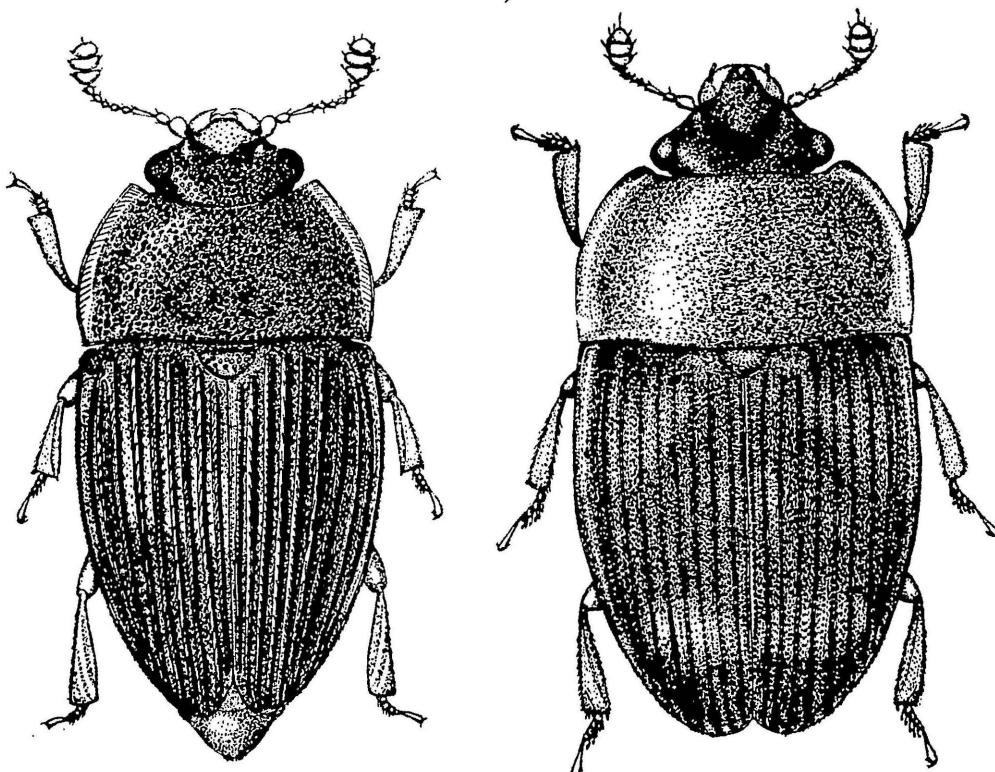


**An Annotated Bibliography
of the Genus *Stelidota* Erichson
(Coleoptera: Nitidulidae, Nitidulinae)**

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AN ANNOTATED BIBLIOGRAPHY OF THE
GENUS STELIDOTA ERICHSON

(Coleoptera: Nitidulidae, Nitidulinae)

Michael J. Weiss and Roger N. Williams^{1/}

Introduction

The purpose of this circular is to consolidate the literature on the genus *Stelidota* Erichson. *Stelidota* species occur in all the faunal regions of the world with the exception of the Australo-Papuan. The Neotropical region with 30 described species has the largest representation. The numbers of species reported from other regions are: Nearctic 5, Ethiopian 3, Oriental 7, and Palearctic 1.

The taxonomy of the genus is difficult and has not been revised since Erichson (1834) erected the genus. Jelinek (1965) did a minor, but incomplete, revision in order to distinguish *Ipidia* from *Stelidota*. The genotype is *Stelidota geminata* (Say). The following description for the genus is from Parsons (1943):

"Body oval, rather convex, moderately small. Head small, clypeus may or may not be distinct. Antennae a little longer than the head, first segment strongly enlarged anteriorly, second convex, third to fifth narrow and elongate, sixth to eighth short, club oval. Antennal grooves subocular, parallel, and moderately deep. Labrum bilobed. Mandibles with a small tooth behind the apex, bearded. Lacinia short, broad, rounded at tip, heavily bearded apically and on inner side. Maxillary palpi with first segment small, second clavate, third short and transverse, fourth cylindrical, about as long as the other three. Ligula with rather small paraglossae; labial palpi with first segment minute, second clavate, third thick, oblong, with or without a seta at apex. Mentum transverse, broadly and deeply emarginate anteriorly. Pronotum as broad or broader than the elytra. Elytra tapering apically; epipleurae broad, attaining the apices. Prosternal process broad, elevated and rounded behind the coxae. Mesocoxae a little further apart than the procoxae. Metacoxae nearly twice as far apart as the mesocoxae. The male additional dorsal segment may be distinctly visible or scarcely evident. Middle and posterior tibiae sometimes apically dilated in the male. Tarsi moderately dilated. Claws simple."

The bibliographical information presented here was obtained by a thorough search of the libraries at the The Ohio State University and the Ohio Agricultural Research and Development Center for the years 1808 to 1979. This literature search recovered most, but not all, checklists, faunal lists, and comprehensive publications which contained information on the genus.

Entries are listed alphabetically by author except in cases where a publication is anonymous or more likely to be identified with a governmental agency under whose sponsorship it was published. The abbreviations in the citations follow the American

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standard for periodical title abbreviations published in Biological Abstracts, 45(13): 4347-4361. Some articles could not be retrieved for annotation. However, the citations are included in the bibliography and some additional information is provided whenever possible. Articles dealing with species once placed in the genus *Stelidota* are listed. Numbers in parentheses following an annotation represent the page numbers which have information on the species of *Stelidota*.

The authors would like to acknowledge the professional people whose advice, criticism, and knowledge were greatly appreciated. Drs. Roy W. Rings, Walter A. Connell, George F. Shambaugh, Mr. Lorin R. Gillogly, Mr. Larry Watrous, and Ms. Virgie Sapp. We would also like to thank Mrs. Viola Keillor, Mrs. Maxine Johnson, and Mrs. Sandra Murray for typing the manuscript.

WORLD DISTRIBUTION OF THE SPECIES OF STELIDOTA ERICHSON

<u>Species and Synonyms</u>	<u>Region</u>
<i>aequalis</i> Reitter	Neotropical
<i>alternans</i> Erichson	Neotropical
<i>alternata</i> Gillogly	Oriental
<i>balanomorpha</i> (Montrouzier) see Grouvelle 1913 <i>Nitidula balanomorpha</i> Montrouzier	Neotropical
<i>bugabensis</i> Sharp	Neotropical
<i>championi</i> Sharp	Neotropical
<i>chontalensis</i> Sharp	Neotropical
<i>clavigera</i> Sharp	Neotropical & Nearctic
<i>coenosa</i> Erichson	Neotropical
<i>costulata</i> Grouvelle	Oriental
<i>costata</i> (Schaufuss) see Jelinek 1967 <i>Epuraeanella costata</i> Schaufuss	Ethiopian
<i>curta</i> Grouvelle	Neotropical
<i>didyma</i> Reitter	Ethiopian
<i>disticha</i> Gillogly	Neotropical
<i>explanata</i> Grouvelle	Oriental
<i>extranea</i> Sharp	Neotropical
<i>ferruginea</i> Reitter	Neotropical & Nearctic
<i>fortis</i> Sharp	Neotropical
<i>geminata</i> (Say) see Grouvelle 1913 <i>biseriata</i> Reitter	Neotropical & Nearctic
<i>guacharensis</i> Gillogly	Neotropical
<i>insularis</i> Van Dyke	Neotropical
<i>lifuana</i> Grouvelle	Neotropical
<i>marginata</i> Grouvelle	Neotropical
<i>meridionalis</i> Grouvelle	Neotropical

<u>Species and Synonyms</u>	<u>Region</u>
<i>metabola</i> Kirsch	Neotropical
<i>multiguttata</i> Reitter	Oriental & Palearctic
<i>nigrovaria</i> (Fairmaire) see Grouvelle 1913	Oriental
<i>multiguttata</i> Grouvelle (non-Reitter)	
<i>octomaculata</i> (Say)	Nearctic
<i>octonata</i> Grouvelle	Oriental
<i>orientalis</i> Arrow	Oriental
<i>ovalis</i> Sharp	Neotropical
<i>pallens</i> Sharp	Neotropical
<i>remelleti</i> Enrody-Younga	Ethiopian
<i>rubripes</i> Reitter	Neotropical
<i>ruderata</i> Erichson	Neotropical
<i>solitaria</i> Sharp	Neotropical
<i>stictica</i> Sharp	Neotropical
<i>strigosa</i> (Gyllenhal) see Grouvelle 1913	Neotropical & Nearctic
<i>lusca</i> (Gyllenhal)	
<i>thoracica</i> Kirsch	Neotropical
<i>trimaculata</i> Grouvelle	Neotropical
<i>vicina</i> Grouvelle	Neotropical

SPECIES REMOVED FROM THE GENUS STELIDOTA

Present Genera

Pocadites

Species

dilatimanus (Reitter 1884-1885)
Stelidota dilatimanus Reitter 1877

Ipidia

variolosa variolosa Reitter, see Jelinek
1965
Ipidia variolosa Reitter 1879
Stelidota hattori Kono 1940

