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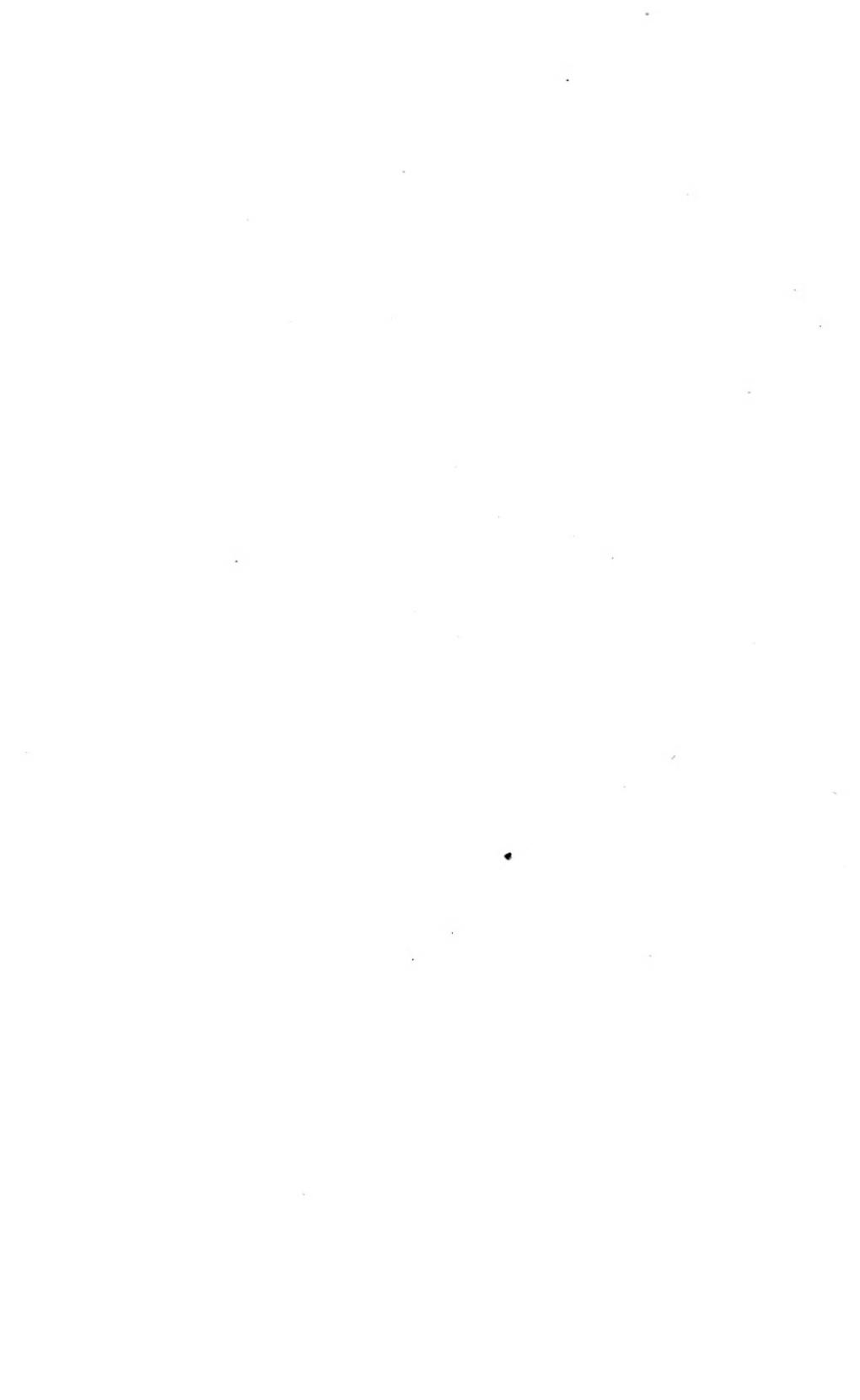
INDEX
TO THE
LITERATURE
OF
AMERICAN ECONOMIC
ENTOMOLOGY

January 1, 1905 to December 31, 1914

Compiled by
NATHAN BANKS



AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS
MELROSE HIGHLANDS, MASS.,
1917



INTRODUCTORY

The great need of bringing the Bibliography of American Economic Entomology down to date was considered at the Cleveland meeting in 1913. A special committee was appointed and drafted resolutions urging the Secretary of Agriculture to continue this exceedingly useful publication. As this proved impracticable, the President appointed a special committee consisting of W. E. Britton, E. P. Felt and J. J. Davis to formulate and submit a plan the following December. This was done; the plan duly accepted and the following were then appointed to have charge of the work: Messrs. E. P. Felt, W. E. Britton, W. E. Hinds, W. C. O'Kane and A. F. Burgess, a committee which continued in charge until the completed index was put into the hands of the Editorial Board of the *Journal of Economic Entomology*. The committee arranged with Dr. L. O. Howard, Chief of the Federal Bureau of Entomology, for the compilation of the Index, submitted progress reports in December 1914 and 1915 and after exhausting every reasonable possibility of securing the publication of the work through a government agency, prepared a third report which was favorably acted upon in December 1916, authorizing its publication by the Journal Board. It is perhaps unnecessary to add that much of the success of the work, projected as it is along new lines, is due to the untiring patience and devotion of the compiler, Dr. Nathan Banks, then connected with the United States Bureau of Entomology.

E. P. FELT,
W. E. BRITTON,
W. E. HINDS,
W. C. O'KANE,
A. F. BURGESS,
Committee.

INDEX TO THE LITERATURE OF AMERICAN ECONOMIC ENTOMOLOGY
JANUARY 1, 1905, TO DECEMBER 31, 1914

By NATHAN BANKS

The following Index to the literature of American Economic Entomology for the ten-year period from January 1, 1905 to December 31, 1914, is a continuation of the Bibliography of Economic Entomology. It has been recognized for some time that an Index on the following plan would contain all that was most useful in the Bibliography and besides would furnish the page references, and be more readily usable and occupy less space than the Bibliography. The insects and other headings are arranged alphabetically; under each are placed the references by author alphabetically. The several articles by one author are arranged chronologically. Unsigned articles are placed after the other references.

The amount of entomological literature has increased enormously in the last ten years, more especially in the agricultural press. Much of this is but a reprint of Station and Federal bulletins; and when plainly so has not been indexed. It is, however, impracticable to examine each article thoroughly to see whether it contains new matter, so doubtless various references may duplicate others, and on the other hand it is probable that some references have been omitted that should have been included. It is also probable that various references have escaped notice of the compiler.

The references (following a recommendation of a committee of the American Association of Economic Entomologists) are rather more abbreviated than usual; but will be readily understood by entomologists, at least with the following explanations:

"B." means bulletin, "C." circular, "R." report, "P. B." press bulletin. Publications of experiment stations are referred to simply by State and number of bulletin, circular or report, as "Fla. B. 42" means Bulletin 42 of the Florida Agricultural Experiment Station. In New York, the Cornell bulletins are referred to as "N. Y. C. B."; the Geneva Station bulletins as "N. Y. St. B." The bulletins of the Bureau of Entomology, United States Department of Agriculture are referred to as "U. S. B."; the yearbook articles as "U. S. Y. B."; the Farmers' Bulletins as "U. S. F. B."; the more recent bulletins of this Department as "U. S. D. A. B."; the Gipsy and Browntail Moth Reports as "G. & B.-T. R."

"Pr." is used for Proceedings, "Jr." or "J." for Journal. The words "State" and "Annual" are usually omitted in the references, although in a few cases "St." (State) is retained because of possible confusion. The first figure after the "B." or "R." indicates the number of the bulletin or report and the next figure the page; the year is usually added, for it is oftentimes a help.

The preparation of the Index has been greatly facilitated by the aid of two typewriters, Mrs. Harriet Bishop and particularly by Miss M. G. Champney, whose knowledge of entomology and of the methods of the Bureau has been of especial value during the entire time of preparation.

LIST OF ABBREVIATIONS

The list of abbreviations given below is supplementary to the preceding explanations:

Agr. = Agriculture, Agriculturist	Farm. = Farmer
Agric. = Agricultrist, Agricultural	Fed. = Federal
Am. or Amer. = American	For. = Forestry
Ann. = Annals, Annual	Fr. = Fruit
App. = Appendix	Fum. = Fumigation
Archiv. = Archives	Fung. = Fungicide
Assoc. = Association	G. & B. T. = Gipsy and Brown Tail
B. = Bulletin	Gard. = Gardening, Gardeners
B. C. = British Columbia	Gaz. = Gazette
Bd. = Board	Gen. = General
Bienn. = Biennial	Gentl. = Gentleman
Bio. or Biol. = Biological	Geog. = Geographic
Bost. = Boston	Grow. = Grower
Br. = Branch	Hort. = Horticulture, Horticulturist
Bu. or Bur. = Bureau	Hosp. = Hospital
Bull. = Bulletin	Hyg. = Hygiene
C. = Circular	Infect. = Infectious
C. when after N. Y. = Cornell	Inform. = Information
C. Gentl. = Country Gentleman	Inj. = Injurious
Calif. = California	Ins. = Insects, Insecticide
Can. = Canada	Insect. = Insecticide
Clem. = Clemson	Insp. = Inspection
Col. = Colmans	Intern. = International
Coll. = College	Interst. = Interstate
Comm. = Commission	J., Jr. or Jour. = Journal
Confer. = Conference	L. I. = Long Island
Cong. = Congress	Lab. = Laboratory
Contr. = Contribution	Lumberm. = Lumberman
Conv. = Convention	Mag. = Magazine
Cran. or Cranb. = Cranberry	Man. = Manual
Cult. = Cultivator	Med. = Medicine
Cut. or Cutan. = Cutaneous	Meet. = Meeting
D. A. = Department Agriculture	Mem. = Memoir
Dept. = Department	Milit. = Military
Dermat. = Dermatology	Mill. = Miller
Destr. = Destructive	Mod. = Modern
Dis. = Diseases	Month. = Monthly
Dom. = Dominion	Mort. = Mortality
Ec. = Economic	Mosq. = Mosquito
Econ. = Economics	Mus. = Museum
Educ. = Education	N. Eng. = New England
Eng. = Engineering	N. Orl. = New Orleans
Ent. = Entomology, Entomologist	Nat. = Naturalist
Exch. = Exchange	Nat'l = National
Exp. = Experimental	Northw. = Northwestern
Exterm. = Extermination	Not. = Notices

