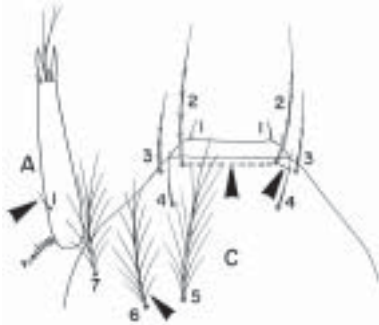


KEY TO THE SUBGENERA OF *ANOPHELES*  
FOURTH-INSTAR LARVAE

Characters: Siphon absent; abdominal seta 1 palmate, usually with well developed leaflets on most segments

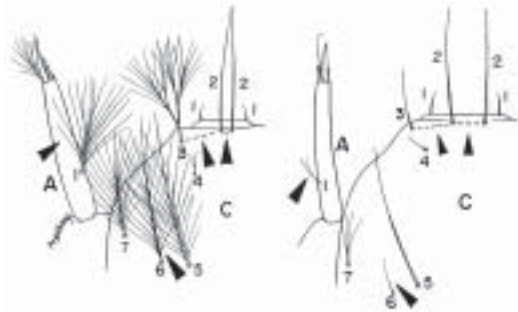
1. Distance between bases of seta 2-C wider than distance between bases of setae 2-C and 3-C on one side
2. Seta 1-A small and simple, rarely bifid or trifid; setae 5-, 6-, and 7-C long and branched



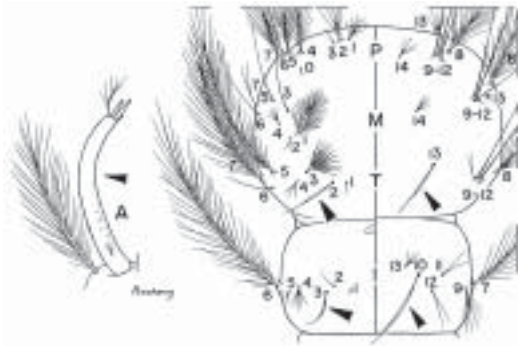
Subgenus *Cellia*

↳ To PLATE 21

1. Distance between bases of seta 2-C equal to or less than distance between bases of setae 2-C and 3-C on one side
2. Seta 1-A branched, often large, if simple or small then some of setae 5-, 6-, and 7-C short, simple, or with few branches

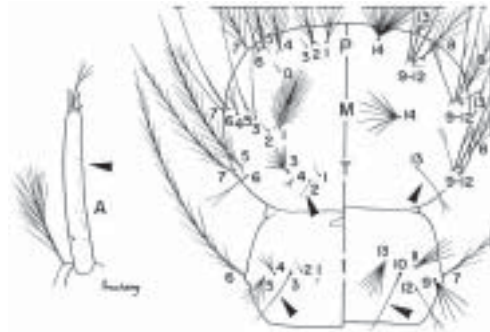


1. Antennal shaft markedly curved inward
2. Some single setae of thorax and abdomen flattened



Subgenus *Baimaia*  
*An. kyondawensis*

1. Antennal shaft straight or only slightly curved
2. Single setae of thorax and abdomen not flattened



Subgenus *Anopheles*

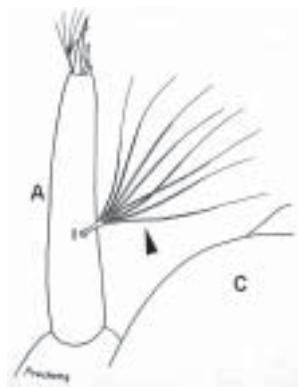
↳ To PLATE 2

KEY TO THE SERIES AND SPECIES GROUPS OF SUBGENUS  
*ANOPHELES* FOURTH-INSTAR LARVAE<sup>a</sup>

From PLATE 1: Antennal shaft straight or only slightly curved; single setae of thorax and abdomen not flattened