Pria

clavicornis (Fairmaire), see Grouvelle 1913
Stelidota clavicornis Fairmaire 1869

Ipidia

sexguttata octusis (Reitter), see Jelinek
1965
Stelidota octusis Reitter 1919

(Not known)

orphana Klug
Stelidota orphana Klug, see Erichson 1843

Lasiodactylus

stelidotoides Ollif, see Grouvelle 1913
Stelidota procerus Reitter 1875

Ipidia

sexguttata sexguttata (Sahlberg), see
Jelinek 1965
Nitidula sexguttata Sahlberg 1834
Ipidia lata Aubé 1850
Ipidia integra Wankowicz 1867
Ipidia sexguttata Seidlitz 1872
Ipidia biguttata Stierlin 1877
Stelidota sexguttata (Seidlitz 1888)

Ipidia

sibirica (Reitter), see Jelinek 1965
Stelidota sibirica Reitter 1879
Ipidia sibirica Reitter 1884

Epuraea

signata Broun, see Grouvelle 1913

Epuraea

zealandica Sharp, see Grouvelle 1913

PUBLICATIONS WITH INFORMATION ON STELIDOTA

- 001 Armstrong, J. W. 1976. The range extension of the fruit pest *Stelidota geminata* (Say) in California (Coleoptera: Nitidulidae). Pan-Pac. Entomol., 52(1): 83-84.

Adults and larvae of *S. geminata* were recovered from decaying oranges in Fresno and Madera counties in California. Previous collection data for *S. geminata* in California were limited to southern California (see 1959 Coop. Econ. Insect Report, 9(15):1050).

- 002 Arnett, R. H. 1960. The beetles of the United States. Catholic Univ. Press, Washington, D. C. 1112 pp.

A key is given to the genera of Nitidulidae occurring in the United States, including *Stelidota*. An illustration of the head of *S. geminata* is given. (760)

- 003 Arrow, G. J. 1900. Coleoptera, Clavicornia, Heteromera. In Andrews, C. W. A monograph of Christmas Island (Indian Ocean). Brit. Mus. Monogr., Vol. 8. 337 pp.

Stelidota orientalis is described as a new species. (92)

- 004 Ashmead, W. H. 1893. Monograph of the North American Proctotrypidae. U. S. Nat. Mus., Bull. 45. 390 pp.

Proctotrypes (=*Cryptoserpheus*) *obsoletus* (Say) is reported as being parasitic on *Stelidota strigosa* larvae. (340)

- 005 Aubé, C. 1850. Description de quelques insectes coleopteres appartenant à l'Europe et à Algeria. Ann. Soc. Entomol. France, ser. 2, 8:299-346. [The description of some coleopteran insects belonging to Europe and Algeria.]

Stelidota lata is described as a new species. (328)

- 006 Blackwelder, R. E. 1945. Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South America. Part 3. Smithsonian Inst. and U. S. Nat. Mus., Bull. 185. 550 pp.

Species of *Stelidota* collected from Mexico, Central America, West Indies, and South America are: *aqualis*, *alternans*, *bugabensis*, *championi*, *chontalensis*, *clavigera*, *coenosa*, *extranea*, *ferruginea*, *fortis*, *geminata*, *marginata*, *meridionalis*, *metabola*, *ovalis*, *pallens*, *rubripes*, *ruderata*, *solitaria*, *stictica*, *strigosa*, *thoracica*, *trimaculata*, and *vicina*. (413)

- 007 Blackwelder, R. E. and R. M. Blackwelder. 1948. Fifth supplement to the Leng Catalog of Coleoptera of America, North of Mexico. J. D. Sherman, Jr., Mt. Vernon, N. Y. 87 pp.

Stelidota octomaculata is listed. The authors erroneously list *S. biseriata* as a synonym for *S. octomaculata*. (24)

- 008 Blatchley, W. S. 1910. Coleoptera or beetles of Indiana. Nature Publishing Co., Indianapolis, Ind. 1386 pp.

Description, state distribution, and habitat are given for *S. geminata* and *S. octomaculata*. (641-642)

- 009 Böving, A. G. and J. G. Rozen. 1962. Anatomical and systematic study of the mature larvae of the Nitidulidae (Coleoptera). Entomol. Medd., 31:265-299.

The authors include a key to the final instars of nitidulid larvae including *Stelidota geminata*. (290) An illustration of the final instar larva of *S. geminata* is given. (291) Host and collection data are given for the specimens used in the study. (298)

- 010 Bradley, J. C. 1930. A manual of the genera of beetles of America north of Mexico. Daw, Illston and Co., Ithaca, N. Y. 360 pp.

A key is given to the genera of the Nitidulidae known to North America including *Stelidota*. (147)

- 011 Brimley, C. S. 1938. The insects of North Carolina. North Carolina Dep. of Agr., Raleigh. 560 pp.

Stelidota geminata and *S. octomaculata* were collected in North Carolina. Location and month of collection are given. (177)

- 012 Broun, T. 1880. Manual of the New Zealand Coleoptera. Colonial Museum & Geological Survey Dep., Wellington.

Broun described *Epuraea signatum* and listed *E. zealandica* Sharp. These species of *Epuraea* are placed under *Stelidota* and under *Epuraea* by Grouvelle 1913. Obviously, the placement under *Stelidota* is in error. (Broun 169, 167). (Grouvelle 123, 128, and 130).

- 013 Brues, C. T. 1916. The Hymenoptera, or wasp-like insects, of Connecticut. State Geol. and Nat. Hist. Surv., Bull. 22. 790 pp.

Serphus obsoletus Say is listed as a parasite of *Stelidota strigosa*. (575)

- 014 Carrillo-S., J. L., A. Ortega-C. and W. W. Gibson. 1966. Lista de insectos en la colección entomológica del Instituto Nacional de Investigaciones Agrícolas. Instituto Nacional de Investigaciones Agrícolas, S.A.G. México. Folleto Misc. 14. 133 pp.

Stelidota strigosa was found on coconut-palm in July and August at San Blas, Nayarit. (40)

- 015 Chagon, G. (no date given). Contribution à l'étude des Coleoptères de la province de Québec. Dep. de Biologie l'Univ. de Montréal, Montréal, Can. 385 pp. [Contributions to the study of Coleoptera of the province of Quebec.]

Description and habitat are given for *Stelidota octomaculata*. (161-162)

- 016 Chatterjee, S. N. 1924. Catalogue of Indian insects. Part 5. Nitidulidae. Government of India, Calcutta. 40 pp.

Stelidota multiguttata and *S. nigrovaria* are listed. Geographical distribution is given. (19)

- 017 Chevrolat, L. A. A. 1863. Coleopteres de l'ile de Cuba. Notes, synonymies et descriptions d'espèces nouvelles. Ann. Soc. Entomol. France, 4(3):589-620. [Coleoptera of the Isle of Cuba. Notes, synonymies and descriptions of new species.]
- Stelidota geminata*, *S. coenosa*, and *S. ruderata* are listed. Descriptions and distribution are given. (603-604)
- 018 Connell, W. A. 1956. Nitidulidae of Delaware. Univ. of Delaware, Agr. Exp. Sta., Bull. 318. 67 pp.
- A key is given for the adults of Nitidulidae found in Delaware, including *Stelidota geminata*. (58) A list of hosts on which *S. geminata* adults and larvae were collected is given. (66)
- 019 Connell, W. A. 1975. Hosts of *Carpophilus dimidiatus*. J. Econ. Entomol., 68(2):279-280.
- Stelidota* spp. are reported as being associated with corn or corn products. (27)
- 020 Chujo, M. and S. Hisamatsu. 1960. Nitidulid-beetles of Niigata Prefecture, Japan, collected by Dr. K. Baba (I). Insects of Niigata Prefecture (IV), Report of Nagaoka Science Museum. pp. 19-24.
- Stelidota sibirica* Reitter is listed in the genus *Ipidia* and *S. dilatimana* is listed as a synonym of *Pocadites dilatimanus*. (23, 24)
- 021 Crotch, G. R. 1880. Checklist of the Coleoptera of America, North of Mexico. G. A. Bates, Naturalists Bur., Salem, Mass. 136 pp.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* are listed. (48)
- 022 Daugherty, D. M. and C. H. Brett. 1966. Nitidulidae associated with sweet corn in North Carolina and influences affecting their damage to this crop. North Carolina Agr. Exp. Sta., Bull. 171. 40 pp.
- Stelidota* spp. were collected from banana bait stations in North Carolina, yet were never collected from sweet corn in the field. (8)
- 023 Dillon, E. S. and L. S. Dillon. 1964. A manual of common beetles of Eastern North America. Row, Peterson and Co., Evanston, Ill. 884 pp.
- A key is given for the genera of Nitidulidae including *Stelidota*. (390) Description and collection habitat are given for *S. geminata*. (392-393) An illustration of a *S. geminata* adult is provided. (395)
- 024 Dorsey, C. K. and J. G. Leach. 1956. The bionomics of certain insects associated with oak wilt with particular reference to the Nitidulidae. J. Econ. Entomol., 49(2):219-230.
- Stelidota geminata* adults were collected from fresh tree wounds in West Virginia. (222) *Stelidota geminata* were reared from oak trees infected with oak wilt disease. (224)

