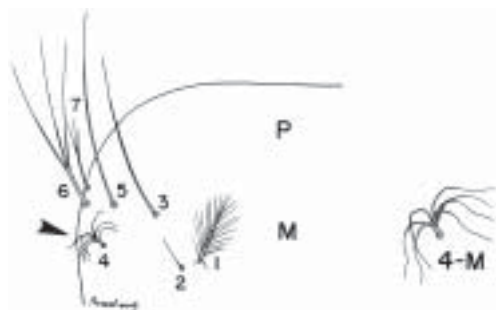
An. donaldi^a

^aThe larval stage is less reliable than the pupal stage for distinguishing these 3 species.

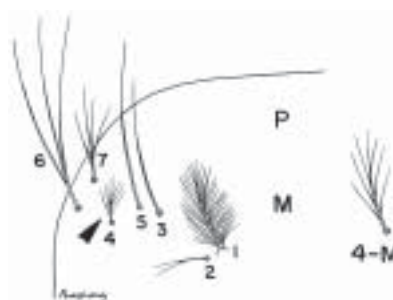
KEY TO THE SPECIES OF THE HYRCANUS GROUP FOURTH-INSTAR LARVAE

From PLATE 5: Seta 3-C divided from near base into 40 or more branches; seta 1-P simple or with 2-5 short branches on distal half

Seta 4-M small, with thin sinuate spreading branches arising close together at base

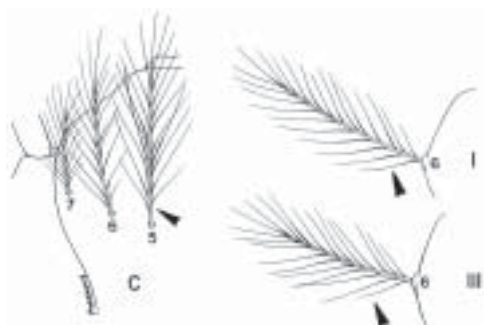


Seta 4-M with stiff more erect branches arising along central stem or close together near base



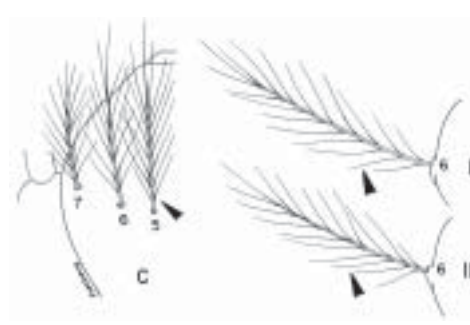
An. peditaeniatus

1. Seta 5-C with 17 or more branches
2. Seta 6-III usually with more than 20 branches
3. Seta 6-I usually with more than 21 branches



An. sinensis (A and B)

1. Seta 5-C with 11-18 branches
2. Seta 6-III rarely with more than 20 branches
3. Seta 6-I usually with fewer than 21 branches

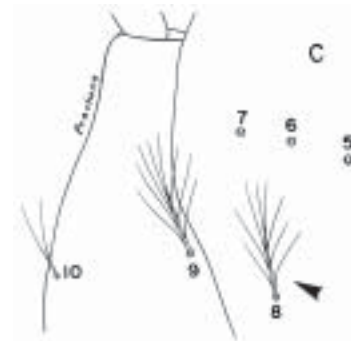
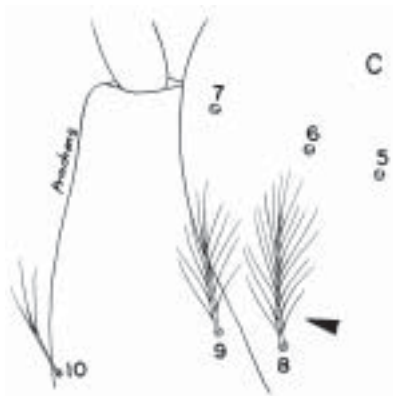