Nurs. = Nursery	South. = Southern
O. = Ohio	Sp. = Special
Off. = Office	St. = State
Ont. = Ontario	Sta. = Station
Or. = Orange	Statis. = Statistical
Orch. = Orchard	Stockm. = Stockman
Ott. = Ottawa	Suppl. = Supplement
P. B. = Press Bulletin	Suppr. = Suppression
Pac. = Pacific	Supt. = Superintendent
Path. = Pathological	Surg. = Surgeon
Plant. = Planter	S. W. = Southwestern
Poly. = Polytechnic	Syn. = Synopsis
Pom. = Pomological	Techn. = Technical
Pom. with Ent. = Pomona	Tr. or Trans. = Transactions
Pop. = Popular	Trop. = Tropical
Prai. = Prairie	Univ. = University
Prevent. = Preventive	U. S. B. = Bulletin U. S. Bureau Entomology
Prod. = Producers	U. S. C. = Circular U. S. Bureau Entomology
Prog. = Progressive	U. S. D. A. B. = Bulletin U. S. Dept. Agriculture
Pub. = Public	U. S. F. B. = U. S. Dept. Agric. Farmers Bulletin
Public. = Publication	U. S. B. An. I. = U. S. Bureau Animal Industry
Quar. or Quart. = Quarterly	U. S. Y. B. = Yearbook U. S. Dept. Agriculture
R. = Report	Veg. = Vegetation
Rec. = Record	Vet. or Veter. = Veterinary
Rev. = Review	West. = Western
Roy. = Royal	Zoöl. = Zoölogy
Rur. = Rural	
S. = South	
Sci. = Science	
Sec'y. = Secretary	
Serv. = Service	
Sess. = Session	
Soc. = Society	

AMERICAN ECONOMIC ENTOMOLOGY

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- Ablerus clisiocampae**
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- Ablerus sp. on grape scale**
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- Acanthia lectularia**, *see* *Cimex*
- Acanthocephala femorata**
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- Acanthocinus obsoletus**
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- Acanthocoris musculus**
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- Acanthoderes decipiens**
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- Acanthoscelides obtectus**, *see* *Bruchus*
- Acariasis**
Stiles, Osler's Mod. Med., I, 626, 1907.
- Acetylene**
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- Achaetoneura frenchi**, *see* *Frontina*
- Achatodes zeae**
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- Achemon sphinx**, *see* *Pholus achemon*
- Acholla multispinosa**
Felt, N. Y. St. Mus. Mem. 8, 613, 1906.
- Achorutes armatum**
Popeno, U. S. C. 155, 6, 1912.
- Achorutes nivicola**
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- Acidia fratria**
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- Aclerda californica**
Carnes, Cal. Hort. Comm. Bien. R. 2, 194, 1907.
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- Munson, Me. Dept. Agr. Quart. B., vol. IV, 1, 15, 1905.
- O'Kane, Inj. Ins. 300, 306, 1914.
- Patch, Me. B. 134, 220, 1906.
- Peltier, Wis. Cranb. Grow. Assoc., 25th Ann. Meet., 10, 1912.
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- Smith, N. J. R., 1905, 563.
- Webster, J. Ec. Ent. II, 211, 1909.
- Webster, J. Ec. Ent. III, 504, 1910.
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- Acordulecera maura**
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- Acraspis erinacei**
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- Acrobasis caryae**
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- Acrobasis feltella**
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- Acrobasis nebulella**
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- Adalia melanopleura**
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- Adelencyrtus sp.**
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- Adelges abieticola**
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- Adimonia cavicollis**
 —— U. S. Y. B., 1907, 547.
- Adistemia watsoni**
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- Admontia pergandei**
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- Adoxus obscurus**
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- Sanderson**, Ins. Pests, 504, 1912.
 —— U. S. Y. B., 1907, 547.
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- Agrilus anxius**
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- Webster & Parks, J. Agr. Res. I, 85, '13.

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 Viereek, U. S. B. 52, 48, 1905.
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 Ewing, Oreg. B. 121, 62, 1914.
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 Reed, Ga. Bd. Ent. B. 29, 20, 1909.
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 Sanderson, U. S. B. 57, 36, 1906.
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 Sanderson, U. S. B. 57, 42, 1906.
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 Burgess, Ohio Nurs. Orch. Insp. R. 4, 14, 1906.
 Burgess, U. S. B. 60, 73, 1906.
 Cotton, Ohio Nurs. Orch. Insp. B. 7, 51, 1906.
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 Britton, Conn. R. 6, 271, 1907.
 Britton, J. Ec. Ent. III, 434, 1910.
 Britton, Conn. R. 10, 664, 1911.
 Howard & Chittenden, U. S. C. 96, 1907.
 Sanderson, Ins. Pests, 234, 1912.
 Watson, Fla. B. 112, 32, 1912.
 Webster, J. Ec. Ent. V, 471, 1912.
- Apanteles conspersae**
 Howard & Fiske, U. S. B. 91, 285, '11.
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 Wildermuth, U. S. D. A. B. 124, 21, '14.
- Apanteles fulvipes**
 Fiske, Mass. For. R. 6, 90, 1910.
 Howard, U. S. Y. B., 1905, 134.
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 Chittenden, U. S. B. 54, 79, 1905.
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 Chittenden, Va. Truck Exp. Sta. B. 2,
 37, 1909.
 Davis, Ill., Ent. R. 27, 100, 1912.
 Houghton, Del. R. 16-17-18, 89, 1907.
 Matheson, Can. Ent., 1907, 205.
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 Hyslop, U. S. B. 95, 116, 1912.
- Apanteles lacteicolor**
 Britton, Conn. B. 182, 20, 1914.
 Britton & Caffey, Conn. R. 13, 222, '14.
 Burgess, U. S. F. B. 564, 6, 1914.
 Howard, U. S. R. Ent., 1911, 9.
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 Howard, U. S. R. Ent., 1914, 3.
 Howard & Fiske, U. S. B. 91, 262, 278,
 1911.
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 Webster, J. Ec. Ent. IV, 181, 1911.
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 Sanderson, U. S. B. 57, 13, 1906.
- Apanteles lunatus**
 Chittenden, U. S. B. 82, 23, 1909.
- Apanteles melanocelis**
 Howard, U. S. R. Ent., 1914, 3.
- Apanteles militaris**
 Garman, Ky. B. 137, 436, 1908.
 Sanderson, U. S. B. 57, 10, 1906.
- Apanteles solitarius**
 Howard, U. S. R. Ent., 1911, 11.
 Howard, U. S. R. Ent., 1912, 9.
 Howard & Fiske, U. S. B. 91, 189, 1911.
- Apanteles sp.**
 Howard & Fiske, U. S. B. 91, 138,
 1911.
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 Smith, N. J. R., 1911, 450.
- Apanteles sp. on cutworms**
 Chittenden, U. S. B. 109, 51, 1912.
- Apanteles theclae**
 Sanderson, U. S. B. 57, 40, 1906.
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 Baldwin, Ind. Ent. R. 6, 30, 1914.
 Forbes, Ill. Ent. R. 23, 75, 1905.
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- Somes, Mo. Fr. Exp. Sta. Bien. R.,
 1913-1914, 14.
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 Felt, N. Y. St. Mus. Mem. 8, 525, 1906.
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 Johannsen, Me. B. 207, 455, 1912.
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 Gossard, Ohio B. 233, 118, 1911.
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 Felt, N. Y. St. Mus. Mem. 8, 560,
 1906.
- Forbes, Ill. Ent. R. 23, 170, 1905.
 Gossard, Ohio B. 233, 150, 1911.
 O'Kane, Inj. Ins. 275, 1914.
- Apatela populi**
 Forbes, Ill. B. 151, 468, 1911.
 Forbes, Ill. Ent. R. 26, 6, 1911.
- Apatela sp.**
 Swenk, Nebr. Hort. Soc., 1909, 83.
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 Felt, N. Y. St. Mus. Mem. 8, 549, 1906.
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- Aphaenogaster aquia**
 Brooks, W. Va. R. f., 1909-1910, 190.
- Aphaenogaster fulva**
 Smith, N. J. B. 225, 17, 1909.
- Aphaereta pegomyiae**
 Washburn, Minn. R. 12, 131, 1908.
- Aphaereta sp.**
 Chittenden, U. S. B. 66, 96, 1909.
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 Johannsen & Patch, Me. B. 195, 235, '11.
- Aphalara veaziei**
 Patch, Me. B. 187, 16, 1911.
- Aphanogmus floridanus**
 McGregor, J. Ec. Ent. VII, 330, 1914.
- Aphanogmus varipes**
 Chittenden, U. S. C. 104, 6, 1909.
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 Quaintance & Sascer, U. S. C. 121, 6,
 1910.
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 Essig, Cal. Hort. B. II, 1-2, 278, 1913.
 Quaintance & Sascer, U. S. C. 121, 6,
 1910.
 Quayle, J. Ec. Ent. III, 398, 1910.

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 Caesar, Ont. Agr. Coll. B. 219, 17, 1914.
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- Cowpea aphid, see** *Aphis medicaginis*
- Cowpea curculio, see** *Chalcodermus aeneus*
- Cowpea weevil, see** *Bruchus chinensis*
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- Jenne, U. S. B. 80, 30, 1909.

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- Destructive mealy bug**, *see* Pseudococcus citri
- Destructive pea aphid**, *see* Macrosiphum pisi
- Destructive pine bark-beetle**, *see* Dendroctonus frontalis
- Destructive spruce-wood borer**, *see* Tetroptium cinnamopterum
- Devastating grasshopper**, *see* Melanoplus devastator
- Dexodes nigripes**
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 Pettit, Mich. B. 233, 182, 1906.
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 Webster, U. S. D. A. B. 8, 1, 1913.
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Diacrisia virginica
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 Johannsen, Me. B. 177, 27, 1910.
 Lochhead, Syn. Ee. Ent. 66, 1914.
 Marsh, U. S. B. 82, 59, 1910.
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Diaperis hydni
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 Conradi, Tex. B. 89, 26, 1907.
 O'Kane, Inj. Ins. 216, 1914.
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 Sanderson, Ins. Pests, 400, 1912.
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 Watson, Fla. Grow., July 26, 1913, 3.
 ——— U. S. Y. B., 1905, 629.
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Diaphnidia hamata

Johnson, U. S. D. A. B. 19, 33, 1914.

Diaspis amygdali

Clarke, Ala. Poly. C. 1, 5, 1906.

Diaspis boisduvalii

Britton, Conn. R. 5, 240, 1906.

Diaspis bromeliae

Berger, Fla. R., 1907, xxxviii.

Carnes, Cal. Hort. Comm. Bien. R. 2, 199, 1907.

Davis, Ill. Ent. R. 27, 124, 1912.