- 025 Douglas, W. A. 1941. Field infestation by insects that injure rice in storage. U. S. Dep. Agr., Circ. 602. 8 pp.
- Stelidota geminata* is listed as being a minor pest in stored rice and rice by-products. (2)
- 026 Dury, C. 1902. A revised list of the Coleoptera observed near Cincinnati, Ohio. J. Cincinnati Soc. Nat. Hist., 20:107-196.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* were collected near Cincinnati. (30) Collection techniques used to collect *Stelidota* spp. are given. (29)
- 027 Eastham, L. E. S. 1929. The post-embryonic development of *Phaenoserphus viator* Hal. (Proctotrypoidea), a parasite of the larva of *Pterostichus niger* (Carabidae), with notes on the anatomy of the larva. Parasitol., 21(2):1-20.
- Proctotrypes* (=*Cryptoserphus*) *obsoletus* (Say) is listed as being parasitic on *Stelidota strigosa* larvae. (2)
- 028 Erichson, W. F. 1843. Versuch einer Systematischen Eintheilung der Nitidularien. Germar's Z. Entomol., 4:225-361. [An attempt at a systematic classification of the nitidulids.]
- The genus *Stelidota* erected. (300-302) *Stelidota lusca* (Gyllenhal) is synonymized with *S. strigosa*. (303) *S. geminata* and *S. strigosa* are described. (302) *S. ruderata*, *S. coenosa*, and *S. alternans* are described as new species. (303) *S. didyma* and *S. orphana* are listed with no description. (304) (see Reitter 1875.)
- 029 Fairmaire, L. 1849. Essai sur les Coleopteres de la Polynesia. Rev. Mag. Zool., ser. 2, 1:277-291, 352-365, 410-422, 445-460, 504-516, 550-556. [Essay on the Coleoptera of Polynesia.]
- No copy obtained. Believed to have information on *S. nigrovaria*. (364) *Pria* (*Stelidota*) *clavicornis* is described as a new species.
- 030 Fattig, P. W. 1937. The Coleoptera or beetles of Georgia (V). Entomol. News, 48(9):250-255.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* were collected in Georgia. Localities are given. (252)
- 031 Fauvel, A. 1903. Faune analytique des Coléoptères de la Nouvelle-Caledonie. Rev. d'Entomol., 22:203-378. [Analytical fauna of the Coleoptera fauna of New Caledonia.]
- This article contains information on *Stelidota balanomorpha* (misspelled *balanophorae*) and *S. lifuana*. The host of *S. balanomorpha* is listed as *Balanophora fungosa*. (302, 303)
- 032 Frost, S. W. and H. Dietrich. 1929. Coleoptera taken from bait traps. Ann. Entomol. Soc. Amer., 22(3):427-437.
- The authors present data on *Stelidota geminata* collection frequency from molasses bait stations in Pennsylvania. (428, 434)

- 033 Funt, R. C., W. C. Harding, and L. O. Weaver. 1977. Growing strawberries in Maryland. Coop. Ext. Serv., Univ. of Maryland, EB 216. 18 pp.
- The bulletin mentions a small brown sap beetle (probably *Stelidota geminata*) which infests ripe strawberry fruits as a pest. (13)
- 034 Gertz, R. F. 1968a. The biology and control of *Stelidota geminata* (Say). Proc., N. Cent. Branch, Entomol. Soc. Amer., 23(1):52. (Abstract)
- The author reports that *Stelidota geminata* is a new pest of strawberry fruit in Michigan and caused a multi-million dollar loss in 1966. Preliminary data are reported on biology, host range, and attractants.
- 035 Gertz, R. F. 1968b. *Stelidota geminata* (Coleoptera: Nitidulidae): biology and means of control on strawberries in Michigan. Michigan State Univ., Ph.D. dissertation. 72 pp.
- Data are presented on rearing, biology, feeding behavior, host range, attractants, and chemical control of *S. geminata*.
- 036 Gibson, W. W. and J. L. Carrillo-S. 1959. Lista de insectos en la colección entomológica de la Oficina de Estudios Especiales, S.A.G. Secretaría de Agricultura y Ganadería, Oficina de Estudios Especiales, México. Folleto Misc. 9. 254 pp.
- Stelidota octomaculata* is in the collection from rotten apples from Ohio, U.S.A. Determination of species was by N. E. Good of Philadelphia, Pennsylvania. (92, 219)
- 037 Gillogly, L. R. 1962a. New species of *Stelidota* from Venezuela (Coleoptera: Nitidulidae). Bol. Soc. Venezuela Cienc. Nat., 23(101):40-48.
- Stelidota disticha* and *S. guacharensis* are described as new species. Illustrations and collection data are included.
- 038 Gillogly, L. R. 1962b. Insects of Micronesia. Coleoptera: Nitidulidae. B. P. Bishop Mus., Honolulu, Hawaii, 16(4):1-188.
- Stelidota alternata* is described as a new species. An illustration is given. A description and illustration are given for *S. nigrovaria*. Geographical distribution is given for both species. (182-184)
- 039 Gillogly, L. R. 1965. A key to the genera of the subfamily Nitidulinae (Nitidulidae, Coleoptera) and description of a new genus and a new species. Calif. Occas. Pap. State Bur. Entomol., 8:1-24.
- A key is given to the world Nitidulinae including *Stelidota*. (13, 24)
- 040 Grouvelle, A. 1890. Viaggio di Leonardo Fea in Birmania e regioni vicine. 23. Nitidulidae 1. Annali del Museo Civico di Storia Naturale Giacomo Doria (Genova) 29:120-126.
- Stelidota nigrovaria* is mentioned in the text. This text was not seen.

- 041 Grouvelle, A. H. 1891. Voyage de M. E. Simon au Venezuela (Decembre 1887 - Avril 1888). mem. 14. Nitidulidae, Monotomidae. Ann. Soc. Entomol. France, 60:313-316. [The voyage of M. E. Simon to Venezuela (December 1887 - April 1888).]
- Stelidota marginata* is described as a new species. (314) An illustration is given. (316)
- 042 Grouvelle, A. H. 1892. Clavicornes de Bengale. mem. 2. Liste. Ann. Entomol. Belg., 36:60-61. [Clavicornia of Bengal.]
- No copy obtained. Believed to have information on *Stelidota multiguttata*.
- 043 Grouvelle, A. H. 1893. Voyage de M. E. Simon à l'île de Ceylan (janvier-fevrier 1892). Nitidulidae, Temnochilidae, Colydiidae, Rhysodidae & Cucujidae. Ann. Soc. Entomol. France, 62:383-384. [Voyage of M. E. Simon to the Isle of Ceylon.]
- Stelidota multiguttata* is listed as being found in Ceylon. (384)
- 044 Grouvelle, A. H. 1899. Descriptions de Clavicornes d'Afrique et de la région Malgache. 2 mem. Ann. Soc. Entomol. France, 68:136-185. [Descriptions of the Clavicornia from Africa and Malagasy Republic (Madagascar).]
- Stelidota clavicornis* is made synonymous with *Pria affinis* Reitter. (144) *S. costulata* is described as a new species. (137)
- 045 Grouvelle, A. H. 1902. Supplement a la liste des Coleopteres de la Guadeloupe de M. M. Fieutiaux et Salle. Ann. Soc. Entomol. France, 71:756-757. [Supplement to the list of Coleoptera of Guadeloupe of M. M. Fieutiaux et Salle.]
- Stelidota thoracica*, *S. geminata*, and *S. chontalensis* are listed as being col- in Guadeloupe. Geographical distribution is given. (757)
- 046 Grouvelle, A. H. 1903. Descriptions de Clavicornes de Nouvelle-Caledonie. Rev. d'Entomol. France, 22:174-203. [Descriptions of Clavicornia of New Caledonia.]
- Stelidota lifuana* is described as a new species. (174)
- 047 Grouvelle, A. H. 1906a. Quelques clavicornes nouveaux de la République Argentine recueillis par M. Charles Brunch. Rev. Mus. La Plata, 12:121-133. [Some new clavicornia of the Republic of Argentina collected by M. Charles Brunch.]
- Stelidota meridionalis* and *S. trimaculata* are described as new species. (122-123) Date of publication may be 1905.
- 048 Grouvelle, A. H. 1906b. Clavicornes nouveaux du Musee civique de Genes. Ann. Mus. Civ. Stor. Nat. Genova, 42:308-333. [New clavicornia of the city museum of Genoa.]
- Stelidota vicina* is described as a new species from Argentina. (332)
- 049 Grouvelle, A. H. 1908. Coleopteres de la region Indienne. Rhysodidae, Trogositidae, Nitidulidae, Colydididae, Cucujidae. Ann. Soc. Entomol. France, 77: 315-495. [Coleoptera from the Indian Region.]

