

To George Stryker Arnaud
with best wishes 1966 v
Paul H. Arnaud Jr.
1-VIII-1966

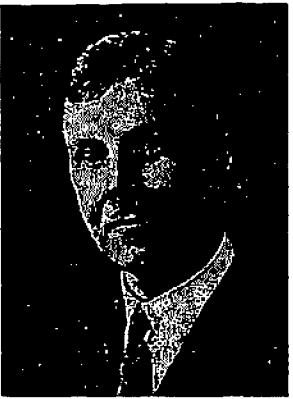
The Scientific Publications of Axel Leonard Melander (1878-1962), with a List of Names Proposed

By PAUL H. ARNAUD, JR.¹

California Academy of Sciences, San Francisco

LIST OF PUBLICATIONS

The scientific publications of Axel Leonard Melander (June 3, 1878 - August 14, 1962) totaling 168 titles were published over a period of 65 years. This article presents a list of these publications and also provides a list of the



AXEL LEONARD MELANDER
1878-1962

written with Charles T. Brues, and later revised with Frank M. Carpenter as third author (1954) are very widely used in Entomology. He was also the author of the very useful *Source Book of Biological Terms* (1937b, 1940d).

Dr. Melander also published extensively on both the taxonomy of Diptera and on economic entomology. The titles of these two fields are combined in the list of publications. They are arranged chronologically by year, with the economic articles following the taxonomic articles. Most of the taxonomic titles are either family or generic revisions. An asterisk * preceding the year of publication denotes that I have not seen a copy of the item listed (there are fourteen, primarily in the economic field, but these should not contain new names).

The year of publication is enclosed in parentheses when it differs from that given on the work or journal. There are two cases where these differ from dates previously accepted - paper 117 (1924d) and paper 131 (1928). Paper 117, "Studies in Asilidae (Diptera)", involves a December 1923 issue of *Psyche* which was not mailed until February, 1924 and only treats four new species. For paper 131 "Diptera. Fam. Empididae" published in *Genera Insectorum*, Fascicle 185, 1927 has been generally accepted as the year of publication for the more than 250 new species and genera proposed. As discussed in a note in *Pan-Pacific Entomologist*, volume 42, in

* It is with pleasure that I acknowledge the aid of Mrs. Mabel Melander and Mr. Ivar Melander of Riverside, California in supplying information and reprints on Dr. Melander's publications, as well as for their kind hospitality, on my visits to their home. Mr. Curtis W. Sabrosky, of the Entomology Research Service, U. S. Department of Agriculture, at the Smithsonian Institution, kindly made available the A. L. Melander and J. M. Aldrich bibliographical cards which were of importance towards making this list as complete as it is. To these individuals as well as to my colleagues in the Department of Entomology and Library, at the California Academy of Sciences, I extend my sincere thanks.

press, 1928 is the year of its publication, since February or March, 1928 is the time the fascicle was sent to the subscribers.

Herman T. Spieth has published an Obituary of Dr. Melander in the 1966 *ANNALS OF THE ENTOMOLOGICAL SOCIETY OF AMERICA*, pages 235-37.

1. 1900a.* A decade of Dolichopodidae. *Can. Entomol.* 32(5) : 134-44, figs. 1-15.
2. 1900b. New species of *Hygrocoleuthus* and *Dolichopus*, with remarks on *Hygrocoleuthus*. *Biol. Bull.* 1(3) : 123-48, figs. 1-22. (by A. L. Melander and C. T. Brues).
3. 1901a. Gynandromorphism in a new species of *Hilara*. *Psyche* 9(303) : 213-5, 2 figs.
4. 1901b. Empidae. P. 366-78. In Godman, F. D., and Salvin, O., eds., *Biologia Centrali-Americanana. Zoologia-Insecta-Diptera*. 1:1-378, pls. 1-6. (by W. M. Wheeler and A. L. Melander).
5. 1902a. A new silphid beetle from a simple insect-trap. *Psyche* 9(312) : 328-9.
6. 1902b. Notes on the Acroceridae. *Entomol. News* 13(6) : 178-82, 1 fig.
7. 1902c. A monograph of the North American Empididae. *Trans. Amer. Entomol. Soc.* 28(34) : 195-367, pls. V-IX.
8. 1902d. Two new Embiidae. *Biol. Bull.* 3(1/2) : 16-26, figs. 1-4.
9. 1902e. The nesting habits of *Anthidium*. *Biol. Bull.* 3(1/2) : 27-32, figs. 1-3.
10. 1902f. New species of *Gasteruption*, *Trigonalyas*, *Parnopes* and *Psammophila*. *Biol. Bull.* 3(1/2) : 33-42, pl. with figs. 1-7, 1 unnumbered fig. (by A. L. Melander and C. T. Brues).
11. 1903a. A life of one night. The story of the mayfly. *Home Ed.* 1(9) : 23-4, 1 fig.
12. 1903b. An interesting new *Chrysotus*. *Entomol. News* 14(3) : 72-5, 1 fig.
13. 1903c. Synopsis of the North American species of *Ammophila*. *Psyche* 10(324) : 156-64.
14. 1903d. Notes on North American Mutillidae, with descriptions of new species. *Trans. Amer. Entomol. Soc.* 29(4) : 291-330, pl. IV.
15. 1903e. A review of the North American species of *Nemotelus*. *Psyche* 10(325/326) : 171-83, pl. 4.
16. 1903f. Some additions to the carboniferous terrestrial arthropod fauna of Illinois. *J. Geol.* 11(2) : 178-98, pls. V-VII.
17. 1903g. Notes on the structure and development of *Embia texana*. *Biol. Bull.* 3(3) : 99-118, figs. 1-6.
18. 1903h. Guests and parasites of the burrowing bee *Halictus*. *Biol. Bull.* 5(1) : 1-27, figs. 1-7. (by A. L. Melander and C. T. Brues).