Essig, Cal. Hort. B. II, 1-2, 123, 1913.

Diaspis carueli

Carnes, Cal. Hort. Comm. Bien. R. 2, 200, 1907.

Felt, N. Y. St. Mus. Mem. 8, 229, 1905.

Felt, N. Y. R. 22, 58, 1907.

Fernald, Mass. R. 25, II, 86, 1913.

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Forbes, Ill. Ent. R. 23, 164, 1905.

Diastictis, *see* **Cymatophora****Diastrophus cuscutaeformis**

Gossard, Ohio B. 233, 147, 1911.

Diastrophus nebulosus, *see* **D. turgidus****Diastrophus turgidus**

Gossard, Ohio B. 233, 147, 1911.

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Smith, N. J. Ent. C. 26.

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Diatraea saccharalis

Ainslie, U. S. C. 116, 1, 1910.

Ainslie, U. S. F. B. 634, 1, 1914.

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Garrett, La. Plant., June 15, 1912, 418.

Haseman, Mo. Bd. Agr. R. 44, 274, '12.

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 Sherman, N. C. Dept. Agr. B. 26, 5, 25,
 1905.
 Sherman, N. C. Dept. Agr. B. 35, 5, 25,
 1914.
 Smith, Ga. Bd. Ent. B. 16, 37, 1905.
 Smith, N. C. B. 197, 35, 1908.
 Smith, N. C. R. 33, 32, 1910.
 Symons, Md. B. 101, 162, 1905.
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 — U. S. Y. B., 1908, 567, 569.
- Diatraea saccharalis** and birds
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 — La. Plant., Jan. 21, 1911, 34.
- Diatraea zeacolella**
 O'Kane, Inj. Ins. 125, 1914.
 Sanderson, Ins. Pests, 172, 181, 1912.
- Diaulinopsis callichroma**
 Webster & Parks, J. Agr. Res. I, 81, '13.
- Diaulinus begini**
 Phillips, J. Agr. Res. II, 28, 1914.
 Webster & Parks, J. Agr. Res. I, 78, '13.
- Diaulinus pulchripes**
 Phillips, J. Agr. Res. II, 27, 1914.
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Bruner, Nebr. Ent. R. f. 1907-1908, 10.
Smith, Nebr. Hort. Soc. B. 20, 14, 1908.
Swenk, Nebr. Bd. Agr. R. f. 1910, 368.
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Fletcher, Can. Exp. Farm's B. 52, 30, '05.
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Patch, Me. B. 121, 169, 1905.
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Patch, Me. B. 121, 177, 1905.
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Cooley, Mont. B. 98, 123, 1914.
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 Felt, N. Y. R. 26, 47, 1911.
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 B. 283, 291, 1906.
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 1910.
 Quaintance, U. S. C. 154, 1, 1912.
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 340, 1908.
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 C. B. 283, 469, 1910.

Smith, N. C. B. 206, 85, 1910.

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 102, 1905.

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Parrott, Hodgkiss & Schoene, N. Y. St.
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Brittain, Pr. Ent. Soc. B. C. 4, 38,
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Moore, Wis. B. 190, 24, 1910.

Sanderson, N. H. B. 129, 265, 1907.

Eriophyes sp. on maple

Parrott, J. Ec. Ent. I, 311, 1908.

Eriophyes sp. on willow

Garman, Ky. B 120, 65, 1905.

Eriophyes tristatus var. erinea

Wilson, Oreg. Bien. Crop Pest R. f.
 1913-1914, 125.

Eriophyes vitis

Bremner, Cal. Hort. Comm. Destr. Ins.
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 421, 1914.

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Eriophyes waitei

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Carnes, Cal. Hort. Comm. Bien. R. 2, 178, 1907.
- Ernobia mollis**
Felt, N. Y. St. Mus. Mem. 8, 694, 1906.
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Webster, U. S. B. 112, 33, 1912.
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Gill, U. S. B. 116, 102, 1913.
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- Essigella californica**
Essig, Cal. Hort. B. II, 1-2, 58, 1913.
Patch, Me. B. 202, 169, 1913.
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- Estigmene acraea**
Ehrhorn, Cal. Hort. Comm. Bien. R. 2, 226, 1907.
Forbes, Ill. Ent. R. 23, 72, 1905.
Gibson, Ont. Ent. Soc. R. 36, 113, 1906.
Hooker, U. S. B. 67, 109, 1907.
Johannsen, Me. B. 177, 27, 1910.
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Patch, Me. B. 162, 358, 1908.
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- Etiella zinckenella**
Chittenden, U. S. B. 82, 25, 1909.
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- Etiella zinckenella schisticolor**
Hyslop, U. S. B. 95, 89, 1912.
- Eubaphe rosa**
Forbes, Ill. Ent. R. 23, 71, 1905.
- Eucallipterus tiliae**
Gillette, J. Ec. Ent. III, 367, 1910.
- Patch, Me. B. 187, 22, 1911.
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Carnes, Cal. Hort. Comm. Bien. R. 2, 184, 1907.
Essig, Cal. Hort. B. II, 1-2, 113, 1913.
- Eucalymnatus tessellatum**
Davis, Ill. Ent. R. 27, 123, 1912.
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Gillette, J. Ec. Ent. III, 371, 1910.
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Felt, N. Y. St. Mus. Mem. 8, 528, 1906.
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Chittenden, U. S. B. 124, 5, 1913.
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- Eclemensia bassettella**
Gibson, Ont. Ent. Soc. R. 43, 19, 1913.
- Eclemensia schwarzzella**
Gable, Nebr. Bd. Agr. R. f., 1909, 253.
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Metcalf, N. C. Dept. Agr. Sp. B. 58, '09.
- Euchistus variolarius**
Britton, Conn. R. 6, 274, 1907.
Jenkins, Conn. B. 180, 43, 1914.
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Webster & Parks, J. Agr. Res. I, 82, '13.
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Marlatt, U. S. C. 115, 7, 1910.
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Smith, U. S. B. 67, 105, 1907.
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Chittenden, Ins. Inj. Veg. 112, 1907.
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- Eudemis vacciniana**
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- Hardenburg, Wis. B. 159, 6, 1908.
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- Whitson, Sandsten, Haskins & Ramsey, Wis. B. 119, 46, 1905.
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- Felt, N. Y. St. Mus. Mem. 8, 445, 1906.
- Euderus lividus**
- Forbes, Ill. Ent. R. 24, 128, 1908.
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- Eudoromyia magnicornis**
- Howard, U. S. R. Ent., 1911, 10.
- Howard, Mass. For. R. 8, 89, 1912.
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- Bethune, Ont. Agr. Coll. B. 158, 30, '07.
- Eufitchia ribearia**, *see* *Cymatophora*
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- Eulecanium armeniacum**, *see* *Eulecanium persicae*
- Eulecanium aurantiacum**
- Douglass, Ind. Ent. R. 4, 169, 1912.
- Eulecanium canadense**
- Britton, Conn. R. 5, 238, 1906.
- Fletcher, Ont. Ent. Soc. R. 37, 86, '07.
- Johannsen, Me. B. 187, 10, 1911.
- Eulecanium caryae**
- Douglass, Ind. Ent. R. 4, 170, 1912.
- Jarvis, Ont. Ent. Soc. R. 38, 66, 1908.
- Sanders, J. Ec. Ent. II, 442, 1909.
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- Britton, Conn. B. 151, 8, 1905.
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- Caesar, Ont. Ent. Soc. R. 44, 53, 1914.
- Fletcher, Ont. Ent. Soc. R. 35, 54, 1905.
- Gossard, Ohio B. 164, 22, 1905.
- Hood, Mass. C. 6, 2, 1907.
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- Johannsen & Patch, Me. B. 195, 237, 1911.
- Lochhead, Syn. Ec. Ent. 43, 1914.
- Washburn, Minn. R. 11, 22, 1906.
- Washburn, Minn. Ent. R. 11, 57, 1906.
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- Carnes, Cal. Hort. Comm. Bien. R. 2, 188, 1907.
- Essig, Cal. Hort. B. II, 1-2, 115, 1913.
- Merrill, Cal. Hort. I, 4, 113, 1912.
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- Douglass, Ind. Ent. R. 4, 171, 1912.
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- Douglass, Ind. Ent. R. 4, 172, 1912.
- Essig, Cal. Hort. B. II, 1-2, 119, 1913.
- Gossard, Ohio B. 233, 121, 1911.
- Johannsen, Me. B. 207, 445, 1912.
- Jones, U. S. B. 80, 148, 1910.
- Merrill, Cal. Hort. B. I, 4, 113, 1912.
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- Quayle, Cal. B. 223, 195, 1911.
- Quayle, J. Ec. Ent. IV, 512, 1911.
- Sanders, J. Ec. Ent. II, 443, 1909.
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- Eulecanium fletcheri**
- Douglass, Ind. Ent. R. 4, 173, 1912.
- Eulecanium hesperidum**, *see* *Coccus*
- Eulecanium kingii**
- Britton, Conn. R. 5, 238, 1906.
- Eulecanium nigrofasciatum**
- Barre & Conradi, S. C. B. 141, 38, 1909.
- Becker, Pr. Ark. Hort. Soc., 1912-1913, 30.
- Bethune, Ont. Agr. Coll. B. 158, 23, '07.
- Britton, Conn. B. 151, 8, 1905.
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- Close & Ballard, Md. B. 159, 189, 1911.
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 221, 1911.
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 223, 1907.
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 — U. S. Y. B., 1908, 576.
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 Bremner, Cal. Hort. Comm. Destr. Ins.,
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- Carnes, Cal. Hort. Comm. Bien. R. 2,
 190, 1907.
- Essig, Cal. Cult., XXXV, 198, 1910.
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 Quayle, Cal. B. 223, 196, 1911.
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- Eulecanium prunastri**
 Gossard, Ohio B. 198, 58, 1908.
 Gossard, Ohio B. 233, 121, 1911.
 Sanders, J. Ec. Ent. II, 446, 1909.
- Eulecanium pubescens**
 Carnes, Cal. Hort. Comm. Bien. R. 2,
 191, 1907.
- Eulecanium quercifex**
 Felt, N. Y. R. 21, 101, 1906.
 Gee, J. Ec. Ent. V, 484, 1912.
 Sanders, J. Ec. Ent. II, 445, 1909.
 Turner, Ala. Poly. C. 28, 106, 1914.
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 Popenoë, Kans. Farm., June 14, '06, 641.
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 83, 1913.
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 Cundiff, Cal. Hort. Comm. C. Feb. '06, 6.
 Haseman, Mo. Hort. Soc., 1911, 251.