A key is given for the Nitidulidae collected in India including *Stelidota*. (339)

Stelidota nigrovaria and *S. multiguttata* are listed and Indian distribution is given. (361)

- 050 Grouvelle, A. H. 1913a. Coleopterorum Catalogus. Byturidae and Nitidulidae. Section 56. W. Junk, Berlin, Germ., 14(1):1-223.

The text lists 37 species of *Stelidota*. They are: *aequalis*, *alternans*, *bala-nomorpha*, *bugabensis*, *championi*, *chontalensis*, *clavigera*, *coenosa*, *costulata*, *curta*, *didyma*, *explanata*, *extranea*, *ferruginea*, *fortis*, *geminata*, *lifuana*, *marginata*, *meridionalis*, *metabola*, *multiguttata*, *nigrovaria*, *octomaculata*, *orientalis*, *ovalis*, *pallens*, *rubipes*, *ruderata*, *sexguttata*, *signata*, *solitaria*, *stictica*, *strigosa*, *thoracica*, *trimaculata*, *vicina*, and *zealandica*. References and geographical distribution are given. (128-130)

- 051 Grouvelle, A. H. 1913b. Insects of the Percy Sladen Trust expedition. 1905. Coleoptera: Nitidulidae, Heteroceridae. Trans. Linn. Soc. Series 2, Zool., 16:93-166.

Stelidota explanata is described as a new species. An illustration is given for the adult. Distribution is given. (108-109)

- 052 Grouvelle, A. H. 1916. Nitidulidae (Coleopteres) des Philippines recoltes par C. F. Baker. Philipp. J. Sci., 11:313-315. [Nitidulidae of the Philippines collected by C. F. Baker.]

Stelidota octonata is described as a new species. (313)

- 053 Gyllenahl, L. 1808. (In Schönherr. Synonymia insectrum, oder: Versuch einer Synonymia aller bisher bekannten Insecten; nach Fabricii Systema Eleutheretorum geordnet.

Part 2. Vol. 1. 424 pp. [Insect synonymy, or: An attempt at the synonymy of all known insects arranged according to Fabricius Systema Eleutheretorum.]

No copy obtained. Believed to have information on *Stelidota strigosa* and *S. lusca*.

- 054 Hamilton, J. 1895. Catalogue of the Coleoptera of southwestern Pennsylvania, with notes and descriptions. Trans., Amer. Entomol. Soc., 22:317-381.

Stelidota geminata and *S. octomaculata* were collected in southwestern Pennsylvania. (331) Host and collection data are given. (361)

- 055 Hatch, M. H. 1924. A list of Coleoptera from Charlevoix County, Michigan. Papers Mich. Acad. Sci. Arts and Letters, 4:543-586.

Stelidota octomaculata is mentioned. (573)

- 056 Headstrom, R. 1977. The beetles of America. A. S. Barnes and Co., New York, N. Y. 488 pp.

A brief description and illustration of the elytra are given for *Stelidota geminata*. (247)

- 057 Henshaw, S. 1885. List of the Coleoptera of America, North of Mexico. Amer. Entomol. Soc., Philadelphia, Pa. 62 pp.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* are listed. (58)
- 058 Hinton, H. E. 1945. A monograph of beetles associated with stored products. Brit. Mus. Nat. Hist., 1(8):1-433.
- The author lists *Stelidota geminata* as being recorded from stored rice in the southern United States, but does not provide reference. (79) Most likely from Douglas 1941. (2)
- 059 Hisamatsu, S. 1953. The insect fauna of Mt. Ishizuchi and Omogo Valley Iyo, Japan. The Nitidulidae. Trans., Shikoku Entomol. Soc., 3:139-143.
- The author concludes that *Stelidota hattorii* is a synonym for *Ipidia variolosa*. (140)
- 060 Hisamatsu, S. 1966. *Stelidota octusis* Reitter new to Japan. Trans., Shikoku Entomol. Soc., 8:134.
- S. octusis* was reported from Tochige Prefecture in 1935.
- 061 Horn, G. H. 1879. Revision of the Nitidulidae of the United States. Trans., Amer. Entomol. Soc., 7:267-336.
- A key to the genera of Nitidulidae found in the United States, including *Stelidota*, is given. (287) The characters of the genus *Stelidota* and a key are given to *S. geminata*, *S. octomaculata*, and *S. strigosa*. Horn places *S. biseriata* as a synonym of *S. geminata*. (304) Horn did not recognize *S. ferruginea* Reitter of the southeastern U. S.
- 062 Hubbard, H. G. and E. A. Schwarz. 1878. Coleoptera of Florida and Michigan. Proc., Amer. Phil. Soc., 17:358-669.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* were collected in Florida. (447) One species of *Stelidota* is listed from Michigan. (634)
- 063 Jacquin-DuVal, P.N.C. 1856. Coleopteros: (In Sagra. Historie physique, politique et naturelle de l'Ile de Cuba. Animaux articulés, insectes.) Paris. 136 pp. [Coleoptera. In Sagra. Physical, political, and natural history of the Island of Cuba. Jointed animals, insects.]
- Stelidota coenosa* and *S. ruderata* are listed. Collection data and habitat are given. (42-43)
- 064 Jantz, O. I., R. F. Gertz, and M. T. Wells, Jr. 1967. Automobile paint effective as an insect attractant. Science, 156 (3777):946-947.
- Stelidota geminata* was attracted to automobile primer paint in Michigan.
- 065 Jelinek, J. 1965. The paleartic species of genera *Ipidia* Er. and *Stelidota* Er. (Coleoptera: Nitidulidae). Acta Entomol. Bohemoslov., 62(3):210-223.

Distinguishing characters of the genus *Stelidota* are revised. The tropical genus is represented in the Palaearctic by *S. multiguttata*. Description and distribution of *S. geminata* and *S. multiguttata* are given. Taxonomic data are presented for the following species of *Stelidota*: *multiguttata*, *geminata*, *strigosa*, *marginata*, and *coenosa*. The author places *S. octusis* in the *Ipidia* as *I. sexguttata - octusis*. *Stelidota sexguttata* is synonymized with *I. sexguttata sexguttata*. *Stelidota sibirica* and *S. hattorii* are placed in *Ipidia*.

- 066 Jelinek, J. 1967. An interesting species group of the genus *Epuraea* from Africa and Madagascar (Coleoptera: Nitidulidae). *Acta Entomol. Bohem. Slov.*, 64(2): 112-121.

The species *Epuraeanella costata* (Schaufuss) from Madagascar is placed in *Stelidota*. (120)

- 067 Johnson, C. W. 1930. A list of the insect fauna of Nantucket, Massachusetts. *Nantucket M. Mitchell Assoc.*, Nantucket, Mass. 3(2):1-74.

Stelidota geminata was collected in Nantucket. (53)

- 068 Kirk, V. M. 1969. A list of beetles of South Carolina. Part I. *South Carolina Agr. Exp. Sta., Bull. 1033*. 124 pp.

Stelidota geminata, *S. octomaculata*, and *S. strigosa* were collected in South Carolina. Location, habitat, and hosts are given. (72-73)

- 069 Kirk, V. M. 1970. A list of beetles of South Carolina. Part 2. *South Carolina Agr. Exp. Sta., Bull. 1038*. 117 pp.

Stelidota geminata, *S. octomaculata*, and *S. strigosa* were collected in South Carolina. Location, habitat, and hosts are given. (69)

- 070 Kirsch, T. F. W. 1873. Beitrage zur Kenntniss der Peruvanischen Käferfauna auf Dr. Abendroth's Sammlungen basiert. *Berl. Entomol. Z.*, 17:121-152. [Contributions to the knowledge of the Peruvian beetle fauna based on Dr. Abendroth's collection.]

Stelidota metabola and *S. thoracica* are described as new species. (141-142)

- 071 Kôno, H. 1940. Die Nitiduliden und Cucujiden in Tannen-und Fichtenwald in Japan. *Inst. Mats.*, 14:56-62. [The nitidulids and cucujids of the fir and spruce forest in Japan.]

The author describes *Stelidota hattorii* as a new species. (57-58)

- 072 LeConte, J. L. 1859. The complete writings of Thomas Say on entomology of North America. *Estes and Lauriat*, Boston, Mass. 2:1-814.

The author gives Say's original description of *Nitidula geminata* and *N. octomaculata* and places them in the genus *Stelidota*. (287)

- 073 LeConte, J. L. 1861. Classification of the Coleoptera of North America. *Smithsonian Inst. Misc. Collect.* 136. 208 pp.

No copy obtained. Believed to have information on *Stelidota*.