* In his card catalog of published papers, Dr. Melander listed his first published paper as appearing in 1899 with the title "Cities of the tree-tops", with the citation as "Home Ed." Robert H. Land, of the General Reference and Bibliography Division, The Library of Congress and his staff were unable to locate such a title in *Winchell's Quarterly* (an earlier name for Home Education) in the year 1899.

19. *1903i. The ant-eater of the Southwest. Home Ed. 1:25-27.
20. 1904a. Additional note on *Nemotelus*. *Psyche* 11(2) :33-4.
21. 1904b. Notes on North American Stratiomyidae. *Can. Entomol.* 36(1) :14-24; (2) :53-4.
22. *1904c. How does a wasp live at home? *Wash. State Coll. Bull.* 3(6) :[4 p.].
23. 1905a. The common house fly a dangerous pest. *Wash. Agr. Exp. Sta. Press Bull.*, p 1-7.
24. 1905b. The wormy apple. *Wash. Agr. Exp. Sta. Bull.* 68:1-16, 4 figs.
25. 1906a. Some new or little-known genera or Empididae. *Entomol. News* 17(10) :370-9.
26. 1906b. The chemical nature of some insect secretions. *Wis. Natur. Hist. Soc. Bull.* 4(½) :22-36. (by A. L. Melander and C. T. Brues).
27. 1906c. Two insect pests of the elm. *Wash. Agr. Exp. Sta. Bull.* 74:1-7, 1 fig.
28. 1906d. The codling moth in the Yakima Valley. *Wash. Agr. Exp. Sta. Bull.* 77:1-96, pls. 1-13, figs. 1-7. (by A. L. Melander and E. L. Jenne).
29. 1907a. A new *Apiocera* from South Africa. *Wis. Natur. Hist. Soc. Bull.* 5(2) :125-27, pl. I.
30. 1907b. Arsenate of lead for the codlin (sic!) moth. *Wash. State Hort. Ass. Rpt.* 3:89-98.
31. 1907c. The codling moth in Eastern Washington [With an account of the use of arsenate of lead for the codling moth.] *Wash. Agr. Exp. Sta. Bull.* 81:1-24, figs. 1-7. (by A. L. Melander and E. L. Jenne).
32. *1907d. The wheat straw worm. *Wash. Agr. Exp. Sta. Press Bull.* pp. 1-4. (by A. L. Melander and G. I. Reeves).
33. *1907e. Uses of insecticides to prevent wormy apples. *Better Fruit* 1(10) :7.
34. 1908a. XXV. Family Empididae. P. 218-27, figs. 87 & 88. In Williston, S. W., Manual of North American Diptera. Ed. 3, pp. 1-405, figs. 1-163. New Haven, Conn.
35. 1908b. Annihilating the codling moth. *Entomol. News* 19(1) :11-3.
36. *1908c. Experiment Station after the insects. *Wash., Ida., Ore. Farmer* 1908:12.
37. 1908d. Filling the calyx cup. *J. Econ. Entomol.* 1(3) :217-20.
38. 1908e. One spraying for the codling moth. *Wash. State Hort. Ass. Rep.* 4:70-89.
39. 1908f. Only one spraying needed for codlin (sic!) moth. *Better Fruit* 2(7) :11, 2 figs.
40. *1908g. Remarkable success in spraying the codling moth. *Fruit Grower* 19:5-6.
41. 1908h. Some potent facts about the codling moth. *Better Fruit* 2(11) :29.
42. 1908i. Spraying for the codling moth. *Wash. Agr. Exp. Sta. Pop. Bull.* 5:1-8, fig. 1. (pages not numbered).
43. 1908j. The codling moth in 1907. *Wash. Agr. Exp. Sta. Bull.* 86:1-19, figs. 1-5 (by A. L. Melander, assisted by R. E. Trumble).
44. 1908k. "The success of single spraying for codling moth." *Wash. State Hort. Ass. Rep.* 5:157-69.
45. 1908l. The sulphur-lime wash. *Wash. Agr. Exp. Sta. Pop. Bull.* 2:1-4. (pages not numbered).
46. 1908m. Value of first spraying for codling moth. *Better Fruit* 2(11) :26-7, 1 fig.