➡ To PLATE 17

PLATE 17

From PLATE 16: Seta 5-C with 11-18 branches; seta 6-III rarely with more than 20 branches; seta 6-I usually with fewer than 21 branches

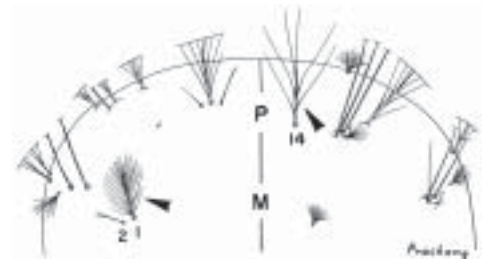
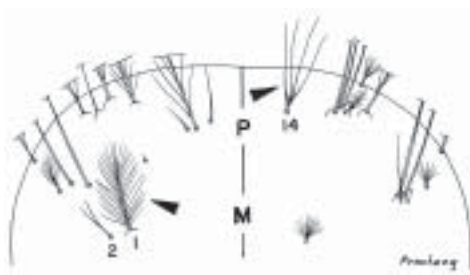
Seta 8-C with 12-24 branches (rarely 11 branches on *An. nitidus*) Seta 8-C with 5-11 branches



➡ To PLATE 18

1. Seta 14-P with 3-5, usually 3 or 4 branches
2. Seta 1-M with 26-38 branches, usually 28 or more

1. Seta 14-P with 5 or more (rarely 5) branches
2. Seta 1-M with fewer than 28 branches

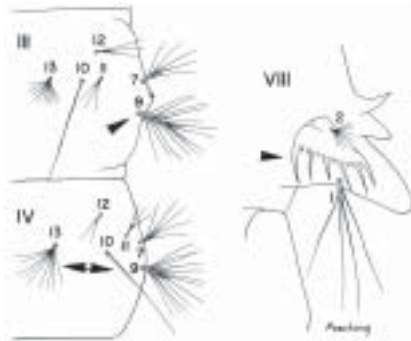


An. pursati

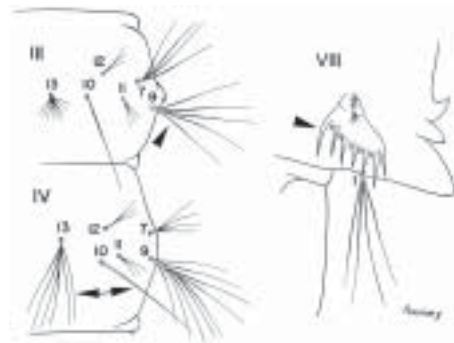
➡ To PLATE 19

From PLATE 17: Seta 8-C with 5-11 branches

1. Seta 9-III with 10-16 branches
2. Pecten seldom with more than 6 long teeth
3. Seta 13-IV short, with 6-12 branches, approximately 0.5 length of seta 10-IV

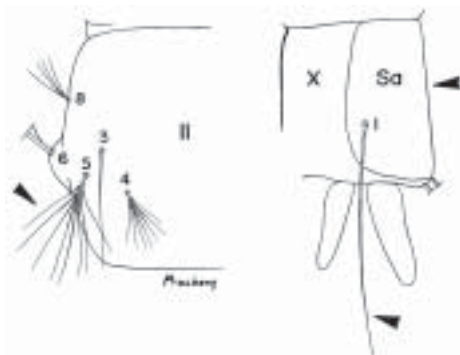


1. Seta 9-III with fewer than 10 branches
2. Pecten rarely with fewer than 7 long teeth
3. Seta 13-IV long, with 4-9 branches, approximately equal to or slightly less length of seta 10-IV



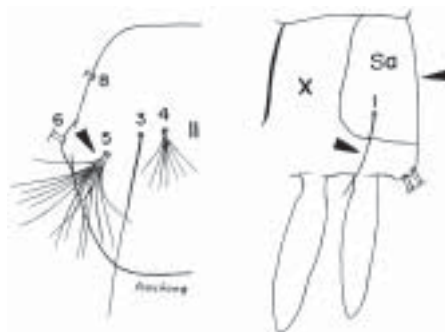
An. nitidus (in part)