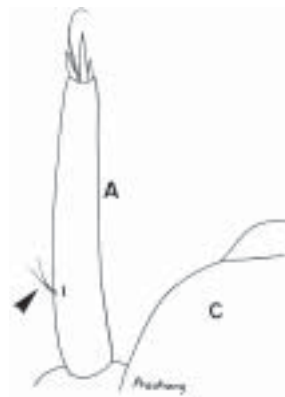
Seta 1-A with branches long, reaching beyond midpoint on antenna

Seta 1-A short, not reaching beyond midpoint on antenna



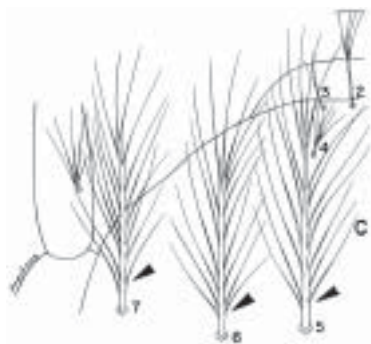
Myzorhynchus Series

↳ To PLATE 4



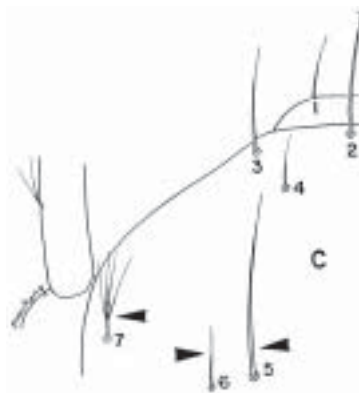
Setae 5-, 6-, and 7-C well developed and plumose

Setae 5-, 6-, and 7-C reduced, some or all, simple or with few short branches



Anopheles Series (in part)

↳ To PLATE 3 (Above)



↳ To PLATE 3 (Below)

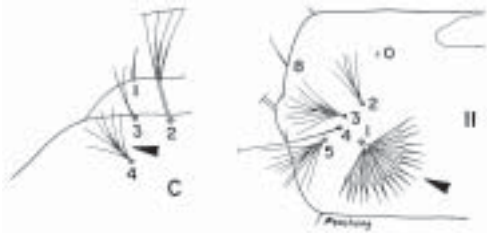
<sup>a</sup>Larva of *An. bulkleyi* is unknown.

PLATE 3

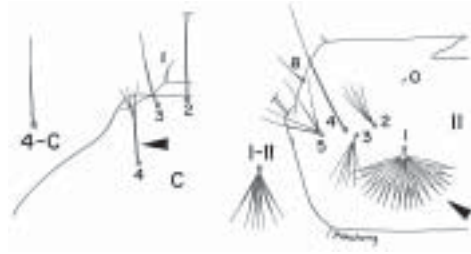
From PLATE 2: Setae 5-, 6-, and 7-C well developed and plumose

1. Seta 4-C branched from base
2. Abdominal segment II with fully developed palmate setae (small species in mountains and lowlands)

1. Seta 4-C simple or branched only on distal half
2. Abdominal segment II with or without fully developed palmate setae (large species on high elevation mountains)



Aitkenii Group



Lindesayi Group

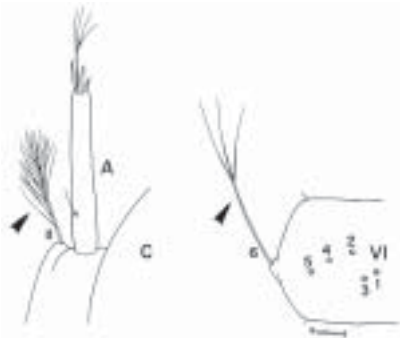
└─▶ To PLATE 8

└─▶ To PLATE 7

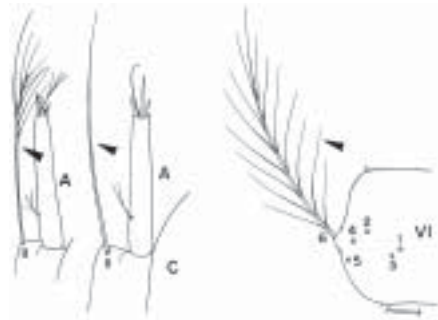
From PLATE 2: Setae 5-, 6-, and 7-C reduced, some or all simple or with few short branches