47. 1909a. Some notions about the spraying of trees. *Better Fruit* 3(10) :36-7, illus.
48. 1909b. The calyx cup must be filled. *J. Econ. Entomol.* 2(1) :67-78.
49. 1909c. The single spray for the codling moth. *Wash. Agr. Exp. Sta. Pop. Bull.* 17:1-4, figs. 1-3. (pages not numbered).
50. 1909d. The sulphur-lime wash. *Wash. Agr. Exp. Sta. Pop. Bull.* 16:1-4. (by A. L. Melander and R. K. Beattie). (pages not numbered).
51. 1909e. Washington State College spraying calendar for 1909. *Wash. Agr. Exp. Sta. Pop. Bull.* 13:1. (by R. K. Beattie and A. L. Melander).
52. 1910a. The genus *Tachydromia*. *Psyche* 17(2) :41-62, pl. 3.
53. 1910b. Characteristics and habits of the bud moth (*Tmetocera ocellana*). *Better Fruit* 4(10) :31-2.
54. 1910c. Combination spray. *Wash. State Hort. Ass. Rep.* 6:87-9.
55. 1910d. Mixing arsenate of lead and sulphur lime. *Better Fruit* 4(9) :47, 1 fig.
56. 1910e. Spraying calendar for 1910. *Wash. Agr. Exp. Sta. Pop. Bull.* 27:1. (by R. K. Beattie and A. L. Melander).
57. 1910f. Spraying for the codling moth. *Wash. Agr. Exp. Sta. Pop. Bull.* 30:1-4, figs. 1-3. (pages not numbered).
58. 1910g. The sulphur-lime wash. *Wash. Agr. Exp. Sta. Pop. Bull.* 28:1-4. (by A. L. Melander and R. K. Beattie) (pages not numbered).
59. 1911a. An analysis of western spraying methods. *Better Fruit* 6(4) :39-41, 1 fig.
60. 1911b. Some spraying experiences of 1910. *Wash. State Hort. Ass. Rep.* 7:152-8.
61. 1911c. Spraying calendar for 1911. *Better Fruit* 5(8) :47. (by R. K. Beattie and A. L. Melander).
62. *1911d. Spraying calendar for 1911. *Wash. Agr. Exp. Sta. Pop. Bull.* 33:1. (by R. K. Beattie and A. L. Melander).
63. 1911e. The control of the codling moth. *Wash. Agr. Exp. Sta. Bull.* 103:1-55.
64. 1912a. The dipterous genus *Bibio*. *Amer. Mus. Natur. Hist. Bull.* 31(27) :337-41, figs. 1-4.
65. *1912b. A Key to the Families of Insects, with Glossary. Mimeographed and bound. Privately printed by H. E. Waltar, pp. 1-80. (Dr. Melander's bibliographical card states "1912?").
66. 1912c. Insects affecting the grape, strawberry, currant, etc. *Better Fruit* 7(6) :15, 56-8, figs.
67. *1912d. Spraying calendar for 1912. *Wash. Agr. Exp. Sta. Pop. Bull.* 43:1. (by R. K. Beattie and A. L. Melander).
68. 1912e. The control of the codling moth. *Wash. Agr. Exp. Sta. Pop. Bull.* 45:1-8, figs. I-VI, 1 unnumbered fig. (pages not numbered).
69. 1913a. A synopsis of the dipterous groups Agromyzinae, Milichiinae, Ochthiphilinae and Geomyzinae. *J. N. Y. Entomol. Soc.* 21(3) :219-73; (4) :283-300, pl. VIII.
70. 1913b. A synopsis of the Sapromyzidae. *Psyche* 20(2) :57-82, pl. 3.
71. 1913c. Some acalyptate Muscidae. *Psyche* 20(5) :166-9, fig. 1.
72. 1913d. Note on two preoccupied muscid names. *Psyche* 20(6) :205.
73. *1903e. Spraying. *Fruit Grower & Farmer* 1913:51-3.
74. 1913f. Spraying calendar for 1913. Pests and diseases of the apple, pear, peach, plum, cherry, etc. *Wash. Agr. Exp. Sta. Pop. Bull.* 52:1. (by A. L. Melander and H. B. Humphrey).

Econ.

moth.
1-3.

Exp.
and

cal.
Bull.
).
1:41-

moth
1-2.
Hort.

lime.

Agr.
and

Agr.
not

Exp.
and

rods.

wash.

Fruit
ler).

Agr.
and

wash.

Mus.

with
ately
ter's

cur-

Agr.
and

ash.
, 1

pro-
my-
4):

the
5):

nes.