- 074 LeConte, J. L. and G. H. Horn. 1883. Classification of the Coleoptera of North America. Smithsonian Inst. Misc. Collect. 507. 567 pp.
- A key is given to the genera of Nitidulidae, including *Stelidota*, found in North America. (150)
- 075 Leng, C. W. 1920. Catalogue of the Coleoptera of America, North of Mexico. J. D. Sherman, Jr., Mt. Vernon, N. Y. 470 pp.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* are listed. *S. biseriata* is given as a synonym for *S. geminata* and *S. lusca* is listed as a synonym of *S. strigosa*. Distribution records are given. (196)
- 076 Leng, C. W. and A. J. Mutchler. 1917. Supplement to preliminary list of the Coleoptera of the West Indies. Bull. Amer. Mus. Nat. Hist., 37:191-220.
- Two species of *Stelidota* were mentioned from Puerto Rico. They were *S. geminata* and *S. ruderata*. (203)
- 077 Leonard, M. D. 1928. A list of the insects of New York with a list of spiders and certain other allied groups. Cornell Univ. Agr. Exp. Sta., Mem. 101, Ithaca, N. Y. 1121 pp.
- Stelidota geminata* and *S. octomaculata* were collected in New York. Collection location and host are given. (337)
- 078 Lindegren, J. E. and G. T. Okumura. 1973. Pathogens from economically important nitidulid beetles. ARS W-9, Western Region, U. S. Dep. Agr. 7 pp.
- Locality, date, host, and pathogen are given for *Stelidota geminata* and *Stelidota* sp. (6)
- 079 Loding, H. P. 1945. Catalogue of the beetles of Alabama. Monogr. 11, Geol Surv. of Alabama, Univ. of Ala. 172 pp.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* were collected in Alabama. Collection location and host or bait are given. (75)
- 080 McMullen, L. H., C. R. Drake, R. D. Shenefelt, and J. E. Kuntz. 1955. Long distance transmission of oak wilt in Wisconsin. Plant Dis. Report., 39(1):51-53.
- Stelidota octomaculata* is incriminated as a possible vector of oak wilt disease in Wisconsin. (52)
- 081 McMullen, L. H. and R. D. Shenefelt. 1961. Nitidulidae collected from banana bait traps in Wisconsin. Trans., Wis. Acad. Sci., Arts, and Letters, 50:233-237.
- Stelidota geminata*, *S. octomaculata*, and *S. strigosa* were collected from banana bait stations. (234) Data are presented on population frequency of all three species. (236-237)
- 082 McMullen. L. H., R. D. Shenefelt, and J. E. Kuntz. 1960. A study of insect transmission of oak wilt in Wisconsin. Trans., Wis. Acad. Sci., Arts and Letters, 49:73-84.

- Stelidota octomaculata* was collected on artificial wound on healthy oak trees. Experimental transmission of oak wilt was demonstrated with *S. octomaculata*.
- 083 Melsheimer, F. E. 1853. Catalogue of the described Coleoptera of the United States. Smithsonian Inst., Washington, D. C. 174 pp.
- Stelidota geminata* is listed as found in the United States. (41)
- 084 Moennich, H. 1939. List of Coleoptera found living in and on various fungi. Bull. Brooklyn Entomol. Soc., 34(3):155-157.
- Stelidota geminata* was collected on *Lactarius piperatus* (Fries). The author erroneously placed *S. geminata* within the family Dermestidae. (155)
- 085 Moennich, H. 1941. Supplement list of Coleoptera found living in and on various fungi. Bull. Brooklyn Entomol. Soc., 36(1):20-22.
- The author collected *S. geminata* from the fungus, *Panus strigosus*. (22)
- 086 Montrouzier, P. 1860. Essai sur la Fauna Entomologique de la Nouvelle - Caledonie. Ann. Soc. Entomol. France Ser. 3, 8:229-308. [Essay on the Entomological fauna of New Caledonia.]
- The author describes *S. balanomorpha* as a new species in the genus *Nitidula*. (263)
- 087 Murray, A. 1864. Monograph of the family of Nitidulariae. Part I. Trans. Linnean Soc. of London, 24:211-414.
- The author gives hybridization and introduction as an explanation of the closeness in appearance of *Stelidota didyma* and *S. orphana* to *S. geminata*. The previous species occur in Madagascar. A similar explanation for the close likeness of the Caribbean species is presented using *S. ruderata* as the parent. (228-229)
- 088 Muesebeck, C. F. W., K. V. Krombein and H. K. Townes. 1951. Hymenoptera of America North of Mexico, Synoptic Catalog. U.S. Dept. Agr., Agr. Monograph No. 2. U.S. Govt. Printing Office. 1420 pp.
- Cryptoserphus obsoletus* (Say) is listed as a parasite of *Stelidota strigosa*. (665)
- 089 Neel, W. W., B. D. Glick, L. L. May, and R. P. True. 1967. Attractiveness to Nitidulidae (Coleoptera) of natural attractants of tree and fungus origin supplemented with vinegar and water in an Appalachian hardwood forest. J. Econ. Entomol., 60(4):1104-1109.
- Stelidota geminata* adults were collected at bait stations in West Virginia. (1106) *Stelidota geminata* was one of the first nitidulids to appear at the bait stations. (1107)
- 090 Parsons, C. T. 1943. A revision of Nearctic Nitidulidae (Coleoptera). Bull. Mus. Comp. Zool., 92(3):119-278.

Stelidota geminata, *S. octomaculata*, and *S. strigosa* are given as being the only nearctic species of *Stelidota*. Distribution, description, and key are included. (208-211) The author erroneously places *S. biseriata* as a synonym for *S. octomaculata*. (211)

- 091 Parsons, C. T. 1972. On the mesosternum of some Nitidulidae (Coleoptera), with a key to new world *Amphicrossus*. Coleop. Bull., 26(3):103-115.

The mesosternum and part of the metasternum of *S. geminata* are illustrated. (105, 108) A key of the Nitidulidae using the mesosternum as the diagnostic character is provided. Other *Stelidota* mentioned are: *octomaculata*, *ferruginea* (=*strigosa* of Horn (1879) and Parsons (1943) in error), *strigosa* (=*strigosa* of Erichson, Reitter, and Sharp), *clavigera* Sharp, *chontalensis* Sharp, *solitaria* Sharp, and *multiguttata*. (107) Actually, the recognition of *S. ferruginea* was Parsons' way of restoring the species. *S. ferruginea* is the small species from southeastern U. S. and *S. strigosa* refers to a species occurring in Mexico, Central and South America.

- 092 Payne, J. A. and E. D. King. 1970. Coleoptera associated with pig carrion. Entomol. Monthly Mag., 105:224-232.

Stelidota geminata and *S. strigosa* were found to be associated with pig carrion in South Carolina. (231)

- 093 Pirone, D. 1974. Ecology of necrophilous and carpophilous Coleoptera in a southern New York woodland (phenology, aspectation, trophic and habitat preferences). Ph.D. Thesis, Fordham University, New York, N.Y.

This publication was not seen. According to Shubeck et al. 1977, one specimen of *Stelidota geminata* was taken at carrion in New York. (13)

- 094 Poinar, G. O., Jr. 1979. Nematodes for biological control of insects. CRC Press, Inc. Boca Raton, Fla. 277 pp.

The nematode *Heterogonema ovomacculis* was reported as a parasite of the adults of *Stelidota* sp. in Madagascar. (80-82) Also *Stelidota geminata* is listed in the host range of the nematode, *Neoaplectana carpopcapsae*. (151)

- 095 Randell, R. and R. H. Meyer. 1977. Major insect and mite pests of strawberries in Illinois. Pages 45-51 in J. W. Carter, ed. Proc., 1977 Illinois Strawberry School, Univ. of Illinois, Coop. Ext. Serv., Urbana-Champaign. 54 pp.

Describes *Stelidota geminata*, the type of damage it causes, and gives brief information about its biology and control. (49)

- 096 Reitter, E. 1873. Systematische Eitheilung der Nitidularien. Verhandl. Naturforsh. Ver. Brünn. Part 1. 12:3-194. [The systematic classification of the Nitidulidae.] Also published in 1874 by W. Burkart of Brünn.

A key is given for the *Stelidota* species: *metabola*, *octomaculata*, *alternans* (as a synonym of *octomaculata*), *thoracica*, *ferruginea*, *geminata*, *coenosa*, *ruderata*, *biseriata*, *strigosa*, and *rubripes*. (12-16) *Stelidota ferruginea*, *S. biseriata*, and *S. rubripes* are described as new species. Geographical distribution is given.