Eulecanium tulipiferae

- Britton, Conn. B. 151, 9, 1905.
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 Houser, Ohio B. 194, 180, 1908.
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Eulia politana

- Felt, N. Y. St. Mus. Mem. 8, 681, 1906.

Eulia quadrifasciana

- Johannsen, Me. B. 207, 454, 1912.
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- Felt, N. Y. St. Mus. Mem. 8, 532, 1906.
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Eumenes bollii

- Quaintance & Brues, U. S. B. 50, 111, 1905.

Eumerus strigatus

- Felt, N. Y. R. 27, 119, 1912.

Eumicrosoma benefica

- McColloch, J. Ec. Ent. VII, 219, 1914.

Eunotus lividus

- Cotton, Ohio Nurs. Orch. Insp. B. 7, 25, 1906.

- Johnson, Colo. B. 116, 11, 1906.

- Sanders, U. S. C. 64, 4, 1905.

- Smith, N. J. R., 1905, 606.

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- Patch, Me. B. 121, 171, 1905.

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- Burgess, U. S. B. 60, 71, 1906.
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 Kelly, J. Ec. Ent. III, 202, 1910.
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- Essig, Cal. Hort. B. II, 1-2, 274, 1913.
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Eupelmus reduvii

- Chittenden, U. S. C. 39, 2nd Ed., 4, '08.

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- Scott & Paine, U. S. D. A. B. 113, 11, 1914.

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- Davidson, U. S. D. A. B. 100, 37, 1914.
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 Webster & Phillips, U. S. B. 110, 130, 1912.

Euphoria aurata

- Britton, Conn. R. 9, 374, 1910.

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- Chittenden, Ins. Inj. Veg. 209, 1907.
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- Gossard, Ohio B. 233, 75, 1911.

- Johannsen, Me. B. 177, 39, 1910.

- O'Kane, Inj. Ins. 323, 1914.

- Pettit, Mich. B. 233, 212, 1906.

- Pettit, Mich. B. 258, 296, 1910.

- Sherman, N. C. Dept. Agr. B., 29, 6, 53, 1908.

- Slingerland & Crosby, Man. Fr. Ins. 298, 1914.

Euphoria kernii

- Hunter, Pratt & Mitchell, U. S. B. 113, 32, 1912.

Euphoria melancholia

- Sherman, N. C. Dept. Agr. B. 29, 6, 53, 1908.

- Slingerland & Crosby, Man. Fr. Ins. 298, 1914.

Euphoria spp.

- Forbes, Ill. Ent. R. 23, 99, 1905.

Euphorocera claripennis

- Howard & Chittenden, U. S. C. 96, 5, 1907.

- Howard & Fiske, U. S. B. 91, 145, 1911.

- Marsh, U. S. B. 127, 17, 1913.

- Swenk, Nebr. R. 24, 29, 1911.

- Webster, J. Ec. Ent. IV, 181, 1911.

- Wildermuth, U. S. C. 133, 7, 1911.

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- Gossard, Ohio B. 198, 72, 1908.

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- Euplectrus comstocki**
Quaintance & Brues, U. S. B. 150, 122, 1905.
- Euproctis chrysorrhoea**
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 Carnes, Cal. Hort. Comm. Bien. R. 2,
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 168, 1907.

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Britton, Conn. R. 5, 235, 1906.
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 169, 1907.
 Douglass, Ind. Ent. R. 4, 151, 1912.

Kermes nigropunctatus

Carnes, Cal. Hort. Comm. Bien. R. 2,
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Kermes pettiti

Douglass, Ind. Ent. R. 4, 151, 1912.

Kermes pubescens

Douglass, Ind. Ent. R. 4, 154, 1914.
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Hodgkiss & Sirrine, N. Y. St. B. 273,
 482, 1905.

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Kerosene, lime and sulphur

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Kerosene-limoid

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Smith, N. J. R., 1905, 622.

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Smith, N. J. R., 1905, 625.

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Penny, Pa. B. 86, 10, 1908.

Kerosene, paraffin oil and rosin oil

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 1913.

Killarvae

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Kil-O-Scale

Fernald, Mass. B. 116, 17, 1907.

Jarvis, Conn. Storrs B. 54, 178, 1908.

Phillips, South. Plant., Mar. 1906, 209.

Smith, N. J. R. f. 1904, 646, 1905.

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Worsham, Pr. Ga. Hort. Soc., 1908, 74.

Kissing bug, see Melanolestes and Reduvius**K-L**

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1913.

Labronchus sp.

Patch, Me. B. 148, 265, 1907.

Lachnopus hispidis

Berger, Fla. R., 1908, Ix.

Lachnosterna arcuata

Close, Ballard & White, Md. B. 160, 219,
1911.

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Glasgow, Prai. Farm., Sept. 15, '12, 9.

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Symons, Md. B. 101, 158, 1905.

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Lachnosterna crenulata

Britton, Conn. R. 12, 289, 1913.

Lachnosterna cribrosa

Sanderson, U. S. F. B. 223, 13, 1905.

Sanderson, U. S. B. 57, 16, 1906.

Lachnosterna farcta

Davis, U. S. F. B. 543, 8, 1913.

Sanderson, U. S. F. B. 223, 13, 1905.

Sanderson, U. S. B. 57, 19, 1906.

Lachnosterna fraterna

Britton, Conn. R. 12, 289, 1913.

Britton, Conn. R. 13, 230, 1914.

Lachnosterna fusca

Britton, Conn. R. 9, 372, 1910.

Britton, Conn. R. 12, 288, 1913.

Britton, Conn. R. 13, 229, 1914.

Chandler, Mo. B. 102, 263, 1912.

Cook, Cal. Hort. B. III, 1, 29, 1914.

Criddle, J. Ec. Ent. IV, 240, 1910.

Davis, U. S. F. B. 543, 5, 1913.

Felt, C. Gentl., 1908, 107.

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Felt, N. Y. R. 23, 41, 1908.

Fletcher, Can. Exp. Farms, B. 52, 19,
1905.

Forbes, Ill. B. 116, 451, 1907.

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Lochhead & Jarvis, Ont. Agr. Coll. B.
150, 15, 1906.

Pease, Mich. Farm., May 30, '14, 572.

Scholl, Tex. Stockm. Farm., Dec. 8,
1909, 7.

Washburn, Minn. R. 12, 148, 1908.

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— U. S. Y. B., 1907, 546, 549.

Lachnosterna gibbosa

Forbes, Ill. B. 116, 451, 1907.

Lachnosterna hirticula

Britton, Conn. R. 12, 289, 1913.

Chittenden, Nut Grow., Mar. '06, 140.

Forbes, Ill. B. 116, 451, 1907.

Garman, Ky. B. 120, 76, 1905.

Smith, Ga. Bd. Ent. B. 20, 168, 1906.

Smith & Lewis, U. S. B. 60, 80, 1906.

Lachnosterna ilicis

Forbes, Ill. B. 116, 451, 1907.

Lachnosterna implicita

Forbes, Ill. B. 116, 451, 1907.

Lachnosterna inversa

Forbes, Ill. B. 116, 451, 1907.

Smith, Ga. Bd. Ent. B. 20, 168, 1906.

Smith & Lewis, U. S. B. 60, 80, 1906.

Lachnosterna lanceolata

Forbes, Ill. Ent. R. 23, 184, 1905.

Sanderson, U. S. F. B. 223, 13, 1905.

Sanderson, U. S. B. 57, 18, 1906.

Lachnosterna nova

Britton, Conn. R. 12, 289, 1913.

Lachnosterna pruinina

Newell & Rosenfeld, J. Ec. Ent. I, 154,
1908.

— U. S. Y. B., 1907, 549.

Lachnosterna rugosa

Forbes, Ill. B. 116, 451, 1907.

Washburn, Minn. R. 12, 148, 1908.

— U. S. Y. B., 1908, 573.

Lachnosterna sp.

Baldwin, Ind. Ent. R. 5, 130, 1912.

Bethune, Ont. Agr. Coll. B. 171, S, '09.

Britton, Conn. R. 10, 709, 1911.

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10, 1911, 7.

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Lovett, Oreg. Coll. B. 91, S, 1913.

Menges, Pa. Dept. Agr. B. 238, 113, '13.

Lachnostenra sp. (*Cont'd*)

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 Oskamp, Ind. B. 164, 763, 1913.
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 Swenk, Nebr. Bd. Agr. R. f. '10, 368.
 Van Hoesen, Nat'l Stockm. & Farm.,
 Dec. 29, 1910, 5.
 Washburn, U. S. B. 60, 85, 1906.
 Webster, U. S. Y. B., 1908, 381.
 West, Prai. Farm., Mar. 16, 1908, 4.
 Rur. N. Y., 1905, 775.
 — U. S. Y. B., 1906, 512.
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Lachnostenra spp. in gardens

- Conradi, Tex. B. 89, 13, 1907.
 Smith, N. C. B. 197, 53, 1908.

Lachnostenra sp. on catalpa

- Cotton, Ohio Nurs. Orch. Insp. B. 7, 55,
 1906.

Lachnostenra sp. on corn

- Dean, Kans. Agr. Educ. I, 4, 8, 1909.
 Pettit, Mich. B. 233, 204, 1906.
 Stedman, Mo. Bd. Agr. R. 38, 263, '06.

Lachnostenra sp. on strawberries

- Clement, Ont. Dept. Agr. Fr. B. 210,
 17, 1913.
 Moore, Wis. B. 190, 32, 1910.
 Price, Va. C. 7, 50, 1909.

Lachnostenra spp.

- Britton, Conn. Farm., Feb. 19, 1910, 3.
 Chittenden, Ins. Inj. Veg. 75, 1907.
 Conradi, Tex. Stockm. Farm., Apr. 11,
 1906, 2.
 Dean & Peairs, Kans. Agr. Educ. VI, 2,
 122, 1913.
 Douglass, Ind. Ent. R. 1, 151, 1908.
 Felt, N. Y. R., 1906, 93.
 Felt, N. Y. R. 27, 1912, 115.
 Felt, N. Y. R. 28, 1913, 56
 Garcia, N. Mex. B. 68, 36, 1908.
 Gossard, O. Farm., June 22, 1912, 738.
 Gossard, O. Farm., Sept. 28, '12, 267.
 Haseman, Mo. Bd. Agr. R. 44, 268,
 1912.

Headlee, Or. Judd Farm., Mar. 7, '08,
 292.

Hine, O. Farm., Oct. 6, 1906, 239.

Holloway, U. S. C. 171, 5, 1913.

Moore, Minn. R. 16, 54, 1914.

Nichelson, Okla. B. 69, 17, 1905.