51-

and
ty,
(by

75. 1913g. The penetration system of orchard spraying. Wash. Agr. Exp. Sta. Bull. 106:1-40, figs. 1-15. (by A. L. Melander and R. K. Beattie).
76. 1914a. Can insects become resistant to sprays? J. Econ. Entomol. 7(2):167-72.
77. 1914b. Winter sprays: sulphur-lime wash and crude oil emulsions. Wash. Agr. Exp. Sta. Pop. Bull. 64:1-8 (pages not numbered).
78. 1914c. [The House Fly]. Treatment of manure. The Women's Municipal League of Boston Bull. 5(6):13-5.
79. 1915a. Key to the Families of North American Insects. An Introduction to the Classification of Insects. The Rumford Press, Concord, N. H., pp. i-vii, 1-140, pls. 1-18. (by C. T. Brues and A. L. Melander).
80. 1915b. Spraying calendar for 1915. Pests and diseases of the apple, pear, peach, plum, cherry, etc. Wash. Agr. Exp. Sta. Pop. Bull. 77:1. (by A. L. Melander and D. C. George).
81. 1915c. The San Jose scale insect (*Aspidiotus perniciosus*). Wash. Agr. Exp. Sta. Pop. Bull. 78:1-7, figs. 1-3. (pages not numbered).
82. 1915d. Varying susceptibility of the San José scale to sprays. J. Econ. Entomol. 8(5):475-81.
83. 1916a. The dipterous family Scatopsidae. Wash. Agr. Exp. Sta. Bull. 130:1-21, pls. I & II.
84. 1916b. The pronunciation of insect names. Bull. Brooklyn Entomol. Soc. 11(5):93-101.
85. 1916c. Controlling the Coulee cricket. Wash. Agr. Exp. Sta. Pop. Bull. 101:1-3. (pages not numbered).
86. 1916d. The control of fruit pests and diseases. Wash. Agr. Exp. Sta. Pop. Bull. 100:1-61. (by A. L. Melander and F. D. Heald).
87. 1917a. The dipterous families Sepsidae and Piophilidae. Wash. Agr. Exp. Sta. Bull. 143:1-103, 1 pl. (by A. L. Melander and A. Spuler).
88. 1917b. The Coulee cricket. Wash. Agr. Exp. Sta. Bull. 137:1-56, figs. I-XXXVII. (by A. L. Melander and M. A. Yothers).
89. *1917c. How, when and with what to spray. Wash. Farmer 40(9):8-14.
90. 1917d. Spray formulas for 1917. Better Fruit 11(9):5-7.
91. *1917e. The strawberry root weevil. Wash. State Hort. Ass. Rep. 13:[4 pp.].
92. 1917f. Winter sprays: lime sulphur sprays and crude oil emulsions. Wash. Agr. Exp. Sta. Pop. Bull. 107:1-12. (revision of Pop. Bull. No. 64).
93. 1918a. The dipterous genus *Drapetis* Meigen (Family Empididae). Ann. Entomol. Soc. Amer. 9(2):183-221.
94. 1918b. Potatoes. Increase the yield by: (1) better culture methods; (2) the control of disease; (3) the control of insect pests. Wash. Agr. Exp. Sta. Pop. Bull. 113:1. (by R. J. Barnett, F. D. Heald, and A. L. Melander).
95. 1918c. Spraying formulas for garden insects. Wash. State Coll. Ext. Bull. 35:1-16, figs. 1-17.
96. 1918d. Spraying formulas for orchard insects. Wash. State Coll. Ext. Bull. 39:1-16, figs.
97. 1919a. Spraying for the codling moth. Wash. State Coll. Ext. Bull. 54:1-4, figs. (pages not numbered).
98. 1919b. The wooly aphid of the apple, suggesting methods of control. Wash. State Coll. Ext. Bull. 61:1-4, 2 figs. (pages not numbered).