1. Seta 11-C shorter than antenna
2. Seta 6-VI simple or with 2-4 branches

1. Seta 11-C longer than antenna, simple or with 4-8 strong branches arising approximately midway
2. Seta 6-VI with more than 10 branches



Culiciformis Group  
*An. sintonoides*



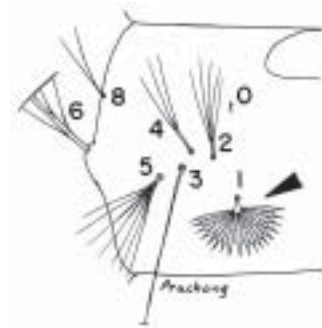
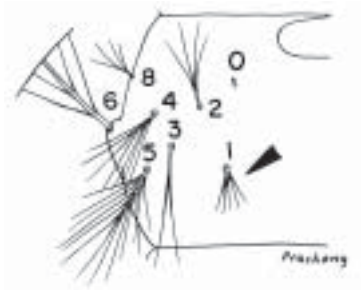
Lophoscelomyia Series  
Asiaticus Group

└─▶ To PLATE 6

From PLATE 2: Seta 1-A with branches long, reaching beyond midpoint on antenna

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

Dorsum of abdomen with fully developed palmate setae (seta 1) on at least 5 segments

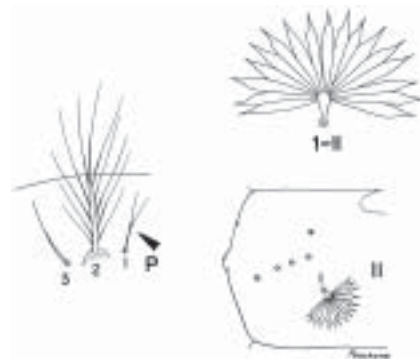
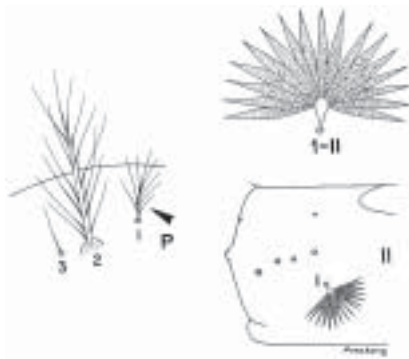


Umbrosus Group

↳ To PLATE 11

1. Seta 1-P with 4 or more branches spreading from near base
2. Seta 1-II palmate, usually pigmented<sup>a</sup>

1. Seta 1-P without branches on basal half, simple or with short branches on distal half
2. Seta 1-II palmate, unpigmented



Barbirostris Group

↳ To PLATE 13

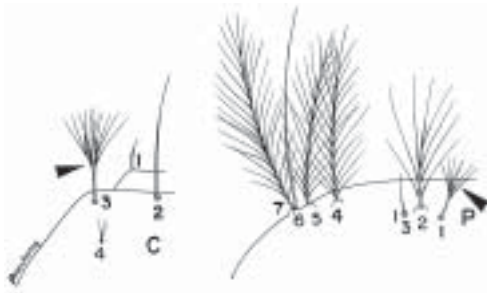
↳ To PLATE 5

<sup>a</sup>Except *An. barbumbrosus*.

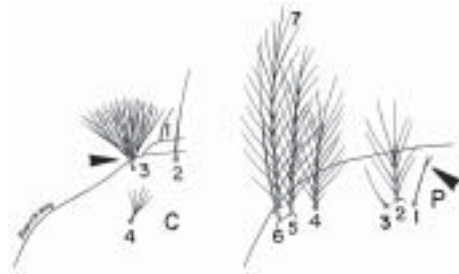
From PLATE 4: Seta 1-P without branches on basal half, simple or with short branches on distal half; seta 1-II palmate, unpigmented

1. Seta 3-C divided about half way from the base into 15 or fewer branches
2. Seta 1-P with 3-7 short, subequal branches arising from the middle to tip of the seta