Pettit, Mich. B. 233, 204, 1906.

Popenoe, Kans. Farm., June 13, '07, 705.

Rosenfeld, La. Hort. Soc., '08, 112.

Sanderson, Ins. Pests, 79, 1912.

Surface, Pa. D. A. Zoöl. III, 1, 26, 1913.

Washburn, Minn. R. 11, 74, 1906.

Weiss, N. J. R., 1912, 442.

Williams, O. Farm., Nov. 9, 1912, 450.

Woods, Me. B. 137, 285, 1906.

 — C. Gentl., 1907, 421.

 — Rur. N. Y., 1908, 783.

 — U. S. Y. B., 1908, 570.

Lachnostenra spp., see also white grubs

Lachnostenra spp., disease of

Northrup, Mich. Tech. B. 18, 491, 1914.

Lachnostenra submucida

 — U. S. Y. B., 1907, 549.

Lachnostenra tristis

Davis, J. Ec. Ent. VI, 276, 1913.

Davis, U. S. F. B. 543, 8, 1913.

Forbes, Ill. B. 116, 451, 1907.

Lachnus curvipes

Patch, Me. B. 202, 161, 1913.

Lachnus hyalinus

Patch, Me. B. 202, 165, 1913.

Lachnus larifex

Patch, Me. B. 202, 164, 1913.

Lachnus pini

Patch, Me. B. 202, 168, 1913.

Lachnus occidentalis

Davidson, J. Ec. Ent. III, 374, 1910.

Lachnus strobii

Patch, Me. B. 202, 167, 1913.

Laelaps agilis

Banks, Pub. Health Mar. Hosp. Serv.

 B. 30, 83, 1910.

Laelaps echidninus

Banks, Pub. Health Mar. Hosp. Serv.

 B. 30, 83, 1910.

Laelaps macropilis

Russell, U. S. B. 64, 52, 1909.

Laelaps stabularis

Banks, Pub. Health Mar. Hosp. Serv.

 B. 30, 84, 1910.

Laemophloeus biguttatus

Felt, N. Y. St. Mus. Mem. 8, 490, 1906.

- Laemophloeus minutus**
 Dean, Kans. B. 189, 205, 1913.
 Whitmarsh, Ohio B. 253, 145, 1912.
- Laemophloeus pusillus**
 Chittenden, Amer. Mill., July 1, '09, 550.
- Laemophloeus testaceus**
 Felt, N. Y. St. Mus. Mem. 8, 490, 1906.
- Laetilia coccidivora**
 Cotton, Ohio Nurs. Orch. Insp. B. 7, 34, 1906.
 Dickerson, U. S. B. 67, 49, 1907.
 Gossard, Fla. B. 79, 314, 1905.
 Johnson, Colo. B. 116, 10, 1906.
 Sanders, U. S. C. 64, 4, 1905.
 Smith, N. J. R., 1905, 599.
 Tucker, La. B. 145, 7, 1914.
- Lagoa crispata**
 Felt, N. Y. St. Mus. Mem. 8, 529, 1906.
 Gossard, Ohio B. 233, 120, 1911.
 Herrick, Household Ins. 427, 1914.
- Lagoa opercularis**
 Slingerland, Rur. N. Y., 1905, 742.
- Languria mozardi**
 Folsom, Ill. B. 134, 178, 1909.
 Folsom, Ill. Ent. R. 125, 106, 1909.
 Garman, Ky. B. 125, 48, 1906.
 Gossard, Ohio B. 233, 82, 1911.
 O'Kane, Inj. Ins. 127, 1914.
 Pettit, Mich. B. 258, 280, 1910.
 Sanderson, Ins. Pests, 202, 1912.
- Lapara bombycoides**
 Felt, N. Y. St. Mus. Mem. 8, 679, 1906.
 Patch, Me. B. 162, 358, 1908.
- Laphygma exigua**
 Ball, Deseret Farm., June 23, 1906, 1.
 Chittenden, Ins. Inj. Veg. 125, 1907.
 Cooley, Mont. R. 12, 265, 1906.
 Essig, Cal. Hort. B. II, 1-2, 162, 1913.
 Gillette, Colo. B. 98, 13, 1905.
 O'Kane, Inj. Ins. 174, 1914.
 Sanborn, Okla. B. 100, 14, 1912.
 Sanderson, U. S. F. B. 223, 14, 1905.
 Sanderson, U. S. B. 57, 35, 1906.
 Sanderson, Ins. Pests, 334, 1912.
 Titus, Deseret Farm., Mar. 28, 1908, 6.
 —— U. S. Y. B., 1908, 571.
- Laphygma frugiperda**
 Baldwin, Ind. Ent. R. 5, 150, 1912.
 Ball & Leidigh, U. S. F. B. 322, 21, '08.
 Britton, J. Ec. Ent. V, 465, 1912.
 Britton, Conn. R. 12, 284, 1913.
 Chittenden, Ins. Inj. Veg. 56, 128, '07.
- Cory, Md. Hort. Soc., 1912, 190, '13.
 Dean, Kans. Agr. Educ. I, 4, 76, 1909.
 Dew, J. Ec. Ent. VI, 361, 1913.
 Dew, Prog. Farm., Oct. 12, 1912, 1063.
 Felt, J. Ec. Ent. V, 403, 1912.
 Felt, N. Y. R. 28, 42, 1913.
 Fernald, Mass. R. 25, II, 87, 1913.
 Forbes, Ill. Ent. R. 23, 81, 1905.
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- Lyctus sp.**
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 Pettit, Mich. B. 244, 216, 1907.
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 Burgess, U. S. B. 52, 54, 1905.
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- Lyda fasciata**
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- Lyda hypotrophica**
 Hopkins, U. S. Y. B., 1907, 153.
- Lyda sp.**
 —— U. S. Y. B., 1906, 512.
- Lyda sp. on spruce**
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 Conradi, Tex. B. 89, 35, 1907.
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- Lygaeus lateralis**
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- Lygaeus turcicus**
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 Crosby, N. Y. C. B. 291, 213, 1911.
 Felt, N. Y. Fr. Grow. Assoc., 1910, 35.
 Felt, N. Y. R. 26, 43, 1911.
 Parrott, J. Ec. Ent. VI, 64, 1913.

Lygidea mendax (Cont'd)

- Parrott, N. Y. St. Fr. Grow. Assoc., 1913, 253.
 Parrott, N. Y. Dept. Agr. B. 30, 1741.
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 Schoene, N. Y. St. C. 25, 3, 1913.
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 Smith, N. J. R., 1911, 421.
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 Felt, N. Y. R. 25, 90, 1910.
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Pettit, Mich. B. 233, 157, 1906.

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Sanborn, Okla. B. 100, 22, 1912.

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Swenk, Nebr. Ent. B. 1, 87, 1913.

Taylor, J. Ec. Ent. I, 370, 1908.

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1908, 45, 1909.

——— C. Gentl., 1909, 859.

——— U. S. Y. B., 1906, 511.

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Lymexylon sericeum

Felt, N. Y. St. Mus. Mem. 8, 449, 1906.

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*Lyperosia irritans, see Haematobia serrata**Lysiphlebus rapae*

Herrick & Hungate, N. Y. C. B. '300, 736, 1911.

Lysiphlebus sp.

Smith, Nebr. Bd. Agr. R. f. 1908, 312.

Lysiphlebus sp. on melon aphis

Swenk, Nebr. R. 24, 41, 1911.

*Lysiphlebus testaceipes, see Aphidius**Lysiphlebus tritici*

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Howard & Fiske, U. S. B. 91, 22, 1911.

Kelly, Pr. Ent. Soc. Wash. X, 163, 1908.

Kelly, Pr. Ent. Soc. Wash. XI, 64, 1909.

- Sanborn, Okla. B. 100, 28, 1912.
 Swenk, Nebr. Bd. Agr. R. f. 1908, 313.
 Washburn, Minn. Ent. Sp. R. 16, 1908.
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 Webster, U. S. C. 93 rev., 3, 1909.
- Macrobasis albida**
 Conradi, Tex. B. 89, 41, 1907.
- Macrobasis spp.**
 Swenk, Nebr. Bd. Agr. R. f. '08, 303.
- Macrobasis unicolor**
 Barre & Conradi, S. C. B. 141, 25, '09.
 Chittenden, Ins. Inj. Veg. 119, 1907.
 Gibson, Ent. Soc. Ont. R. 42, 84, 1912.
 Patch, Me. B. 148, 277, 1907.
 Patch, Me. B. 366, 1908.
 Popenoe, Kans. Farm., July 26, '06, 783.
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 Swenk, Nebr. Ent. B. 1, 21, 1913.
 Symons, Md. B. 101, 175, 1905.
 Washburn, Minn. R. 14, 38, 1912.
- Macrobasis unicolor var. murina**
 Criddle, Nor'-West Farm., Dec. 20, 1912, 1595.
- Macrocentrus cerasivoranae**
 Herrick, N. Y. C. B. 311, 291, 1912.
- Macrocentrus delicatus**
 Quaintance, U. S. Y. B., 1907, 443.
- Macrocentrus sp.**
 Patch, Me. B. 148, 265, 1907.
- Macrocheles sp. on boll weevil**
 Hunter and Pierce, U. S. B. 114, 137, '12.
- Macrodactylus subspinosus**
 Alderman, Giddings & Rumsey, W. Va. C. 7, 36, 1913.
 Baldwin, Ind. Ent. R. 5, 105, 1912.
 Barre & Conradi, S. C. B. 141, 48, 1909.
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 Bethune, Ont. Agr. Coll. R. 32, 45, 1907.
 Britton, Conn. R. 5, 259, 1906.
 Butz, Col. Rur. World, July 18, '06, 227.
 Butz, Conn. Farm., July 21, 1906, 12.
 Caesar, Ont. Ent. R. 43, 80, 1913.
 Cotton, Ohio Nurs. Orch. Insp. B. 7, 45, 1906.
 Dean & Peairs, Kans. Agr. Educ. VI, 2, 99, 1913.
 Douglass, Ind. Ent. R. 1, 150, 1908.
- Douglass, Ind. Ent. R. 3, 199, 1910.
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 Felt, U. S. B. 60, 89, 1906.
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 Fulton, Wright & Gregg, Pa. B. 110, 26, 1911.
 Funk, Pa. Dept. Agr. B. 152, 305, '07.
 Gibson, Ont. Ent. Soc. R. 36, 110, '06.
 Gossard, C. Gentl., 1908, 490.
 Gossard, Green's Fr. Grow., June 1908, 23.
 Gossard, J. Ec. Ent. I, 190, 1908.
 Gossard, O. Farm., July 4, 1908, 3.
 Gossard, Ohio P. B. 291, 1908.
 Hartzell, N. Y. St. B. 331, 530, 1910.
 Hartzell, J. Ec. Ent. IV, 419, 1911.
 Herrick, Rur. N. Y., 1911, 358.
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 Jarvis, Ont. Ent. Soc. R. 37, 51, 1907.
 Jarvis, Conn. Storrs B. 56, 254, 1909.
 Johannsen & Patch, Me. Comm. Agr. R. f. 1910, 358.
 Johnson, Pa. Dept. Agr. R. 17, 589, '11.
 Johnson, U. S. B. 97, 53, 1911.
 Johnson & Hammar, U. S. B. 89, 17, '10.
 Lamson, Conn. Storrs B. 71, 74, 1912.
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 Lochhead, Syn. Ec. Ent. 73, 1914.
 O'Kane, Inj. Ins. 322, 1914.
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 Parrott, N. Y. Fr. Grow. Assoc., 1906, 24.
 Patch, Me. B. 123, 216, 1905.
 Patch, Me. B. 148, 271, 1907.
 Pettit, Mich. B. 251, 289, 1908.
 Price, Va. C. 7, 44, 1909.
 Quaintance & Shear, U. S. F. B. 284, 24, 1907.
 Rumsey, W. Va. Hort. Soc. 14th R., 30, 1907.
 Rumsey & Brooks, W. Va. R. f. 1905-1906, 22.
 Sanborn, Okla. B. 100, 48, 1912.
 Sanderson, Ins. Pests, 518, 1912.
 Shaw, Ohio Bd. Agr. R. 63, '08, 697.
 Shaw, Ohio Nurs. Orch. Insp. R. 7, 19, 1909.
 Sill, Pa. Dept. Agr. B. 217, 53, 1912.
 Slingerland, Rur. N. Y., '08, 566, 633.