99. 1920a. Review of the nearctic Tetanoceridae. Ann. Entomol. Soc. Amer. 13(3):305-52, pl. XXX.
100. 1920b. Synopsis of the dipterous family Psilidae. Psyche 27(5):91-101.
101. 1920c. An index number for rating codling moth treatments. J. Econ. Entomol. 13(6):456-8.
102. 1921. First Annual Report of the Division of Apiculture to the Governor of Washington, March 1, 1921. Wash. State Coll., Pullman & Frank M. Lamborn, Olympia, Public Printer. 119 p., 32 figs.
103. 1922a. *Microsania*, a genus of the Platypzedidae. Psyche 29(2):43-8, 1 fig.
104. 1922b. A miniature photographic darkroom. Science 56(1454):536-7.
105. 1922c. The wooly aphid of the apple. Wash. State Hort. Ass. Proc. 17:83-6.
106. 1922d. Wooly aphids and its control. Wash. State Hort. Ass. Proc. 17:86-93.
107. 1923a. The genus *Cyrtopogon* (Diptera; Asilidae). Psyche 30(34):102-19.
108. 1923b. The genus *Lasiopogon* (Diptera, Asilidae). Psyche 30(5):135-45.
109. 1923c. Collecting insects on Mount Rainier. Smithson. Inst. Annu. Rep. 1921(2694):415-22, pls. 1-9.
110. 1923d. Conclusions drawn from spraying experiences on San Jose scale. Wash. State Hort. Ass. Proc. 18:79-83.
111. 1923e. Handling red spider menace. Better Fruit 17(12):5-6, 1 fig.
112. 1923f. Red spiders. Wash. State Hort. Ass. Proc. 18:77-9.
113. 1923g. Tolerance of San Jose scale to sprays. Wash. Agr. Exp. Sta. Bull. 174:1-52, pl.
114. 1924a. New species of *Platypalpus* occurring in New England. Boston Soc. Natur. Hist. Occas. Papers 5:83-7.
115. 1924b. Review of the dipterous family Piophilidae. Psyche 31(2):78-86.
116. 1924c. A revision of the two-winged flies of the family Clusiidae Proc. U. S. Nat. Mus. 64(11):1-54, pls. 1-4. (by A. L. Melander and N. G. Argo).
117. 1924d. Studies in Asilidae (Diptera). Psyche (1923) 30(6):207-19.
118. 1924e. How shall we spray next year? Wash. State Hort. Ass. Proc. 19:45-50.
119. 1924f. Oil sprays. Their preparation and use for insect control. Wash. Agr. Exp. Sta. Bull. 184:1-31. (by A. L. Melander, A. Spuler and E. L. Green).
120. 1924g. Sprays for San Jose scale and leaf-roller. Wash. Agr. Exp. Sta. Pop. Bull. 126:1-14, 1 fig.
- *121. 1925a. How shall we spray next year? Ida. State Hort. Ass. [Proc.] 1925:102-10.
122. 1925b. Making oil sprays. Wash. State Coll. Ext. Bull. 129:1-10, 1 fig.
123. 1925c. Notes on oil sprays. J. Econ. Entomol. 18(5):681-6.
124. 1925d. The preparation of oil sprays. Wash. State Hort. Ass. Proc. 20:89-93.
- (1925e). Second Annual Report of the Division of Apiculture to the Governor of Washington, March 1, 1921, to April 1, 1922. Wash. State Coll., Pullman & Frank M. Lamborn, Olympia, Public Printer. (1924) 7 pp. (Bibliographical card from Melander library states "Printed Feb. 1925").
- (1925f). Third Annual Report of the Division of Apiculture to the Governor of Washington,