1. Seta 3-C divided from near base into 40 or more branches
2. Seta 1-P simple or with 2-5 short branches on distal half



Albotaeenius Group  
*An. montanus*



Hyrcanus Group

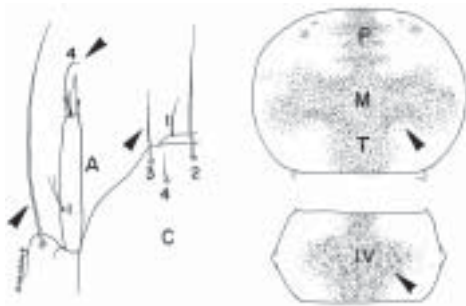
↳ To PLATE 16

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

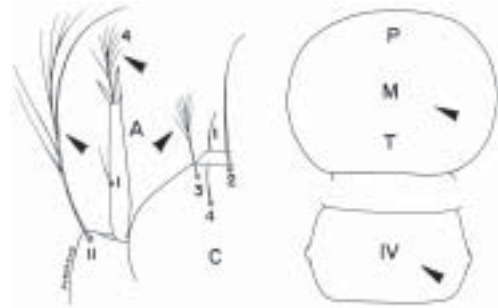
From PLATE 3: Seta 11-C longer than antenna, simple or with 4-8 strong branches arising approximately midway; seta 6-VI with more than 10 branches

1. Setae 4-A, 3-C, and 11-C usually simple
2. Dorsum of thorax and abdominal segments IV-V with large central black marks

1. Setae 4-A, 3-C, and 11-C branched
2. Dorsum of thorax and abdominal segments IV-V without central black marks



*An. asiaticus*



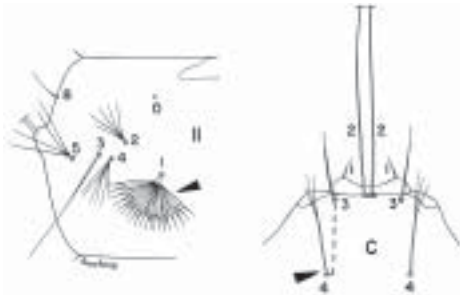
*An. interruptus*

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

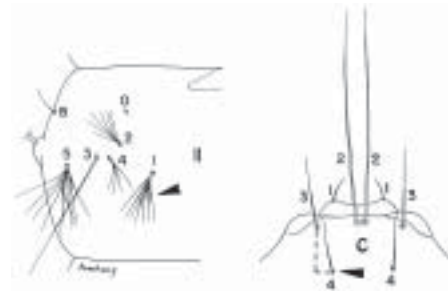
From PLATE 3: Seta 4-C simple or branched only on distal half; abdominal segment II with or without fully developed palmate setae

1. Abdominal segment II with fully developed palmate setae
2. Seta 4-C branched distally and longer than 3-C, inserted far posterior and slightly lateral to insertion of 3-C

1. Abdominal segment II with filamentous setae
2. Seta 4-C single or double and shorter than 3-C, inserted closer to and mesal to insertion of 3-C