- 097 Reitter, E. 1874. *Beschreibungen neuer Käfer-Arten nebst synonymischen Notizen.* Verhandl. Zool.-Bot. Ges. Wien., 24:509-528. [The descriptions of new beetle species along with synonymic notes.]
- Stelidota aequalis* is described as a new species. Description and geographical distribution are given. (510)
- 098 Reitter, E. 1875. *Beschreibungen neuer Nitidulidae aus der Sammlung der Herren Deyrolle in Paris.* Verhandl. Naturforsch. Ver. Brünn., 13:99-122. [Descriptions of the new Nitidulidae from the collection of Mr. Deyrolle.]
- Stelidota didyma* is listed and description and distribution are given. (104)
- 099 Reitter, E. 1877a. *Japanische Nitidulidae,* Deut. Entomol. Z., 21:109-133. [Japanese Nitidulidae.]
- Stelidota multiguttata* and *S. dilatimanus* are described as new species. (110-111) *S. dilatimanus* is later transferred to *Pocadites*.
- 100 Reitter, E. 1877b. *Synonymische Bemerkungen.* Deut. Entomol. Z., 21:191 [Synonymical observations.]
- Stelidota sexguttata* is synonymized with *S. biguttata*. (191)
- 101 Reitter, E. 1879. *Verzeichniss der von H. Christoph in Ost-Sibirien gesammelten clavicornier, etc.* Deut. Entomol. Z., 23:209-226. [Catalogue of the clavicornes collected by H. Christoph in eastern Siberia, etc.]
- Stelidota sibirica* (216) and *Ipidia variolosa* (219) are described as new species.
- 102 Reitter, E. 1884-1885. *Die Nitiduliden Japans.* Wiener Entomol. Z., 3:257-272, 299-302; 4:141-142. [The Nitidulidae of Japan.]
- A key to the Nitidulidae of Japan included *Stelidota multiguttata*. (262) Collection data are presented in volume 4. (142) The genus *Pocadites* is erected and *S. dilatimanus* is placed in it. (264-267) The author places *S. sibirica* in *Ipidia*. (262)
- 103 Reitter, E. 1919. *Bestimmungs-Tabelle der Coleopteren-Familien: Nitidulidae und Byturidae aus Europa und der angrenzenden Landern,* Verhandl. Ver Brünn., 56:1-104. [Key to coleopteran families: Nitidulidae and Byturidae of Europe and bordering countries.]
- The author describes *Stelidota octusis* (76) and places *Ipidia sibirica* in the genus *Stelidota*. (77)
- 104 Remillet, M. and D. Van Waerebeke. 1972. *Particularites du cycle heterogonique de deux nematode Tylenchida parasites de Nitidulidae.* C. R. Acad. Sci. Paris, 275:1507-1509. [Details of the heterogonic cycle of two parasitic Tylenchida nematodes of Nitidulidae.]
- Two nematodes from Malagasy Republic (Madagascar) were studied. One is parasitic on *Stelidota* sp., the other is parasitic on *Carpophilus* sp.

- 105 Remillet, M. and D. Van Waerebeke. 1978. Description et cycle biologique de *Heteromorphotylenchus stelidotae* N. G., n. sp. et de *Heteromorphotylenchus carpophili* n. sp. (Nematoda: Allantonematidae). *Nematologica*, 24:222-238. [Description and biological cycle of the *Heteromorphotylenchus stelidotae* N. G., n. sp. and *H. carpophili* n. sp. (Nematoda: Allantonematidae).]
- The nematode *Heteromorphotylenchus stelidotae* is reported being parasitic on *Stelidota remelleti*. Biology and description are given for *H. stelidotae*.
- 106 Riley, C. V. and L. O. Howard. 1892. Some of the bred parasitic Hymenoptera in the national collection. *Insect Life*, 4:122-126.
- Stelidota strigosa* larvae are parasitized by *Proctotrypes* (=*Cryptoserphus*) *obsoletus* (Say). (126)
- 107 Sahlberg, R. F. 1834. *Bull. Mosc.*, 7:273.
- No copy obtained. According to Jelinek 1965, contains original description of *Nitidula sexguttata*.
- 108 Say, T. 1825. Descriptions of new species of Coleopterous insects inhabiting the United States. *J. Acad. Nat. Sci., Philadelphia*, Part I., 5:160-204.
- Say described *Nitidula geminata* and *N. octomaculata* as new species. Collection localities are given. (181)
- 109 Schaufuss, C. 1891. Beitrag zur Käferfauna Madagascars. *Tijdschr. Entomol.*, 34:1-35. [Contribution to the beetle fauna of Madagascar.]
- Omosiphora costata* is described as a new species. (6)
- 110 Schaufuss, C. 1916. Calwer's Käferbuch Einführung in die Kenntnis der Käfer Europas. E. Schweizerbart'sche Verlagbuchhandlung, Stuttgart. 709 pp. [Calwer's Beetle Book. Introduction to knowledge of European beetles.]
- A key is given for the nitidulid genera in Europe. *Stelidota* is among the genera listed. (422)
- 111 Schall, Mrs. G. and C. V. Riley. 1884. Strawberry fruit beetles. *Bull. Dep. Agr. Entomol.*, Vol. 4.
- This is the first record of *Stelidota* damaging strawberries. The crop was entirely destroyed by these sap beetles according to Mrs. Schall, Montgomery Co., Pa. The beetles came in as the berries began to turn color and ate small holes in them. The damage is typical of *Stelidota* damage seen today. They were identified as *Stelidota strigosa*; however, most likely they were *Stelidota geminata*. *S. geminata* is the common strawberry pest in Pennsylvania and all neighboring states.
- 112 Seidlitz, von G. 1872. Fauna Baltica. Die Käfer der Ostseeprovinzen Russlands, Ed. 1. Leipfrungz. Dorpat. [Baltic Fauna. The beetles of the eastern provinces of Russia.]

No copy obtained. Believed that author placed *Nitidula sexguttata* in *Ipidea*.

- 113 Seidlitz, von G. 1888. Fauna Baltica. Die Käfer der deutschen Ostseeprovinzen Russlands. Ed. 2. Königsborg, Germ. p. [Baltic fauna. The beetles of German east provinces of Russia.]

The author assigned the *Ipidia sexguttata* to the genus *Stelidota*. (214)

- 114 Sharp, D. 1890. Biologia Centrali-Americanana, Insects, Coleoptera. Part I. Vol. 20. 717 pp.

The four species of *Stelidota* previously known from Central America were: *strigosa*, *rubripes*, *geminata*, and *alternans*. New species of *Stelidota* were: *pallens*, *solitaria*, *ovalis*, *stictica*, *bugabensis*, *fortis*, *clavigera*, *chontalensis*, *championi*, and *extranea*. Descriptions are given. (310-315)

- 115 Shubeck, P. P., N. M. Downie, R. L. Wenzel, and S. B. Peck. 1977. Species composition of carrion beetles in a mixed-oak forest. Wm. L. Hutcheson Mem. Forest Bull., 4(1):12-17.

One *Stelidota geminata* was taken at carrion in this study. (13 and 14)

- 116 Smith, J. B. 1910. Annual report of the New Jersey State Museum, including a report of the insects of New Jersey. MacCrellish and Quigley, Trenton, N. J. 888 pp.

Stelidota geminata, *S. octomaculata*, and *S. strigosa* are listed. Habitat and state distribution are given for each species. (272)

- 117 Stierlin, W. G. 1877. Mitt. Schw. Entomol. Ges. Vol., 5:479.

No copy obtained. Believed to have information on *S. biguttata*.

- 118 Spornraft, K. 1967. Clavicornia. In Freude, Harde and Lohse, Die Käfer Mitteleuropa, Goeke and Evers Krefeld, Germ. 310 pp.

Mentions that *Stelidota sexguttata* is in the genus *Ipidia*. A key to *Ipidia* is given. (20-89)

- 119 Sutherland, D. W. S. (Chairman). 1978. Common names of insects and related organisms (1978 Revision). Entomological Society of America, College Park, Md. 132 pp.

The Committee on Common Names of Insects of the Entomological Society of America lists the approved common name "strawberry sap beetles" for *Stelidota geminata* (Say). (37, 79)

- 120 USDA. 1959. Coop. Econ. Insect Report. 9(51):1050.^{2/}

^{2/} U. S. Dep. of Agriculture, Cooperative Economic Insect Report, began with Vol. 1, No. 1, July 31, 1951. It contains reports of insect occurrence and abundance, particularly of economic pests, from information supplied by Survey Entomologists in the various states and by others. In 1976 it was replaced by Cooperative Plant Pest Report, Vol. 1, No. 1, Feb. 6, 1976, which, in addition, reports occurrence of plant diseases. Issued by Plant Protection and Quarantine Programs, Animal and Plant Health Inspection Service, U. S. Dep. of Agriculture.

High populations of *Stelidota geminata* were found in dropped sapote and figs in San Diego County, Calif. It is believed that the beetle is established in California.

- 121 USDA. 1963. Coop. Econ. Insect Report. 13(9):152, (33):953.

Stelidota geminata with other species of Nitidulidae were occasional pests of sweet corn in Virginia (152), and were numerous on decaying melons in Chilton County, Ala. (953)

- 122 USDA. 1964. Coop. Econ. Insect Report. 14(24):616.

Stelidota geminata were infesting strawberry fruit in Montgomery County, Md.

- 123 USDA. 1965. Coop. Econ. Insect Report. 15(7):83

Stelidota strigosa were taken from hand-pollinated sweet corn in Dade County, Fla.