Macrodactylus subspinosus (Cont'd)

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Swenk, Nebr. Bd. Agr. R. f. 1908, 297.

Swenk, Nebr. Ins. Pest Bur. C. 3, 1, '08.

Swenk, Nebr. Hort. Soc., 1909, 91.

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Symons, Md. B. 101, 154, 1905.

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Taft, Nat'l Fr. Grow., June 1908, 13.

Troop, Ind. Hort. Soc. f. 1906, 122, '07.

Troop, Or. Judd Farm., July 20, '07, 46.

Wells, Or. Judd Farm., May 26, '06, 729.

Zavitz, Ont. Ent. Soc. R. 36, 124, 1906.

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Macrodactylus subspinosus, poisonous

Lamson, Conn. Farm., July 12, 1913, 7.

Conn. Farm., July 1, 1911, 10.

Macrodactylus uniformis

Cook, Cal. Hort. B. III, 9, 372, 1914.

Morrill, Ariz. Comm. Agr. & Hort. R. 6, 28, 1914.

Morrill, S. W. Stockm., Aug. 21, '14, 10.

Macrodactylium sp.

Brooks, W. Va. B. 119, 339, 1909.

Rumsey, W. Va. R. f. 1909-1910, 79.

Macroglenes sp. on Agromyza

Phillips, J. Agr. Res. II, 29, 1914.

Macronoctua onusta

Britton, Conn., R. 6, 306, 1907.

Felt, N. Y. R. 27, 52, 1912.

Gibson, Ont. Ent. Soc. R. 36, 118, 1906.

Smith, Rur. N. Y., 1910, 821.

Macropteralma disjuncta

Forbes, Ill. B. 116, 472, 1907.

Forbes, Ill. Ent. R. 24, 160, 1908.

Macrops vitticollis

Patch, Me. B. 148, 272, 1907.

Macrorhoptrus sphaeralacieae

Pierce, U. S. B. 100, 76, 1912.

Macrosiphum albifrons

Essig, Cal. Hort. B. II, 1-2, 72, 1913.

Macrosiphum cerealis

Dean, Kans. Agr. Educ. I, 4, 45, 1909.

Bruner & Swenk, Nebr. B. 96, 35, 1907.

——— U. S. Y. B., 1905, 510.

Macrosiphum citrifolii

Essig, Pom. Jr. Ent. III, 592, 1911.

Essig, Cal. Hort. B. I, 4, 122, 1912.

Essig, Cal. Hort. B. II, 1-2, 72, 1913.

Macrosiphum crataegi

Johannsen & Patch, Me. B. 195, 236, '11.

Macrosiphum cucurbitae

Britton, Conn. R. 8, 814, 1909.

Swenk, Nebr. Bd. Agr. R. f. 1910, 369.

Macrosiphum cynosbati

Davis, Ann. Ent. Soc. Am. II, 38, 1909.

Macrosiphum destructor, see M. pisi**Macrosiphum fragariae var. immaculata**

Davis, J. Ec. Ent. IV, 327, 1911.

Macrosiphum granaria

Bethune, Farm. World, Can., 1907, 699.

Bishopp, U. S. Y. B., 1912, 398.

Fletcher, Can. Exp. Farms B. 52, 17, '05.

Gibson, Ont. Ent. Soc. R. 40, 10, 1910.

Gossard, J. Ec. Ent. I, 191, 1908.

Haseman, Mo. P. B. 46, 1914.

Headlee, Kans. Farm., Apr. 30, '08, 530.

Riddle-Smyth, Kans. Farm., June 20, 1907, 725.

Sanderson, Ent. News., 1906, 327.

Sanderson, Ins. Pests, 147, 1912.

Smith, Nebr. Bd. Agr. R. f. 1908, 314.

Swenk, Nebr. Bd. Agr. R. f. 1910, 363.

Washburn, Minn. P. B. 32, 17, 1908.

Washburn, Minn. R. 12, 47, 1908.

Washburn, Minn. Ent. Sp. R., 11, 1908.

Washburn, Minn. Ent. R. 13, 95, 1910.

Webster, U. S. B. 67, 99, 1907.

Webster, J. Ec. Ent. II, 210, 1909.

——— U. S. Y. B., 1906, 510.

Macrosiphum lactucae

Davis, J. Ec. Ent. III, 181, 1910.

Davis, Ill. Ent. R. 26, 132, 1911.

Davis, J. Ec. Ent. IV, 329, 1911.

- Macrosiphum laevigatae**
Patch, Me. B. 213, 84, 1913.
- Macrosiphum liriodendri**
Morrison, Ind. Ent. R. 5, 232, 1912.
——— U. S. Y. B., 1907, 550.
——— U. S. Y. B., 1908, 578.
- Macrosiphum lycopersici**
Lovett, Oreg. Coll. B. 91, 14, 1913.
- Macrosiphum martini**
Cooley, Mont. B. 92, 58, 1912.
- Macrosiphum pisi**
Barre & Conradi, S. C. B. 141, 41, 1909.
Bethune, Ont. Agr. Coll. B. 171, 31, '09.
Britton & Walden, Conn. R. 13, 235, '14.
Chittenden, Ind. Inj. Veg., 114, 1907.
Chittenden, U. S. C. 43, 2nd Ed., 1, '09.
Conradi, Tex. B. 89, 4, 1907.
Davis, Ill. Ent. R. 26, 138, 1911.
Essig, Pom. Jr. Ent. II, 336, 1910.
Essig, Cal. Hort. B. II, 1-2, 73, 1913.
Felt, N. Y. R. 20, 408, 1905.
Fletcher, Can. Exp. Farms. B. 52, 27,
1905.
Folsom, Ill. B. 134, 138, 1909.
Folsom, Ill. Ent. R. 25, 66, 1909.
Forbes, Ill. Ent. R. 23, 208, 1905.
Gibson, Ont. Ent. Soc. R. 39, 119, 1909.
Gibson, Ont. Ent. Soc. R. 40, 14, 1910.
Gibson, Ont. Ent. Soc. R. 41, 16, 1911.
Gillette, U. S. B. 52, 50, 1905.
Gossard, J. Ec. Ent. IV, 208, 1911.
Gossard, Ohio B. 233, 78, 1911.
Johnson, Or. Judd Farm., Apr. 18, '08, 508.
Lovett, Oreg. Coll. B. 91, 16, 1913.
Morrison, Ind. Ent. R. 5, 232, 1912.
Newell & Rosenfeld, J. Ec. Ent. I, 153,
1908.
Newell & Rosenfeld, La. Crop Pest
Comm. C. 27, 108, 1909.
O'Kane, Inj. Ins. 200, 1914.
Patch, Me. B. 190, 81, 1911.
Pettit, Mich. B. 233, 191, 1906.
Pettit, Mich. B. 258, 285, 1910.
Rosenfeld, J. Ec. Ent. III, 214, 1910.
Sanborn, Okla. B. 100, 43, 1912.
Sanderson, Ins. Pests, 211, 322, 1912.
Slingerland, Rur. N. Y., 1908, 168.
Smith, N. J. Ent. C. 34.
Smith, Va. Truck Exp. Sta. B. 13, 301,
1914.
Swenk, Nebr. Hort. Soc. 1909, 104.
——— U. S. Y. B., 1905, 629, 635.
- U. S. Y. B., 1906, 510.
——— U. S. Y. B., 1907, 544.
——— U. S. Y. B., 1908, 571.
- Macrosiphum rosae**
Essig, Pom. Jr. Ent. III, 550, 1911.
Essig, Cal. Hort. B. II, 1-2, 76, 1913.
Essig, Cal. Hort. B. II, 11, 725, 1913.
Davis, Ill. Ent. R. 27, 117, 1912.
Gahan, Md. B. 119, 16, 1907.
Lewis, Ga. Bd. Ent. B. 33, 91, 1910.
Lewis, Ga. Hort. Soc., 1910, 91.
Morrill, Cal. Cult., XLII, 235, 1914.
Morrison, Ind. Ent. R. 5, 234, 1912.
Russell, U. S. D. A. B., 90, 1, 1914.
——— U. S. Y. B., 1908, 578.
- Macrosiphum rudbeckiae**
——— U. S. Y. B., 1907, 551.
——— U. S. Y. B., 1908, 578.
- Macrosiphum sanborni**
Davis, Ill. Ent. R. 27, 116, 1912.
Gahan, Md. B. 119, 14, 1907.
Lewis, Ga. Bd. Ent. B. 33, 91, 1910.
Lewis, Ga. Hort. Soc., 1910, 91.
——— U. S. Y. B., 1908, 578.
- Macrosiphum solanifoli**
Britton, Conn. R. 12, 294, 1913.
Davis, Ill. Ent. R. 26, 145, 1911.
O'Kane, Inj. Ins. 202, 1914.
Patch, Me. B. 134, 215, 1906.
Patch, Me. B. 147, 235, 1907.
Patch, Me. B. 148, 273, 1907.
Patch, Me. B. 190, 81, 1911.
Patch, Me. B. 202, 178, 1913.
Webster, J. Ec. Ent. V, 471, 1912.
Young, Ont. Ent. Soc. R. 37, 15, 1907.
- Macrosiphum spp.**
Gillette, J. Ec. Ent. IV, 382, 1911.
- Macrosiphum trifolii**, *see* **M. pisi**
- Macrosiphum viticola**
Dean & Peairs, Kans. Agr. Educ. VI, 2,
100, 1913.
O'Kane, Inj. Ins. 219, 1914.
- Madarellus undulatus**
Felt, N. Y. St. Mus. Mem. 8, 479, 1906.
- Magdalis aenescens**
Brittain, Pr. Ent. Soc. B. C., 4, 17, 1914.
Cooley, Mont. B. 79, 53, 1910.
Slingerland & Crosby, Man. Fr. Ins. 199,
1914.
Treherne, Pr. Ent. Soc. B. C., 4, 26, '14.
Wilson, Oreg. Bien. Crop Pest R. f.
1911-1912, 159.

