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KEY TO THE KNOWN LARVAE OF THE MOSQUITOES OF THE UNITED STATES.

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1. Larvae without a distinct air tube, the air hole with flaps but no elongated sides; floating at surface of water in a horizontal position. The malaria carriers. ........................................ Subfamily ANOPHELINE. 3

2. The last segment, beyond the air tube, with a ventral brush or rudder in the middle of the segment behind ................................................................. Subfamily CULICINE. 6

Last segment without a median brush, the hairs paired on the two sides, none on mid-ventral line ................................................ Subfamily SABETHINE.

Only one species, in leaves of pitcher plants in cold bogs.

Wyomyia smithii Coquillett.

3. Abdomen with plumose lateral hairs on the first three segments only; head with plumose hairs ............................................................................................ 4

Abdomen with plumose hairs to the sixth segment; head without plumose hairs. Lives in hollow trees. ................................................... Anopheles barbei Coquillett.

4. Lateral comb (on the eighth segment below the air hole) with one long lower tooth followed by four little ones. Anopheles franciscanus McCracken.

Lateral comb with one long lower tooth followed by three little ones.

Anopheles punctipennis Say.

5. Lateral comb with the lower long tooth followed by another as long or nearly so ........................................................................................................... 5

5. Lateral comb with the upper tooth short. Anopheles maculipennis Meigen.

Lateral comb with the upper tooth long. Anopheles crucians Wiedemann.

6. Mouth brush folded outward when not in use, not vibratile, used to seize prey only. Predaceous on other mosquito larvae ........................................... 7

Mouth brush folding inward, tufted, vibratile, usually continually in motion. Feed on microscopic organisms and vegetable detritus ......................... 9

7. A plate on the side on the eighth abdominal segment. Only one species, living in hollow trees and water barrels; beneficial.

Megarhinus portoricensis von Köder.

A patch of small scales on the side of the eighth abdominal segment. Living in temporary puddles; beneficial species ........................................... 8

8. Labial plate (mentum) of head with the teeth regular and alike.

Psorophora ciliata Fabricius.

Labial plate with the next to the basal tooth much enlarged.

Psorophora howardi Coquillett.

The generic names here used have been made uniform with those of Technical Series No. 11, of this Bureau, to facilitate cross reference. In case of discrepancy in specific names, the names employed in that publication are given in footnotes.
9. Antennae with tuft outwardly placed, in a notch, the apical part of antenna slender; air tube long, over three times as long as wide
10. Antennae with the tuft at or before the middle, the apical part not more slender; air tube usually shorter than three times its width
11. Lateral comb of the eighth segment a patch of spines
12. Lateral comb of the eighth segment a row of bars

Fig. 1.—Diagram of a mosquito larva (Culex salinarius), with names of the parts referred to in the key (original).

11. Anal segment with a row of hairs along the ventral line to base; an early spring species
12. Anal segment without any tufts in front of the ventral brush
13. Air tube with four paired tufts posteriorly outwardly, the subapical one moved sideways out of line
14. Air tube with four to ten paired tufts along the posterior line in a straight row, none displaced
13. Air tube over five times as long as wide, nearly straight, without marked tapering; living in fresh-water pools, rain barrels, etc.

*Culex salinarius* Coquillett.

Air tube less than five times as long as wide, tapering rather rapidly after the middle, somewhat fusiform in shape ..................................... 14

14. Air tube five times as long as wide, its pecten of 15 teeth; subdorsal hairs of third and fourth abdominal segments double. Introduced domestic mosquito ........................................... *Culex pipiens* Linnaeus.

Air tube four times as long as wide, its pecten of nine teeth; subdorsal hairs of the third and fourth abdominal segments single. Southern domestic mosquito .................................................. *Culex fatigans* Wiedemann.  

15. Air tube slightly expanded at tip. Summer swamp mosquito. The adult does not bite ............ *Culex territans* Walker.

Air tube evenly tapered to tip. Living in permanent pools all summer. ....................................................... *Culex tarsalis* Coquillett.