- April 1, 1923. Wash. State Coll., Pullman & Frank M. Lamborn, Olympia, Public Printer. (1924) 8 pp. (Bibliographical card from Melander library states "Printed Feb. 1925").
127. (1925g). Fourth Annual Report of the Division of Apiculture to the Governor of Washington. April, 1924. Wash. State Coll., Pullman & Frank M. Lamborn, Olympia, Public Printer. (1924) 8 pp. (Bibliographical card from Melander library states "Printed Feb. 1925").
128. 1925h. Fifth Annual Report of the Division of Apiculture to the Governor of Washington, April 1, 1924—March 31, 1925. Wash. State Coll., Pullman & Frank M. Lamborn, Olympia, Public Printer. 10 p.
129. 1926a. Investigations on oil sprays. Wash. Agr. Exp. Sta. Bull. 197:1-19. (by A. L. Melander, A. Spuler and E. L. Green).
130. 1926b. Poisoned baits for strawberry root weevil. Wash. Agr. Exp. Sta. Bull. 199:1-22, figs. 1-8. (by A. L. Melander and A. Spuler).
131. (1928). Diptera. Fam. Empididae. Pp. 1-434, pls. 1-8 in Wytzman, P., Genera Insectorum, (1927) fasc. 185.
132. 1929a. The selection of family names. Fourth Internat'l. Cong. Entomol. 2:657-63.
133. *1929b. Science Survey Biology. The College of the City of New York, Photo-lith Edition, pp. 1-81, figs. 1-35. (A. L. Melander, Editor).
134. 1931. Science Survey Biology. Second Edition. The College of the City of New York, offset, pp. i-vii, 1-81, figs. 1-35. (A. L. Melander, Editor).
135. 1932. Classification of Insects. A key to the Known Families of Insects and Other Terrestrial Arthropods. Harvard Univ., Mus. Compar. Zool. Bull. 73:1-672, figs. 1-1121. (by C. T. Brues and A. L. Melander). (Reissued photo-offset, Jan. 1946).
136. (1933a). The entomological publications of C. W. Johnson. Psyche (1932) 39(4):87-99.
137. 1933b. [Science service radio talks presented over the Columbia Broadcasting System.] Fighting insects with powder and lead. Sci. Monthly 36(2): 168-72.
138. 1934a. The Source of Biological Terms. The College of the City of New York, p. 1-32. (Compiled by A. L. Melander; Varityped by Evelyn Spieth).
139. 1934b. John Merton Aldrich. Psyche 41(3):133-49, pl. 6.
140. 1937a. William Morton Wheeler. Ann. Entomol. Soc. Amer. 30(3):433-7, pl. (by A. L. Melander and F. M. Carpenter).
141. 1937b. Source Book of Biological Terms. Comet Press, Brooklyn, pp. i-v, 1-157.
142. 1937c. [Your new books.] Idaho, a Guide in Word and Picture. Natur. Hist. 40(1):453.
143. 1938. A new empidid fly in Hawaii. Proc. Hawaiian Entomol. Soc. 10(1):57.
144. 1940a. The dipterous genus *Microphorus*. I. Phylogeny (Diptera, Empididae). Pan-Pacific Entomol. 16(1):5-11, figs. 1-11, pl. I.
145. 1940b. The dipterous genus *Microphorus*. II. Taxonomy (Diptera, Empididae). Pan-Pacific Entomol. 16(2):59-69.
146. 1940c. *Hilara granditarsis*, a balloon-maker. Psyche 47(3):55-6.
147. 1940d. Source Book of Biological Terms. (Second Edition). Comet Press, Brooklyn. pp. i-v, 1-157.
148. 1940e. [Book reviews.] The Golden Throng. By Edwin Way Teale. Illustrated with 85 photographs by the author. Dodd, Mead and Co., New York, 1940. 208 pp. \$3.00. Bird-Lore 42(6):558-9.
149. 1945. Ten new species of Empididae (Diptera). Psyche 52(3):79-87.
150. 1946a. The nearctic species of *Iteaphila* and *Apalocnemis*. Bull. Brooklyn Entomol. Soc. 41(2): 29-40.
151. 1946b. *Apolysis*, *Oligodrane* and *Empidideicus* in America. Ann. Entomol. Soc. Amer. 39(3):451-95, pl. I.
152. 1946c. Synopsis of *Coptophlebia*, with descriptions of new American and Oriental species (Diptera, Empididae). Pan-Pacific Entomol. 22(3):105-17, figs. 1-6.
153. (1947a). Some fossil Diptera from Florissant, Colorado. Psyche (1946) 53(3):43-9, pl. II.
154. 1947b. Synopsis of the Hemerodromiinae (Diptera, Empididae). J. N. Y. Entomol. Soc. 55(4): 237-73, pls. XXII-XXIII.
155. 1949a. A report on some Miocene Diptera from Florissant, Colorado. Amer. Mus. Natur. Hist. Amer. Mus. Novitates 1407:1-63, figs. 2-71.
156. 1949b. The status of the genus *Antineura* Melander (Diptera, Agromyzidae). Entomol. News 60(3):57-60.
157. 1950a. *Aphoebanthus* and its relatives *Epacmus* and *Eucressia*. (Diptera: Bombyliidae). Ann. Entomol. Soc. Amer. 43(1): 1-45, pls. I & II.
158. 1950b. Taxonomic notes on some smaller Bombyliidae (Diptera). Pan-Pacific Entomol. 26(3): 139-44; (4):145-56.
159. 1950c. A simple microfilm reader and the microfilm process. Science 111(2883):338.
160. (1952a). The North American species of Tethinidae (Diptera). J. N. Y. Entomol. Soc. (1951) 59(4):187-212, pl. VII.
161. (1952b). *Drapetis insularis*, a new species from Oahu (Diptera: Empididae). Proc. Hawaiian Entomol. Soc. (1951) 14(3):419-20.
162. 1952c. The American species of Trixoscelidae. J. N. Y. Entomol. Soc. 60(1):37-52.
163. 1954. Classification of Insects. Keys to the Living and Extinct Families of Insects, and to the Living Families of Other Terrestrial Arthropods. (Revised ed.). Harvard Univ., Mus. Compar. Zool. Bull. 108:i-v, 1-917 figs. 1-1219. (by C. T. Brues, A. L. Melander and F. M. Carpenter).
164. 1955a. Charles Thomas Brues, II. 1879-1955. Ann. Entomol. Soc. Amer. 48(5):422-3, 1 fig.
165. 1955b. C. T. Brues, Zoologist. Science 122(3172): 679. (by A. L. Melander and F. M. Carpenter).
166. 1960. A new species of *Charadrodromia* from California (Diptera: Empididae). Wasmann J. Biol. 18(1):129-30.
167. (1961). The genus *Mythicomyia* (Diptera: Bombyliidae). Wasmann J. Biol. (1960) 18(2):161-261. (Date of publication, March 23, 1961).
168. 1965. Family Empididae (Empidae, Hybotidae). P. 446-81. In Stone, A. et al., eds., U. S. Dept. Agr., A. R. S., Agr. Handb. No. 276:i-v, 1-1696.