- Magdalais alutacea**
Felt, N. Y. St. Mus. Mem. 8, 402, 1906.
- Magdalais armicollis**
Felt, N. Y. St. Mus. Mem. 8, 75, '05.
Forbes, Ill. B. 154, 15, 1912.
Forbes, Ill. Ent. R. 27, 13, 1912.
- Magdalais barbita**
Felt, N. Y. St. Mus. Mem. 8, 73, 1905.
- Magdalais olyra**
Felt, N. Y. St. Mus. Mem. 8, 274, 1905.
- Magdalais perforata**
Felt, N. Y. St. Mus. Mem. 8, 402, '06.
- Maggot trap**
Levy & Tuck, Amer. Jr. Pub. Health, IX, 657, 1913.
- Maggots**
Gibbon, Amer. Med., May 1906, 74.
- Maggots in sheep**
Kleinheinz, Iowa Home., Sept. 14, 1911, 1643.
- Magic Fly Killer Plant**
— U. S. D. A. Ins. & Fung. Bd., Ins. 3, p. 43, 1914.
- Magnet Brand Poison Fly Paper**
— U. S. D. A. Ins. & Fung. Bd., Ins. 3, p. 45, 1914.
- Maize bill-bug, see *Sphenophorus maidis***
- Malachius auritus**
Jones & Davidson, U. S. B. 115, 161, '12.
- Malacosoma americana**
Bailey, Vt. Agr. R. 5, 30, 1913.
Bailey, Vt. Agr. R. 6, 38, 1914.
Baldwin, Ind. Ent. R. 5, 63, 1912.
Ball & Titus, Deseret Farm., May 6, 1911, 1.
Barre & Conradi, S. C. B. 141, 23, 1909.
Beach, Iowa B. 127, 60, 1912.
Bedell, Rur. N. Y., 1909, 160.
Bethune, Ont. Agr. Coll. B. 158, 5, '07.
Britton, Conn. R. 11, 342, 1912.
Britton, Conn. B. 177, 1913.
Britton, Conn. Farm., May 31, 1913, 6.
Britton, Conn. R. 13, 226, 1914.
Brown, Nat'l Fr. Grow., Jan. 1908, 5.
Brown, Mich. Farm., July 18, 1914, v. 143, p. 43.
Burgess, U. S. B. 52, 53, 1905.
Caesar, Ont. Ent. Soc. R. 42, 30, 1912.
Caesar, Ont. Ent. Soc. R. 43, 76, 1913.
Caesar, Ont. Ent. Soc. R. 44, 50, 1914.
Clinton & Britton, Conn. R. f. 1909, 1910, 595, 1911.
- Conradi, S. C. B. 158, 3, 1911.
Cunningham, Pr. Ent. Soc. B. C., 1, 18, 1911.
- Dean & Peairs, Kans. Agr. Educ. VI, 2, 41, 1913.
- Dillon, Am. Agric., Apr. 20, 1912, 571.
Dillon, Or. Judd Farm., Apr. 20, '12, 617.
- Douglass, Ind. Ent. R. 2, 59, 1910.
Douglass, Ind. Ent. R. 3, 117, 1910.
Douglass, Ind. Ent. R. 4, 114, 1912.
Essig, Cal. Hort. B. II, 1-2, 181, '13.
Felt, N. Y. St. Mus. Mem. 8, 550, '06.
Felt, N. Y. R. 28, 94, 1913.
Felt, J. Ec. Ent. VII, 373, 1914.
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Meal sap-beetle, see Carpophilus dimidiatus

Meal snout-moth, see Pyralis farinalis

Meal worms, see Tenebrio, Tribolium, Silvanus

Mealy bugs

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Mealy wing, see Aleyrodes citri

Mediterranean flour-moth, see Ephestia kuehniella

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- Megorismus sp. on green bug**
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Watson, Fla. B. 112, 33, 1912.
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Kelly, J. Agr. Res. II, 440, 1914.
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Cooley, Mont. B. 88, 87, 1912.
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Hunter, Cal. B. 170, 5, 1905.
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Essig, Cal. Hort. B. II, 1-2, 18, 1913.
- Melanoplus differentialis**
Bruner, U. S. B. 54, 61, 1905.
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Bruner, U. S. B. 54, 64, 1905.
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Bruner, U. S. B. 54, 61, 1905.
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Forbes, Ill. Ent. R. 23, 142, 1905.
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Garcia, N. Mex. B. 68, 33, 1908.
Hughes, Iowa B. 137, 70, 1913.
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Essig, Cal. Hort. B. II, 1-2, 19, 1913.
Hunter, Cal. B. 170, 5, 1905.
- Melanophila drummondi**
Burke, U. S. Y. B., 1909, 404.
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Forbes, Ill. Ent. R. 23, 182, 1905.
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- Melanostoma mellinum**
Symons, Md. B. 101, 199, 1905.
- Melanotus communis**
Swenk, Nebr. Bd. Agr. R. f. 1910, 364.
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Symons, Md. B. 101, 161, 1905.
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Britton, Conn. R. 6, 268, 1907.
Stedman, Mo. Bd. Agr. R. 38, 244, 1906.
- Melanotus fissilis**
Johannsen & Patch, Me. B. 195, 233, '11.
- Melanoxantherium antennatum**
Patch, Me. B. 213, 87, 1913.
- Melanoxantherium bicolor**
Patch, Me. B. 213, 85, 1913.
- Melanoxantherium salicis**
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- Melanoxantherium salicti**
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- Melanoxantherium smithiae**
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Britton, Conn. R. 10, 707, 1911.
- Melasoma lapponica**
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Garman, Ky. B. 120, 59, 1905.
Harned, Pr. Columbus Hort. Soc., 1906, 106.
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Burgess, U. S. B. 60, 74, 1906.
Felt, N. Y. St. Mus. Mem. 8, 317, 1905.
Fernald, Mass. R. 25, II, 87, 1913.
Garman, Ky. B. 120, 55, 1905.
Smith, N. J. R. 1910, 347.
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Bruner, Nebr. Farm., Aug. 25, 1909, 755.
Swenk, Nebr. Hort. Soc. R., 1909, 103.
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Criddle, J. Ec. Ent. IV, 240, 1911.
Criddle, Ont. Ent. Soc. R. 43, 100, 1913.
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Ainslie, U. S. B. 85, 60, 1910.
Forbes, Ill. Ent. R. 23, 83, 1905.
Gossard, Ohio B. 233, 67, 1911.
O'Kane, Inj. Ins. 214, 1914.
Quayle, J. Ec. Ent. IV, 525, 1911.
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Hunter, Pratt & Mitchell, U. S. B. 113, 28, 1912.
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Morman, C. Gentl., June 14, 1913, 913.
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Smith, N. C. B. 205, 23, 1910.
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Weiss, N. J. R., 1912, 441.
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Howard & Fiske, U. S. B. 91, 209, 1911.
- Meloe angusticollis**
Patch, Me. B. 148, 278, 1907.
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- Melon caterpillar, see Diaphania hyalinata**

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Memythrus asilipennis

Felt, N. Y. St. Mus. Mem. 8, 464, '06.

Memythrus dolpii

Forbes, Ill. B. 151, 493, 1911.

Memythrus polistiformis

Baldwin, Ind. Ent. R. 5, 114, 1912.

Brooks, W. Va. B. 110, 19, 1907.

Brooks, W. Va. R. f. 1907-1908, 23.

Douglass, Ind. Ent. R. 3, 203, 1910.

O'Kane, Inj. Ins. 231, 1914.

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Memythrus simulans

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Memythrus tricinctus

Felt, N. Y. St. Mus. Mem. 8, 471, 1906.

Forbes, Ill. B. 151, 493, 1911.

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Menopon biseriatum

Banks, U. S. C. 92, 7, 1907.

Ewing, Ore. Coll. B. 92, 10, 1913.

Kaupp, Colo. B. 185, 5, 1912.

Pearl, Surface & Curtis, Me. R. 27, App.

Poultry, 126, 1911.

Menopon pallidum

Banks, U. S. C. 92, 4, 1907.

Bell, U. S. F. B. 287, 47, 1907.

Bentley, Tenn. Bd. Ent. R. f. '13, 31.

Black, O. Farm., Oct. 12, 1912, 333.

Couch, O. Farm., June 11, 1910, 722.

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Merchant grain-beetle, see *Silvanus mercator***Mercuric chlorid**

Howard, U. S. B. 88, 39, 1910.

Mermis albicans

Chittenden, U. S. C. 62, 3, 1905.

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Howard, U. S. R. Ent., 1905, 289.

Pettit, Mich. B. 233, 174, 1906.

Symons, U. S. B. 60, 84, 1906.

Merisus destructor

Felt, N. Y. R. 28, 39, 1913.

Webster, U. S. C. 70, 12, 1906.

Merisus mordellistena

Phillips, U. S. B. 95, 9, 1911.

Merodon equestris

Childs, Cal. Hort. B. III, 2, 73, 1914.

Hewitt, Ont. Ent. Soc. R. 41, 28, '11.

Norman, Pr. Ent. Soc. B. C., 1, 22, '11.

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Meromyza americana

Criddle, Nor'-West Farm., Dec. 20, 1907, 1157.

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Criddle, Ont. Ent. Soc. R. 43, 98, 1913.

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- Sanderson, Ins. Pests, 132, 1912.
- Swenk, Nebr. Bd. Agr. R. f. 1910, 363.
- Swenk, Nebr. Ent. B. 1, 65, 1913.
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- Sanderson, U. S. B. 67, 112, 1907.