Bars of comb in an irregular row; skin minutely pilose. ................................................................. *Mochlostyrax erraticus* Dyar and Knab.  

17. Air tube strongly inflated; anal segment with a chitinous ring, pierced by a row of tufts along the ventral line .................................................. 18

Air tube not inflated; anal segment not ringed, or, if so, without tufts along the ventral line .................................................. 20

18. Antennæ long and prominent .................................................. 19

Antennæ less long, moderate only. Developing rapidly in rain puddles. ................................................................. *Grabhamia jamaicensis* Theobald.

19. Lateral comb of the eighth segment of six or seven nearly equal teeth.


Lateral comb of the eighth segment of five teeth, the upper and lower ones small ................................................................. *Janthinosoma varipes* Coquillett.

20. Antennæ inflated and bent. Rapidly developing in rain puddles. ................................................................. *Grabhamia discolor* Coquillett.

Antennæ not markedly inflated or bent ................................................................. 21


Head without such an angle .................................................. 22

22. Head with thick club-like hairs .................................................. Genus *Uranotenta*.  

Head with the usual fine hairs only .................................................. 23

23. Air tube without pecten; several chitinous plates on the abdominal segments. In hollow trees and rain barrels. *Pneumaculex signifer* Coquillett.

Air tube with pecten; abdominal segments without any plates before the air tube .................................................. 24

24. Air tube bottle-shaped, the outer half linear. .................................................. *Teneorhynchus perturbans* Walker.

Air tube regularly tapered .................................................. 25

25. Air tube with a row of hairs beyond the pecten, the pair of tufts at base of tube .................................................. 26

Air tube without a row of hairs; the tuft at or beyond the middle of the tube .................................................. 28

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1 *Culex pipiens* (in part). Not the true *fatigans* of India, but so called by Theobald. The proper name of our species appears to be *Culex cubensis* Bigot.

2 *Melanoconion atratus* (in part).

3 *Janthinosoma posticata*.

4 Three species differentiated by minute characters. Only one species is at all common. *Cra-notanxia sapphirina* Osten-Sacken.
26. Lower head tuft with three long hairs, the upper multiple. In permanent water, with a northern distribution. *Culiseta absconditis* Felt. Lower and upper head tufts alike, multiple. 27


28. Air tube with several hair tufts. Air tube with only one pair of tufts. 29


30. Air tube with the hair tuft within the pecten. Air tube with the hair tuft beyond the pecten. 31


32. Lateral comb of the eighth segment a few scales in a row. In swamps, with a southern distribution. *Aedes tormentor* Dyar and Knab,2 Lateral comb of the eighth segment a large patch of scales. *Ochlerotatus binaculatus* Coquillett.

33. Pecten of the air tube with detached teeth outwardly. Pecten of the air tube with all the teeth evenly spaced. 34

34. Air tube four times as long as wide; lateral comb of the eighth segment a patch of scales three rows deep. An early spring species. *Ochlerotatus abitchii* Felt. Air tube three times as long as wide or less; lateral comb of the eighth segment of few scales 35

35. Antennae enlarged basally; tuft rather beyond the middle. An early spring species. *Ochlerotatus aurifer* Coquillett. Antennae moderate only; the tuft before the middle. 36

36. The two rows of the pecten of the air tube approximate behind; dorsal plate of anal segment a saddle only. An early spring species. *Ochlerotatus impiger* Walker. The two rows of pecten well separated; dorsal plate more than half encircling the anal segment. 37


38. Comb scales few, in a single or irregularly single row. Comb scales more numerous to many, in a patch. 39

39. Anal segment ringed by the plate. Anal segment not completely ringed by the plate. 40

40. Anal gills moderate, normal. Anal gills very long with stent central trachea. In pools, not coming to the surface; distribution southern. *Ochlerotatus dupreii* Coquillett. 41

41. Pecten of air tube running about one-third; anal segment not longer than wide. An early spring species. *Ochlerotatus punctor* Kirby. Pecten of air tube running about one-half; anal segment longer than wide. *Aedes atlanticus* Dyar and Knab.2