LIST OF NAMES PROPOSED

On the following pages are listed in their original form and printed in bold-faced type, the 1,118 names proposed by Dr. Melander for both fossil and recent Insecta and Arachnida. These include 41 genera and 5 subgenera, and 988 species, 2 subspecies, 52 varieties,

and 1 form, and 2 new generic names and 27 new species names proposed for preoccupied names. No attempt has been made to list names of higher categories.^a

The fossil Insecta and Arachnida proposed by Melander cover four orders, and are of Carboniferous and Miocene origin. These consist of 6 new genera and 75 new species.

The recent Insecta proposed by Melander cover four orders. The species names consist of 2 Embioptera, 1 Coleoptera, 35 Hymenoptera in 9 families, and 957 Diptera in 26 families. The 42 new genera and subgenera are all in the order Diptera.

The year-subletter-page method of citation has been employed. A small "f" indicates that one or more figures or photographs were included with the description. Names are to be attributed solely to A. L. Melander unless a dual authorship is indicated within parentheses.

The types of most of the recent species of Diptera described by A. L. Melander are deposited in the United States National Museum where his extensive collection and library are deposited.

A. FOSSIL

1. Carboniferous, Illinois
- Class Arachnoidea

Architarboidae

- Hadrachne*, 1903e:179,f.
horribilis, 1903e:180,f.
Kustarachne extincta, 1903e:182,f.
sulcata, 1903e:181,f.

Class Insecta

MEGASECOPTERA (Incertae sedis)

- Protodictyon*, 1903e:195,f.
pulchripenne, 1903e:196,f.

PROTORTHOPTERA Eucanidae

- Eucaneus attenuatus*, 1903e:190,f.
mazonus, 1903e:188,f.

Geraridae

- Dieconeura maxima*, 1903e:193,f.

Spanioderidae

- Cheliphlebia extensa*, 1903e:186,f.
Dictyoneara clarinervis, 1903e:185,f.
Petromartus, 1903e:191,f.
indistinctus, 1903e:191,f.

2. Miocene, Florissant, Colorado

DIPTERA

Tipulidae

- Tipula wilmattae*, 1949a:5,f.

Chironomidae

- Chironomus pausatus*, 1949a:14,f.
primaevus, 1949a:13,f.
printinus, 1949a:13.
proterus, 1949a:14,f.
requiescens, 1949a:15,f.
sepultus,^b 1949a:15.
Diamesa extincta, 1949a:12,f.

^a I know of two - Mythicomyiinae Melander (Bombyliidae, 1902) and Amlotinae Brues and Melander (Drosophilidae, 1932).
^b This name is preoccupied and a replacement patronymic name is being proposed in the Pan-Pacific Entomologist.

Bibionidae

- Bibio capnodes*, 1949a:22,f.
excurvatus, 1949a:23,f.
explanatus, 1949a:23,f.
jamesi, 1949a:24,f.
podager, 1949a:24,f.
vulcanius, 1949a:25,f.
Hesperinthus immutabilis, 1949a:20,f.
Penthetria longifurca, 1949a:20,f.
Plecia gradata, 1949a:21,f.
orycta, 1949a:21,f.
tessella, 1949a:21,f.

Mycetophilidae

- Boletina hypogaea*, 1949a:8,f.
Exechia priscula, 1949a:8,f.
Proapemon, 1949a:9.
infernus, 1949a:9,f.

Sciaridae

- Sciara dormitans*, 1949a:10,f.
requieta, 1949a:11,f.
sopora, 1949a:11,f.

Scatopsidae

- Reichertella fasciata*, 1949a:16,f.

Xylomyidae

- Solva (Xylomyia) inornata*, 1949a:28,f.

Stratiomyidae

- Moyamyia*, 1949a:26.
limigena, 1949a:27.

Rhagionidae

- Rhagio fossarius*, 1949a:29,f.
wheeleri, 1949a:29,f.

Therevidae

- Nebritus willistoni*, 1949a:30,f.

Asilidae

- Asilus curculionis*, 1947a:45,f.
Leptogaster prior, 1947a:44,f.
Senoprosopis eureka, 1949a:36,f.

Bombyliidae

- Alepidophora cockerelli*, 1949a:32,f.
minor, 1949a:31,f.
Amphicosmus delicatulus, 1949a:32,f.
Apolysis magister, 1947a:47,f.
Melandrella testea, 1949a:35,f.
Protophthiria atra, 1949a:33,f.

Empididae

- Acallomyia probolaea*, 1949a:38,f.
Empis infossa, 1949a:39,f.
Rhamphomyia aeterna, 1949a:40,f.
craterae, 1949a:40,f.
fossa, 1949a:41,f.
inanimata, 1949a:41,f.
infernalis, 1949a:42,f.
interita, 1949a:43,f.
morticina, 1949a:43,f.
senecta, 1949a:44,f.
spodites, 1949a:44,f.
tumulata, 1949a:45,f.
Tachypesa primitiva, 1949a:45,f.

Phoridae

- Phora tumbae*, 1949a:47,f.