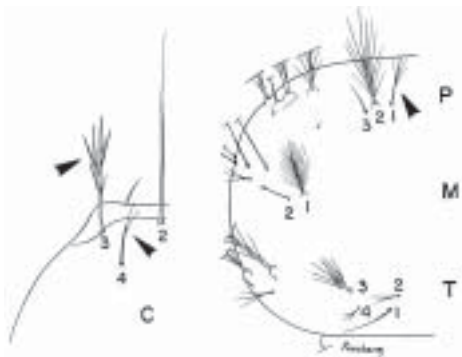
*An. lindesayi cameronensis*



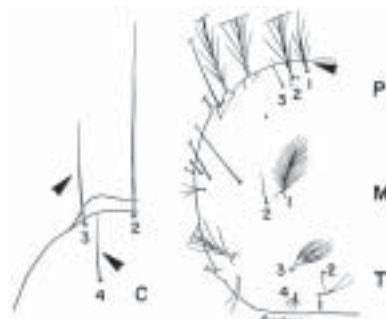
Gigas Subgroup

1. Seta 3-C branched
2. Seta 4-C usually bifid
3. Seta 1-P branched on distal half

1. Seta 3-C single
2. Seta 4-C usually single
3. Seta 1-P branched on basal half



n. sp. near *An. gigas*<sup>a</sup>



*An. baileyi*

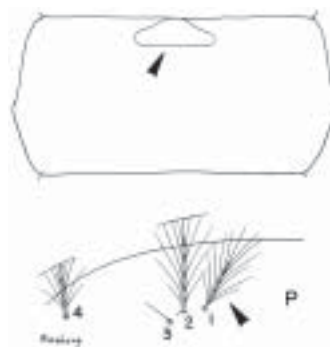
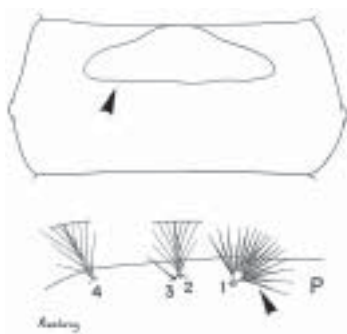
<sup>a</sup>In preparation, from Phu Kra Dung, Loei Province.

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

From PLATE 3: Seta 4-C branched from base; abdominal segment II with fully developed palmate setae

1. Anterior tergal plates on segments I-VII large, 0.66-0.75 width of segment
2. Seta 1-P fan-like with single branches and broad basal stem

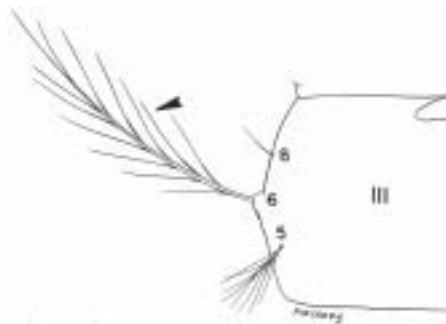
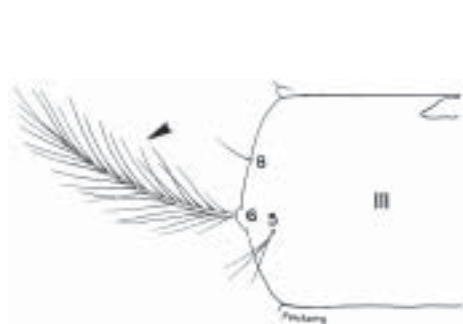
1. Anterior tergal plates on segments I-VII small, less than 0.50 width of segment
2. Seta 1-P not fan-like



*An. palmatus*

Seta 6-III with more than 15 branches

Seta 6-III with fewer than 15 branches



↳ To PLATE 9

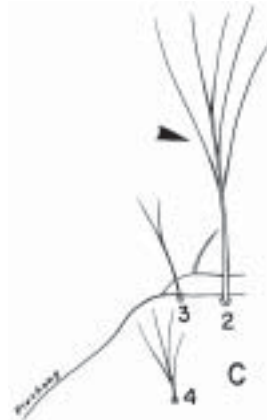
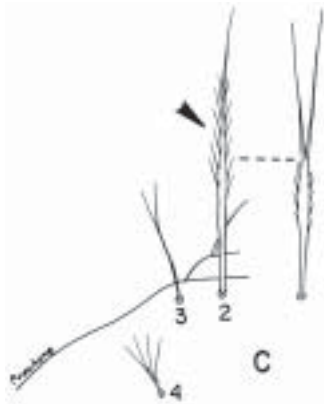
↳ To PLATE 10



From PLATE 8: Seta 6-III with more than 15 branches

Seta 2-C single or with 2 or 3 distal branches, with short barbs mesally

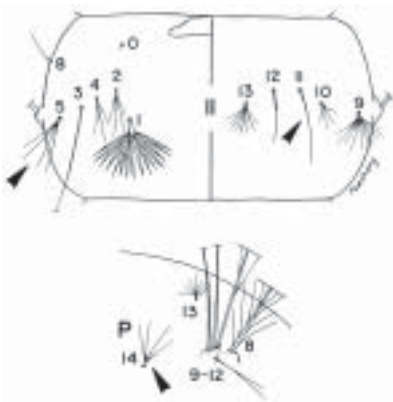
Seta 2-C with 2-14 distal branches, without short barbs mesally