- 124 USDA. 1966. Coop. Econ. Insect Report. 16(26):611, (28):677, (31):758, (37):906.

A *Stelidota* sp. abundant in ripe strawberries in southwestern Michigan was *S. geminata*, not *S. octomaculata* as first thought. Damage was so heavy that one-third of crop was not harvested. (611, 677) Larvae and adults were later collected from blackberry fruit (758) and feeding was reported on peaches and pears. (906)

- 125 USDA. 1967. Coop. Econ. Insect Report. 17(12):205, 211, (19):389.

Stelidota geminata adults were collected from tomato fruit in Michigan (205), were reported damaging melons in Berrien County, Michigan (211), and were reported found on strawberries (389) in Michigan.

- 126 USDA. 1968. Coop. Econ. Insect Report. 18(11):201, (24):525, (26):590.

Stelidota geminata first appear in southwestern Michigan strawberry fields about June 8. Organic phosphate baits gave good control. (201, 590) Migration from woodlots to strawberries was reported. (525)

- 127 USDA. 1970. Coop. Econ. Insect Report. 20(12):203.

Harvest of strawberry fruit was 90-95% complete in Michigan before migration of *Stelidota geminata* into strawberry planting began.

- 128 USDA. 1971. Coop. Econ. Insect Report. 21(14):227, (24):415.

Migration of *Stelidota geminata* into strawberry plantings coincided with harvest in Michigan. (227) Adults were collected in woodlots bordering strawberry fields on May 28. (415)

- 129 USDA. 1978. Coop. Plant Pest Report. 3(23):256.

Stelidota geminata damaged about 40.5 hectares of strawberry fruit in Indiana.

- 130 USDA. 1976. Paint lures insects. *Agri. Res.*, 15:12.
Two red acrylic paints attracted *Stelidota geminata* adults in Michigan.
- 131 Van Dyke, E. C. 1953. The Coleoptera of the Galapagos Islands. *Occas. Papers Calif. Acad. Sci.*, No. 22. 181 pp.
Stelidota insularis is described as a new species. Description and collection data are given. (62)
- 132 Vogt, G. B. 1950. Occurrence and records of Nitidulidae. *Coleopt. Bull.*, 4(6):81-91.
Stelidota geminata and *S. strigosa* were collected on oak sap flows in Maryland. Seasonal abundance is given. (85) *Stelidota geminata*, *S. strigosa*, and *S. octomaculata* were collected on other hosts in Maryland. (90)
- 133 Vogt, G. B. 1951. Occurrence and records of Nitidulidae. *Coleopt. Bull.*, 5(1):4-11.
Stelidota geminata and *S. strigosa* were collected on rotting orange fruit in Florida. (4) *Stelidota strigosa* and *S. geminata* were collected on rotten citrus fruit in Texas. (6)
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- 135 Washburn, F. L. 1919. The Hymenoptera of Minnesota. 17th Rep. State Entomologist of Minn., Agri. Exp. Sta., Univ. Farm, St. Paul. Dec. 1918. pp. 145-237.
Serphus obsoletus Say was reported to parasitize *Stelidota strigosa*. (197)
- 136 Weber, R. G. 1971. The biology of *Stelidota geminata* (Say) (Coleoptera: Nitidulidae). Univ. of Delaware, M. S. thesis. 42 pp.
Data are presented on rearing, sex ratio, adult size, distribution, biology of all stages, and fecundity of *S. geminata*.
- 137 Weber, R. G. and W. A. Connell. 1975. *Stelidota geminata* (Say): studies of its biology (Coleoptera: Nitidulidae). *Ann. Entomol. Soc. Amer.*, 68(4):649-653.
Data are presented on biology, host range, and rearing of *S. geminata*. Illustrations of the final larval instar and pupa are given.
- 138 Weiss, H. B. and E. West. 1920. Fungus insects and their hosts. *Proc. Biol. Soc. Wash.*, 33:1-20.
Stelidota geminata was collected on *Polyporus chinoeus* (Fries) in New Jersey. (7)
- 139 Weiss, H. B. and E. West. 1921. Notes on fungous insects. *Proc. Biol. Soc. Wash.*, 34:168.

The genus *Stelidota* is mentioned. (168)

- 140 Weiss, M. J. and R. N. Williams. 1978. Distribution of the strawberry sap beetles, *Stelidota geminata* (Say) (Coleoptera: Nitidulidae). Proc., N. C. Branch, Entomol. Soc. Amer., 33:55-56. (Abstract)

Stelidota geminata is found throughout the eastern, southern, and midwestern United States as well as southern California. In addition, this species is known from Canada, Mexico, Central America, West Indies, and South America. Distribution was determined from collection data from insect reference collections throughout North and South America.

- 141 Weiss, M. J., R. N. Williams, and C. C. Loan. 1978. Euphorine parasitism of *Stelidota geminata* (Say) (Coleoptera: Nitidulidae) with description of a new species of *Microctonus* Wesmael (Hymenoptera: Braconidae). Natur. Can., 105: 323-326.

Microctonus nitidulidis is reported being parasitic on adults of *Stelidota geminata*. Description and biology are given for *M. nitidulidis*.

- 142 Weiss, M. J. and R. N. Williams. 1979a. A new parasite of the strawberry sap beetle. OARDC, Ohio Report, 64(1):3-5.

Preliminary biology is reported for a new species of *Microctonus* (Hymenoptera: Braconidae) which is parasitic on adult *S. geminata*. Illustrations are given for the parasite.

- 143 Weiss, M. J. and R. N. Williams. 1979b. Swan song for sap beetle. Amer. Fruit Grower, 99(5):14,40.

Report on the discovery and preliminary findings of a *Microctonus* parasite of the strawberry sap beetle, *Stelidota geminata*.

- 144 Weiss, M. J. 1979. The biology of *Microctonus nitidulidis* Loan (Hymenoptera: Braconidae), a parasite of *Stelidota geminata* (Say) (Coleoptera: Nitidulidae). Ohio State Univ., M. S. thesis. 54 pp.

Data are presented on laboratory rearing, longevity, host range, and parasitization of a field population of *S. geminata* by *Microctonus nitidulidis*. The effects of parasitism on the host are discussed.

- 145 Williams, F. X. 1932. *Exallonyx philonthiphagus*, a new proctotrypid wasp in Hawaii, and its host. Proc., Hawaiian Entomol. Soc., 8:205-208.

Cryptoserphus obsoletus (Say) reported as a parasite of the larvae of *Stelidota strigosa*. (207)

- 146 Wolcott, G. N. 1948. The insects of Puerto Rico. J. Agr. of Univ. Puerto Rico, Rio Piedras, 32:1-975.

Stelidota geminata, *S. ruderata*, and *S. strigosa* were collected in Puerto Rico. (297)

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GILLOGLY. MICRONESIA ALTERNATA TAXONOMY		038	1962