1. Seta 5-II with 6-10 branches
2. Seta 1-X strong, longer than saddle



An. paraliae

1. Seta 5-II seldom with fewer than 12 branches
2. Seta 1-X usually weak and shorter than saddle

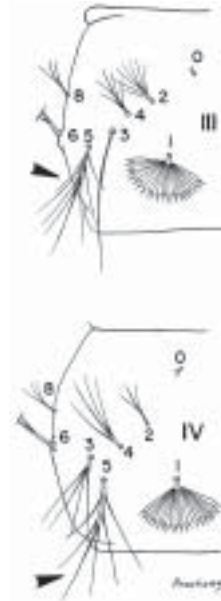


An. crawfordi
(A and B)

PLATE 19

From PLATE 17: Seta 14-P with 5 or more (rarely 5) branches; seta 1-M with fewer than 28 branches

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Seta 5-III with 4-8 branches 2. Seta 5-IV with 2-4 branches, usually 3 | <ol style="list-style-type: none"> 1. Seta 5-III with 7-17 branches 2. Seta 5-IV seldom with fewer than 5 branches |
|--|--|



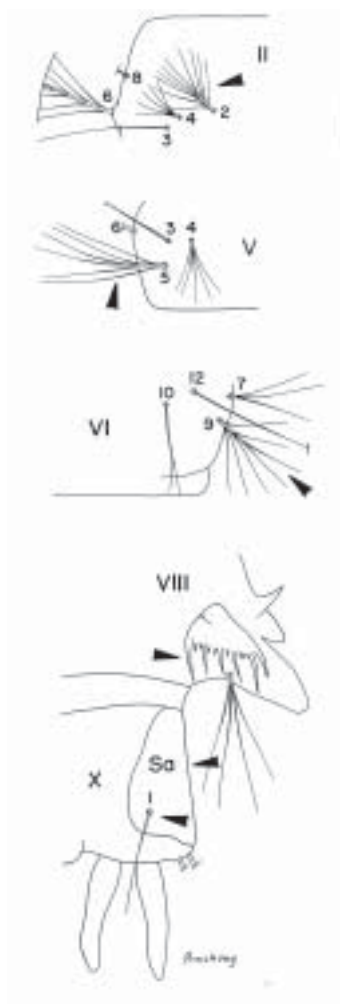
An. nigerrimus
(A and B)

└─▶ To PLATE 20

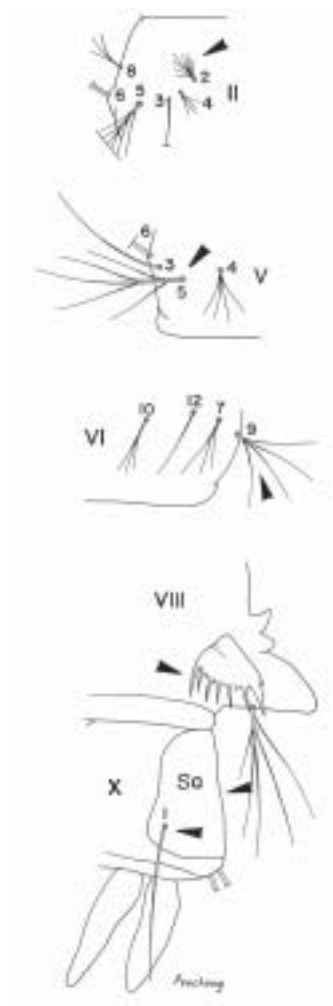
PLATE 20

From PLATE 19: Seta 5-III with 7-17 branches; seta 5-IV seldom with fewer than 5 branches

1. Seta 2-II with 8-14 branches
2. Seta 5-V with 5-9 branches
3. Seta 9-VI with 5-9 branches
4. Pecten seldom with more than 6 long teeth
5. Seta 1-X weak, rarely longer than saddle



An. nitidus (in part)



An. argyropus
(A and B)