- microcera*, 1920b:95.
washingtona, 1920b:96.
Strongylophthalmyia angustipennis, 1920b:100.
- Helcomyzidae
- Helcomyza mirabilis*, 1920a:309,f.
- Dryomyzidae
- Dryomyza ferruginea*, 1920a:311.
maculipennis, 1920a:311.
- Sepsidae
- Euticita bispinosa*, 1917a:40. (Melander & Spuler).
Scpsidimorpha secunda, 1917a:32,f. (Melander & Spuler).
secunda brunnipes, 1917a:33. new var. (Melander & Spuler).
secunda piceipes, 1917a:33. new var. (Melander & Spuler).
- Sepsis armillata*, 1917a:18,f. (Melander & Spuler).
furcata, 1917a:19,f. (Melander & Spuler).
hoplincnema, 1917a:17,f. (Melander & Spuler).
luteipes, 1917a:29,f. (Melander & Spuler).
neocynipsea, 1917a:28,f. (Melander & Spuler).
pyrrhosoma, 1917a:25,f. (Melander & Spuler).
signifera, 1917a:26,f. (Melander & Spuler).
signifera curvitibia, 1917a:28,f. new var. (Melander & Spuler).
violacea hecate, 1917a:22,f. new var. (Melander & Spuler).
- Themira flavicoxa*, 1917a:46. (Melander & Spuler).
incisurata, 1917a:44. (Melander & Spuler).
incisurata latitarsata, 1917a:45,f. new var. (Melander & Spuler).
malformans, 1917a:46. (Melander & Spuler).
- Sciomyzidae
- Antichaeta melanosoma*, 1920a:318.
robinigiosa, 1920a:317.
testacea, 1920a:318.
- Limnia georgiae*, 1920a:324.
louisianae, 1920a:325.
- Melina palustris*, 1920a:316.
- Poecilographa*, 1913d:205. new name.
- Poecilomyia*, 1913b:58,f.
- Pteromicra leucothrix*, 1920a:313.
melanothrix, 1920a:313.
- Renocera cyathiformis*, 1920a:319.
quadriglineata, 1920a:320.
- Sepdon caeruleus*, 1920a:332.
- Tetanocera obtusifibula*, 1920a:328,f.
papillifera, 1920a:329,f.
phyllophora, 1920a:330,f.
soror, 1920a:328,f.
spirifera, 1920a:330,f.
- Lauxaniidae
- Caliope* (sic!) *nigerrima*, 1913b:71.
Lauxania (*Minettia*) *annularis*, 1913d:205. new name.
Minettia annulata, 1913b:73.
cana, 1913b:72.
fumipennis, 1913b:75.
nigrans, 1913b:72.
nubila, 1913b:74.
ordinaria, 1913b:74.
- Pachycerina ornata*, 1913b:79,f.
Sapromyza cyclops, 1913b:75.
monticola, 1913b:75,f.
- Chamaemyiidae
- Pseudodinia nitida*, 1913a:295.
pruinosa, 1913a:295.
- Piophilidae
- Mycetaulus costalis*, 1924b:79.
nigritellus, 1924b:79.
polypori, 1924b:80.
testaceus, 1924b:81.
- Piophila affinis halterata*, 1917a:62. new var. (Melander & Spuler).
atrifrons, 1917a:66. (Melander & Spuler).
flavipes, 1917a:63. (Melander & Spuler).
liturata, 1917a:60. (Melander & Spuler).
morator, 1924b:85.
nigricoxa, 1917a:64. (Melander & Spuler).
nitens, 1917a:70. new name. (Melander & Spuler).
nitidissima, 1917a:66. (Melander & Spuler).
occipitalis, 1917a:65. (Melander & Spuler).
oriens, 1917a:63. (Melander & Spuler).
privigna, 1924b:86.
senescens, 1917a:72. new name. (Melander & Spuler).
setosa, 1917a:64. (Melander & Spuler).
xanthopoda, 1917a:59. (Melander & Spuler).
xanthostoma, 1917a:103. new name (error). (Melander & Spuler).
- Prochyliza brevicornis*, 1924b:81.
- Pallopteridae
- Palloptera setosa*, 1913b:81,f.
- Tethinidae
- Pelomyia nubila*, 1952a:195.
Phycomyza, 1952b:198.
- Rhinoessa angustipennis*, 1952a:203,f.
bermudaensis, 1952a:203.
denudata, 1952a:204.
horripilans, 1952a:204.
lavendula, 1952a:205.
milichioides, 1913a:299.
prognatha, 1952a:206.
seriata, 1952a:206.
sonorensis, 1952a:207.
variseta, 1952a:209.
whitmani, 1913a:298.
- Tethina angustifrons*, 1952a:199.
maritima, 1913a:297.
- Milichiidae
- Mallochiella*, 1913c:169. new name.
Milichiella bisignata, 1913a:239.
Neophyllomyza, 1913a:243.
nitens, 1913a:244.
quadricornis, 1913a:243.
Paramadiza, 1913a:245.
washingtona, 1913a:246.
Pholeomyia myopa, 1913a:238.
Stomosis, 1913a:242.
- Diastatidae
- Diastata modesta*, 1913a:290.
- Agromyzidae
- Agromyza auriceps*, 1913a:262.
clara, 1913a:265.
diadema, 1913a:259.
genualis, 1913a:261.
interfrontalis, 1913a:263.
lima, 1913a:265.

Econ.

moth.
s. 1-3.

Exp.
er and

Bull.
r.).
(1931) :41-

moth
31-2.
Hort.

line.
Art.

Agric.
S. No.

Exp.
and

Methods.

Fruit

Agt.
e and

Vash.

with
1

der's

Agr.

Wash.
VI 1

gro-
mme

(4):

(5) :

:51-

and
erry,
N.Y.

10