*An. fragilis*

1. Seta 11-II simple
2. Seta 5-II with 3-6 branches
3. Seta 14-P with 3-5 branches, rarely 5 on both sides<sup>a</sup>

1. Seta 11-II forked or branched beyond base
2. Seta 5-II with 7 or more branches
3. Seta 14-P with 5-8 branches, rarely 5 on both sides



*An. aberrans*<sup>a</sup>



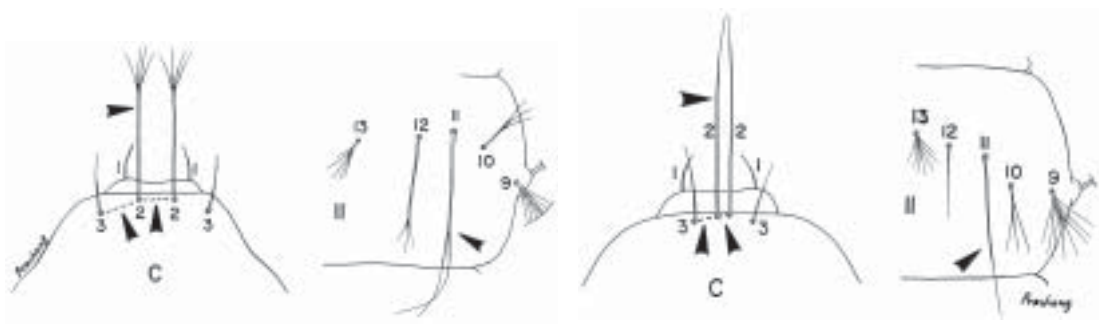
*An. bengalensis*

<sup>a</sup>Approximately 50% of larvae have the thorax and abdominal segments IV, V, and X paler than abdominal segments I-III, VI-VIII.

From PLATE 8: Seta 6-III with fewer than 15 branches

1. Seta 2-C with 2-5 branches originating beyond middle, bases separated by approximately same distance as bases of setae 2-C and 3-C on one side
2. Seta 11-II forked beyond base

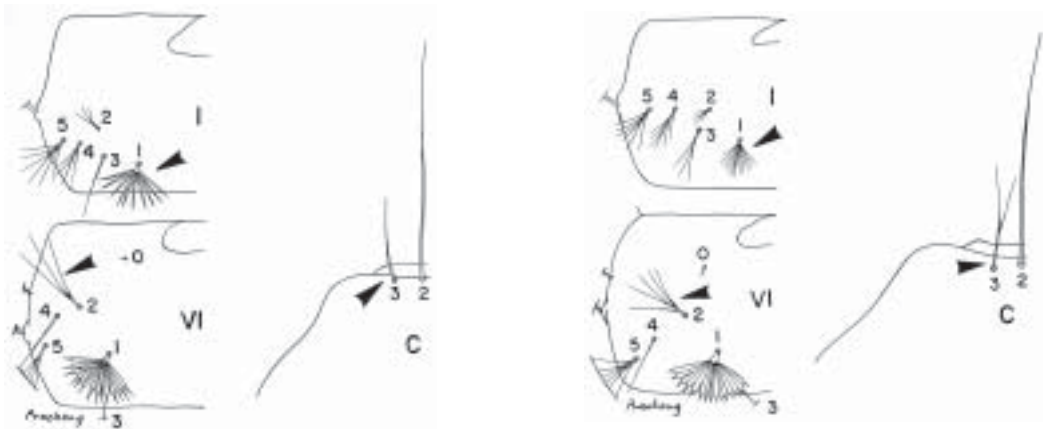
1. Seta 2-C simple, bases much closer than distance between bases of setae 2-C and 3-C on one side
2. Seta 11-II long and simple



*An. tigerti*

1. Seta 1-I palmate, with flattened leaflets
2. Seta 2-VI with 1-3 branches
3. Seta 3-C simple, rarely bifid at tip

1. Seta 1-I not palmate, with filamentous branches
2. Seta 2-VI with 4 or 5 branches
3. Seta 3-C with 2-4 branches



*An. insulaeflorum*

*An. stricklandi*