

KEY TO COMMON SPECIES OF DROSOPHILIDAE IN FAYETTEVILLE, ARKANSAS

by Frances E. Clayton

(These species have been collected on the campus of the University of Arkansas)

- Compiled from: Strickberger: Experiments In Genetics with *Drosophila*
Patterson and Mainland: The Drosophilidae of Mexico
Wheeler: Taxonomic Studies on the Drosophilidae, U. T. P. 4920:157-195
1. Postvertical bristles large 2
Postvertical bristles small 4
 2. Uppermost orbital bristle nearer to inner verticle than to lowermost orbital;
lower reclinate behind proclinate *Leucophenga varia*
Uppermost orbital bristle nearer to lowermost orbital than to inner vertical; lower reclinate in
front of proclinate 3
 3. Wings with a pattern to two large dark bands nearly crossing the blade
Chymomyza amoena
Wings clear except tip of wing is white *Chymomyza procnermis*
 4. One pair of large dorsocentral bristles *Mycodrosophila sp.*
Two or more pairs of dorsocentral bristles 5
 5. Never more than four rows of acrostichal hairs in frost of dorsocentrals
Acrostichals in six or more rows in front of anterior dorsocentrals
(Genus: *Drosophila*) 7
 6. Wings with a black spot at apex of third vein *Scaptomyza adusta*
Wings clear without such a spot *Scaptomyza pallida*
 7. Bristles and hairs on mesonotum do not each arise from a separate black spot 8
Bristles and hairs on mesonotum each arise from a separate dark spot, these spots
occasionally fused 29
 8. Abdominal segments with distinct markings (spots or bands) 9
Abdominal segments without distinct markings 10
 9. Markings on abdominal segments do not show interruption or notching in mid-dorsal line 10
Markings on abdomen have gap or notching in mid-dorsal line on two or more segments 16
 10. Acrostichal hairs in eight rows 11
Acrostichal hairs in six rows 13
 11. Thorax color yellow or yellowish 12
Thorax color brownish, gray, or black 13
 12. No sex combs on male front tarsi *D. ananassae*
Sex combs on male front tarsi *D. melanogaster/simulans*

13. Sex combs on male tarsi		14
No sex combs on male tarsi		19
14. Male sex comb covering about 2/3 of tarsal segment (8-10)	<i>D. algonquin</i>	
Male sex comb occupying only tip of tarsal segment (4-6 teeth)		15
15. Large teeth on sex comb	<i>D. affinis</i>	
Small teeth on sex comb	<i>D. athabasca</i>	
16. Acrostichal hairs in eight rows		17
Acrostichal hairs in six rows		21
17. Thorax and abdomen yellow or yellowish		18
Thorax and abdomen brown or brownish		20
18. Three distinct black stripes on mesonotum	<i>D. busckii</i>	
Mesonotum without black stripes		19
19. Crossveins or wings are clear	<i>D. duncani</i>	
Crossveins (posterior) are clouded	<i>D. immigrans</i>	
20. Arista with eleven branches, mesonotum light brown	<i>D. funebris</i>	
Arista with nine branches, mesonotum dark brown to black (ovipositor black)	<i>D. macrospina</i>	
21. Thorax color brownish gray, or black		22
Thorax color yellow or yellowish		23
22. Anterior scutellar bristles are convergent (arista with about nine branches)	<i>D. robusta</i>	
Anterior scutellar bristles are divergent; posterior crossvein narrowly clouded	<i>D. virilis</i>	
23. Wing distinctly spotted with 13 black spots	<i>D. guttifera</i>	
Wing without 13 spots		24
24. Anterior scutellar bristles divergent		25
Anterior scutellar bristles convergent		26
25. Dark brown spot in mid-dorsal line of abdominal segments	<i>D. tripunctata</i>	
Spots, if present, not in mid-dorsal line		26
26. Presutural acrostichal bristles present		27
Presutural acrostichal bristles absent		28
27. Presutural bristles inclined along body	<i>D. putrida</i>	
Presutural bristles upright	<i>D. testacea</i>	
28. About four spots on each of first four segments and two spots on posterior segments	<i>D. falleni</i>	
29. Coxae of front legs heavily darkened compared to remainder of same leg; testes white	<i>D. repleta</i>	
Coxae of front legs not darkened compared to remainder of same leg; testes yellow or light orange	<i>D. hydei</i>	