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- Parrott, N. Y. St. C. 9, 8, 1908.
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- Yothers, J. Ec. Ent. VI, 161, 1913.

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- Jarvis, Conn. Storrs B. 54, 172, 1908.

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- Brown, Wash. Hort. Assoc. 9th R., 37, '13.
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- Orange-striped oak worm**, *see Anisota senatoria*
- Orange sulphur**, *see Eurymus eurytheme*
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- Peach scale, West Indian, see** *Aulacaspis pentagona*
- Peach slug, see** *Caliroa amygdalina*
- Peach soft scale, see** *Eulecanium persicae*
- Peach-tree bark-beetle, see** *Phloeotribus liminaris*
- Peach tree borer, see** *Sanninoidea exitiosa*
- Peach twig-borer, see** *Anarsia lineatella*
- Peach-twig moth, see** *Anarsia lineatella*
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- Pear-leaf rust-mite, see** *Epitrimerus pyri*
- Pear midge, see** *Contarinia pyrívora*
- Pear psylla, see** *Psylla pyricola*
- Pear scale, Italian, see** *Epidiaspis piricola*
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- Sesia pyri**
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- Sheep bot fly, see *Oestrus ovis***
- Sheep flies**
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 - Reynolds, Mich. Farm, May 22, '09, 559.
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- Sapp, Farm. Guide, July 25, 1914, 5.
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- Sheep maggots**
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- Sheep scab-mite, see *Psoroptes communis***
- Sheep tick, see *Melophagus ovinus***
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- Short-winged mole-cricket, see *Scapteriscus abbreviatus***
- Shot-borer, see *Xyleborus dispar***
- Shot-hole borer, see *Scolytus rugulosus***
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 - Conradi & Thomas, S. C. B. 143, 27, '09.
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- Zimmer, U. S. B. 97, 120, 1912.
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- Ainslie, U. S. B. 85, 141, 1910.
- Sigalpus virginensis**
- Smith, N. J. B. 225, 16, 1909.
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- Cooley, Mont. R. 12, 261, 1906.
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 Wilson, Oreg. Bien. Crop Pest R. f. 1913-1914, 129.
- Silver fish, see Lepisma**
- Silver mite, see Eriophyes oleivorus**
- Simplemphytus pacificus**
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 Johannsen, Me. B. 187, 4, 1911.
 Sanderson, J. Ec. Ent. III, 27, 1910.
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 Forbes, Ill. Ent. R. 27, 31, 1912.
- Simulium meridionale**
 Bishop, U. S. Y. B., 1912, 385.
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 Forbes, Ill. Ent. R. 27, 40, 1912.
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- Sinea diadema**
 Morgan, U. S. B. 63, 51, 1907.
 Webster, Iowa B. 130, 190, 1912.
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 Felt, N. Y. St. Mus. Mem. 8, 442, 1906.
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 ——— U. S. Y. B., 1907, 549.
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 Patch, Me. R. 202, 174, 1913.
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 Bishopp, U. S. Y. B., 1912, 398.
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 Felt, N. Y. R. 25, 76, 1910.
 Gillette & Taylor, Colo. B. 133, 30, 1908.
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 Sanderson, Ins. Pests, 604, 1912.
 Slingerland & Crosby, Man. Fr. Ins. 151, 1914.
 Smith, Nebr. Bd. Agr. R. f. 1908, 315.
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- Siphonophora spp** *see* *Macrosiphum*
- Sitka spruce beetle**, *see* *Dendroctonus obesus*
- Sitka spruce hylurgops**, *see* *Hylurgops rugipennis*
- Sitodrepa panicea**
 Douglass, Ind. Ent. R. 2, 79, 1910.
 Felt, N. Y. St. Mus. B. 129, 40, 1909.
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 Herrick, Household Ins. 295, 1914.
 Metcalf, N. C. Dept. Agr. Sp. B., 69, '09.
 Smith, N. J. B. 203, 36, 1907.
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 Folsom, Ill. Ent. R. 25, 112, 1909.
 Folsom, Ill. B. 134, 184, 1909.
 Gossard, Ohio B. 233, 81, 1911.
 O'Kane, Inj. Ins. 167, 1914.
 Pettit, Mich. B. 258, 280, 1910.
- Sitones hispidulus**
 Gossard, Ohio B. 233, 81, 1911.
- Parrott**, N. Y. Dept. Agr. B. 62, 1830, 1914.
- Pettit, Mich. R. 53, 232, 1914.
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 Bentley, Tenn. Dept. Agr. Bien. R., 1909-1910, 52.
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 Chittenden, Amer. Mill., May 1, '09, 364.
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 Dean, Kans. B. 189, 214, 1913.
 Derr, U. S. F. B. 443, 45, 1911.
 Dietz, Ind. Ent. R. 6, 84, 1914.
 Essig, Cal. Hort. B. II, 1-2, 172, 1913.
 Felt, C. Gentl., 1909, 907, 1025.
 Gee, S. C. B. 170, 13, 1912.
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 Smith, N. J. Ent. C. 37.
 Smith, U. S. B. 67, 102, 1907.
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 Symons, Md. B. 101, 167, 1905.
 Symons, Md. B. 137, 1, 1909.
 Tucker, Kans. Farm., Feb. 9, 1905, 148.
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 Hunter, Pratt & Mitchell, U. S. B. 113, 36, 1912.
- "Sha-Kill"**
 Surface, Pa. Dept. Agr. R. 13, 303, 1907.
- Slender-horned flour-beetle**, *see* *Echocerus maxillosus*
- Slender seed-corn ground-beetle**, *see* *Clivina impressifrons*

Slugs

Smith, N. J. B. 181, 43, 1905.

Small-eyed flour-beetle, see Palorus ratzburgi**Small gray leaf-weevil, see Thricolepis inornata****Small green rose aphid, see Myzus rosarum****Smaller corn stalk-borer, see Elasmopalpus lignosellus****Smeared dagger, see Acronycta oblinita****Smicraulax tuberculatus**

Pierce, U. S. B. 100, 76, 1912.

Smicronyx tychooides

Pierce, U. S. B. 100, 75, 1912.

Smilia misella, see Microweisia**Smynthurus albamaculata**

Patch, Me. B. 123, 220, 1905.

Patch, Me. B. 134, 225, 1906.

Patch, Me. B. 187, 24, 1911.

Smynthurus arvalis

Felt, N. Y. R. 27, 103, 1912.

Smynthurus sp.

Fink, J. Ec. Ent. VII, 400, 1914.

Snowy tree-cricket, see \textcircled{E} canthus niveus**Soap solution**

Sherman, N. C. Dept. Agr. B. June, 1909, 19.

Smith, N. J. R., 1907, 456.

Smith, N. J. B. 213, 23, 1908.

Soap washes

Harcourt & Fulmer, Ont. Agr. Coll. B. 154, 21, 1907.

Social grape caterpillar, see Harrisina americana**Soda wash**

Doten, Nev. B. 66, 26, 1908.

Sodium cyanide

Essig, Pom. Jr. Ent. III, 385, 1911.

Woglum, J. Ec. Ent. III, 85, 1910.

Woglum, U. S. B. 90, 83, 1912.

Soft brown scale, see Coccus hesperidum**Soft scale, see Coccus hesperidum****Soil Fumigant and Insecticide**

Fernald, Mass. R. 25, I, 90, 1913.

Soil fumigation

Hyslop, J. Ec. Ent. VII, 305, 1914.

Solenopsis debilis

Brooks, W. Va. R. f. 1909-1910, 190.

Swenk, Nebr. Bd. Agr. R. f. 1909, 246.

Vickery, U. S. B. 85, 106, 1910.

Solenopsis geminata

Hinds, U. S. B. 74, 24, 1907.

Hinds, Ala. Poly. R. 20, 37, 1908.

Hooker, Bishop & Wood, U. S. B. 106, 42, 1912.

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Newell, J. Ec. Ent. I, 33, 1908.

Pierce, U. S. B. 100, 70, 1912.

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Solenopsis geminata var. xyloni

Hinds, U. S. B. 63, 45, 1907.

Solenopsis molesta

Hunter & Pierce, U. S. B. 114, 140, 1912.

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Solenopsis tenuis

Buck, Va. R. f. 1908, 67.

Solenopsis texana

Hunter & Pierce, U. S. B. 114, 140, 1912.

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Solenopsis validiusculus

Jenne, U. S. B. 80, 30, 1909.

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 Southern buffalo gnat, *see* *Simulium pecuarum*
 Southern cabbage butterfly, *see* *Pontia protodice*
 Southern cabbage worm, *see* *Pontia protodice*
 Southern corn root-worm, *see* *Diabrotica duodecimpunctata*
 Southern hornworm, *see* *Phlegethontius sexta*
 Southern leaf-footed plant-bug, *see* *Lep-toglossus phyllopus*
 Southern pine beetle, *see* *Dendroctonus frontalis*
 Southern pine sawyer, *see* *Monohammus titillator*
 Southern tobacco worm, *see* *Phlegethontius sexta*
 Southwestern pine beetle, *see* *Dendroctonus barberi*
Spalangia hirta
 Marlatt, U. S. C. 115, 7, 1910.
Spalangia lanaicensis
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Spalangia muscae
 Bishopp, J. Ec. Ent. VI, 124, 1913.
Spalangia muscidarum
 Bishopp, U. S. F. B. 540, 23, 1913.
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Sparnopolius fulvus
 Forbes, Ill. B. 116, 473, 1907.
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Spermophagus robiniae
 Pierce, U. S. B. 100, 74, 1912.
Speckled cutworm, *see* *Mamestra sub-juncta*
Sphaerophoria cylindrica
 Chittenden, Va. Truck Exp. Sta. B. 2, 24, 1909.
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- Spotted cutworm**, *see* Noctuac-nigrum
- Spotted fever**
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- Spotted pelidnota**, *see* Pelidnota punctata
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Tetraneura ulmisacculi

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- Gahan, Md. B. 119, 20, 1907.

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 Trumble, Better Fr., Apr. 1912, 27.
 Watson, Fla. R., 1913, LXX.
 Weiss, N. J. R., 1912, 435.
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 Weldon, Colo. Bd. Hort. R. f. 1909, 39,
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 1908.
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 Smith, N. C. R. 34, 35, 1911.
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 Essig, Cal. Hort. B. II, 1-2, 4, 9, 1913.
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 Prizer, Cal. Hort. B. I, 5, 174, 1912.
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 Ehrhorn, Cal. Hort. Comm. Bien. R. 1,
 121, 1905.
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