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1 *Ochlerotatus cinereohorca*.
2 *Ochlerotatus serratus* (in part).
42. Scales of the comb of the eighth segment smooth, bluntly rounded. In
    hollow trees and rain barrels Download Ochlerotatus triseriatus Say.
    Scales of comb sole-shaped with trident apex. The yellow-fever mosquito.
    Stegomyia calopus Meigen.
43. Anal segment ringed by the plate Download 44
    Anal segment not completely ringed by the plate Download 50
44. Air tube over twice as long as wide, its pecten of 19 to 22 teeth Download 45
    Air tube twice as long as wide or less, its pecten of 12 to 14 teeth Download 48
45. Scales of the comb with the central spinule shorter than the body of the
    scale; pecten of the air tube of equal teeth Download 46
    Scales of the comb with central spinule as long as the body of the scale;
    pecten of the air tube longer outwardly Download 47
46. Air tube two and one-half times as long as wide; comb scales moderate.
    The Atlantic coast salt-marsh mosquito Download Ochlerotatus sollicitans Walker.
    Air tube three times as long as wide; comb scales long. In rain puddles
    with a southern distribution Download Ochlerotatus mitchelli Dyar.
47. Air tube pecten reaching to beyond the middle of the tube; lateral comb of
    21 scales in nearly three rows Download Ochlerotatus trivittatus Coquillett.
    Air tube pecten not reaching to the middle of the tube; comb of 17 scales
    in two imperfect rows. An early spring species.
    Ochlerotatus auroides Felt.
48. Scales of the comb feathered on the sides, with central thorn.
    Aedes infrirnatus Dyar and Knab. Download 49
    Scales of the comb evenly feathered; no central thorn Download 49
49. Air tube one and one-half times as long as wide; pecten teeth broadly elliptical.
    In puddles along the Atlantic seaboard Download Ochlerotatus damnosus Say.2
    Air tube twice as long as wide; pecten teeth narrowly elliptical. An early
    spring species Download Ochlerotatus inconspicuus Grossbeck.
50. Air tube four times as long as wide; trachea narrow, angled. An early
    spring species Download Ochlerotatus fitchii Felt and Young.
    Air tube three times as long as wide or less Download 51
51. Anal plate small; gills very large, sack like, spotted.
    Ochlerotatus varipalpus Coquillett.
    Anal plate over half encircling the segment; anal gills moderate or small. Download 52
52. Comb scales tapered, a single median spinule stouter or larger than the
    rest Download 53
    Comb scales bluntly rounded, the median spinule resembling the others Download 53
53. Both of the hair tufts on the front of the head multiple Download 54
    The lower head tuft single or double (rarely three) Download 56
54. Subdorsal prothoracic hairs single. In temporary pools.
    Ochlerotatus cannadensis Theobald. Download
    Ochlerotatus nigritarsis Coquillett.3
    Subdorsal prothoracic hairs multiple Download 55
55. Weakly colored; tufts of ventral brush short-stemmed. In puddles near
    the sea along the Atlantic coast Download Ochlerotatus cantator Coquillett.
    Darkly colored; tufts of the ventral brush long-stemmed. An early spring
    species in the Northwest Download Ochlerotatus pallatus Coquillett.
56. Lower head hair double (or triple) Download 57
    Lower head hair single Download 58

1 Ochlerotatus confirmatus (in part).
2 Ochlerotatus tenniscophorius.
3 Imperfectly known.
57. Comb scales with lateral spinules as long as the apical one. An early spring species, *Aedes grossbecki* Dyar and Knab.\(^1\)

Comb scales with the lateral spinules very short. An early spring species, *Ochlerotatus pretans* Grossbeck.


Anal gills very short, bud-shaped. The Pacific coast salt-marsh mosquito. *Aedes quayleii* Dyar and Knab.\(^2\)

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1 *Lepidoplatys squamiger* (in part).
2 *Ochlerotatus lativittatus*.

Approved:

James Wilson,
Secretary of Agriculture.

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