GILLOGLY. TAXONOMY*	GILLOGLY. TAXONOMY*	039	1965
GILLOGLY. VENEZUELA DISTICHA GUACHARENSI		037	1962
GROUVELLE. AFRICA MALAGASY-REPUBLIC CLAV		044	1899
GROUVELLE. BENGAL MULTIGUTTATA* GROUVEL		042	1892
GROUVELLE. CEYLON MULTIGUTTATA* GROUVEL		043	1893
GROUVELLE. DISTRIBUTION AEQUALIS ALTERNA		050	1913
GROUVELLE. EXPLANATA DISTRIBUTION* GROU		051	1913
GROUVELLE. GUADELOUPE THORACICA GEMINATA		045	1902
GROUVELLE. INDIA NIGROVARIA MULTIGUTTATA		049	1908
GROUVELLE. ITALY NIGROVARIA* GROUVELLE.		040	1890
GROUVELLE. MERIDIONALIS TRIMACULATA* AR		047	1906
GROUVELLE. NEW-CALEDONIA LIFUANA* GROUV		046	1903
GROUVELLE. PHILIPPINES OCTONATA* GROUVE		052	1916
GROUVELLE. VENEZUELA MARGINATA TAXONOMY*		041	1891
GROUVELLE. VICINA ARGENTINA* GROUVELLE.		048	1906
GUACHARENSIS TAXONOMY* GILLOGLY. VENEZU		037	1962
GUADELOUPE THORACICA GEMINATA CHONTALENS		045	1902
GYLLENHAL. STRIGOSA LUSCA* GYLLENHAL. S		053	1808
HAMILTON. PENNSYLVANIA GEMINATA OCTOMACU		054	1895
HATCH. MICHIGAN OCTOMACULATA* HATCH. MI		055	1924
HATTORII* HISAMATSUA. JAPAN HATTORII*		059	1953
HATTORII* JELINEK. GEMINATA MULTIGUTTAT		065	1965
HATTORII* KONO. JAPAN HATTORII* KONO.		071	1940
HEADSTROM. TAXONOMY GEMINATA* HEADSTROM		056	1977
HENSHAW. GEMINATA OCTOMACULATA NORTH-AME		057	1885
HINTON. GEMINATA DISTRIBUTION RICE UNITE		058	1945
HISAMATSUA. JAPAN HATTORII* HISAMATSUA.		059	1953
HISAMATSUA. OCTUSIS JAPAN DISTRIBUTION*		060	1966
HORN. UNITED-STATES DISTRIBUTION GEMINAT		061	1879
HOST STELIDOTA-SP.* WEISS. FUNGI HOST		139	1921
HOST* BOVING. TAXONOMY GEMINATA HOST*		009	1962
HOST* FAUVEL. NEW-CALEDONIA BALANOMORPH		031	1903
HOST* WEBER. GEMINATA HOST* WERER. GEM		137	1975
HOST* WEISS. FUNGUS GEMINATA HOST* WEI		138	1920
HOSTS ATTRACTANTS* GERTZ. BIOLOGY CONTR		034	1968
HOSTS ATTRACTANTS CONTROL* GERTZ. GEMIN		035	1968
HOSTS ATTRACTANTS WEST-VIRGINIA* NEEL.		089	1967
HOSTS NEW-YORK* LEONARD. GEMINATA OCTOM		077	1926
HOSTS PATHOGENS NATURAL-ENEMIES NEMATOES		078	1973
HOSTS* CONNELL. DELAWARE TAXONOMY GEMIN		018	1956
HOSTS* HAMILTON. PENNSYLVANIA GEMINATA		054	1895
HOSTS* KIRK. GEMINATA OCTOMACULATA STRI		068	1969
HOSTS* KIRK. SOUTH-CAROLINA GEMINATA OC		069	1970
HOSTS* LODING. ALABAMA GEMINATA OCTOMAC		079	1945
HOSTS* MOENNICH. FUNGI GEMINATA HOSTS*		084	1939
HOSTS* VOGL. GEMINATA STRIGOSA OAK MARY		132	1950
HUBBARD. FLORIDA MICHIGAN GEMINATA OCTOM		062	1878
ILLINOIS STRAWBERRY DAMAGE* RANDELL. IL		095	1977
INDIA MULTIGUTTATA NIGROVARIA DISTRIBUTI		016	1924
INDIA NIGROVARIA MULTIGUTTATA DISTRIBUTI		049	1908
INDIANA DISTRIBUTION GEMINATA OCTOMACULA		008	1910
INDIANA* USDA. GEMINATA STRAWBERRY INDI		129	1978
INSULARIS ECUADOR* VAN-DYKE. GALAPAGOS-		131	1953
INTEGRA* WANKOWICZ. INTEGRA* WANKOWICZ		134	1867
ITALY NIGROVARIA* GROUVELLE. ITALY NIGR		040	1890
JACQUILIN-DUVAL. CUBA COENOSA RUDERATA*		063	1856

JANTZ. ATTRACTANT GEMINATA PAINT MICHIGA	064	1967
JAPAN DISTRIBUTION* HISAMATSUA. OCTUSIS	060	1966
JAPAN HATTORII* HISAMATSUA. JAPAN HATTO	059	1953
JAPAN HATTORII* KONO. JAPAN HATTORII*	071	1940
JAPAN SIBIRICA DILATIMANA* CHUJO. JAPAN	020	1960
JAPAN* REITTER. MULTIGUTTATA DILATIMAUS	099	1877
JELINEK. AFRICA MADAGASCAR COSTATA* JEL	066	1967
JELINEK. GEMINATA MULTIGUTTATA STRIGOSA	065	1965
JOHNSON. MASSACHUSETTS GEMINATA* JOHNSO	067	1930
KIRK. GEMINATA OCTOMACULATA STRIGOSA SOU	068	1969
KIRK. SOUTH-CAROLINA GEMINATA OCTOMACULA	069	1970
KIRSCH. PERU METABOLA THORACICA* KIRSCH	070	1873
KONO. JAPAN HATTORII* KONO. JAPAN HATTO	071	1940
LATA TAXONOMY* AUBE. EUROPE ALGERIA LAT	005	1850
LECONTE. NORTH-AMERICA GEMINATA OCTOMACU	072	1859
LECONTE. NORTH-AMERICA STELIDOTA-SPP.*	073	1861
LECONTE. NORTH-AMERICA STELIDOTA-SPP.*	074	1883
LENG. GEMINATA OCTOMACULATA UNITED-STATE	075	1920
LENG. PUERTO-RICO GEMINATA RUDERATA WEST	076	1917
LEONARD. GEMINATA OCTOMACULATA HOSTS NEW	077	1926
LIFUANA HOST* FAUVEL. NEW-CALEDONIA BAL	031	1903
LIFUANA MARGINATA MERIDIONALIS METABOLA	050	1913
LIFUANA* GROUVELLE. NEW-CALEDONIA LIFUA	046	1903
LINDEGREN. HOSTS PATHOGENS NATURAL-ENEMI	078	1973
LODING. ALABAMA GEMINATA OCTOMACULATA ST	079	1945
LUSCA DISTRIBUTION* LENG. GEMINATA OCTO	075	1920
LUSCA STRIGOSA GEMINATA RUDERATA COENOSA	028	1843
LUSCA* GYLLENHAL. STRIGOSA LUSCA* GYL	053	1808
MADAGASCAR COSTATA* JELINEK. AFRICA MAD	066	1967
MADAGASCAR COSTATA* SCHAUFUSS. MADAGASC	109	1891
MADAGASCAR NEMATODE* REMILLET. NATURAL-	104	1972
MADAGASCAR RUDERATA* MURRAY. DIDYMA ORP	087	1864
MADAGASCAR* POINAR. NEMATODE PARASITE G	094	1979
MALAGASY-REPUBLIC CLAVICORNIS COSTULATA*	044	1899
MARGINATA COENOSA OCTUSIS SEXGUTTATA SIB	065	1965
MARGINATA MERIDIONALIS METABOLA OVALIS P	006	1945
MARGINATA MERIDIONALIS METABOLA MULTIGUT	050	1913
MARGINATA TAXONOMY* GROUVELLE. VENEZUEL	041	1891
MARYLAND DAMAGE STRAWBERRY* FUNT. MARYL	033	1977
MARYLAND OCTOMACULATA HOSTS* VOGT. GEMI	132	1950
MARYLAND* USDA. GEMINATA STRAWBERRY MAR	122	1964
MASSACHUSETTS GEMINATA* JOHNSON. MASSAC	067	1930
MCMULLEN. BANANA WISCONSIN GEMINATA OCTO	081	1961
MCMULLEN. OAK-WILT OCTOMACULATA DISEASE-	080	1955
MCMULLEN. OCTOMACULATA DISEASE-TRANSMISS	082	1960
MELONS ALABAMA* USDA. GEMINATA SWEET-CO	121	1963
MELONS* USDA. GEMINATA TOMATO STRAWBERR	125	1967
MELSHEIMER. GEMINATA UNITED-STATES* MEL	083	1853
MFRIDIONALIS METABOLA OVALIS PALLENS RUB	006	1945
MERIDIONALIS METABOLA MULTIGUTTATA NIGRO	050	1913
MERIDIONALIS TRIMACULATA* ARGENTINA GRO	047	1906
METABOLA MULTIGUTTATA NIGROVARIA OCTOMAC	050	1913
METABOLA OCTOMACULATA ALTERNANS OCTOMACU	096	1873
METABOLA OVALIS PALLENS RUBRIPES RUDERAT	006	1945
METAROLA THORACICA* KIRSCH. PERU METABO	070	1873
MEXICO CENTRAL-AMERICA WEST-INDIES SOUTH	006	1945

MEXICO CENTRAL-AMERICA WEST-INDIES SOUTH		140	1978
MEXICO STRIGOSA COCONUT-PALM* CARRILLO-	014	1966	
MICHIGAN BIOLOGY STRAWBERRY HOSTS ATTRAC	035	1968	
MICHIGAN GEMINATA OCTOMACULATA STRIGOSA*	062	1878	
MICHIGAN OCTOMACULATA* HATCH. MICHIGAN	055	1924	
MICHIGAN PAINT* USDA. ATTRACTANTS GEMIN	130	1976	
MICHIGAN STRAWBERRY CONTROL WOODLOTS* U	126	1968	
MICHIGAN WOODLOTS* USDA. GEMINATA STRAW	128	1971	
MICHIGAN* JANTZ. ATTRACTANT GEMINATA PA	064	1967	
MICRONESIA ALTERNATA TAXONOMY NIGROVARIA	038	1962	
MOENNICH. FUNGI GEMINATA HOSTS* MOENNICH	084	1939	
MOENNICH. FUNGI GEMINATA* MOENNICH. FUN	085	1941	
MOLASSES* FROST. GEMINATA ATTRACTANTS M	032	1929	
MONTROUZIER. NEW-CALEDONIA BALANOMORPHA*	086	1860	
MUESEBECK. PARASITE STRIGOSA* MUESEBECK	088		
MULTIGUTTATA DISTRIBUTION* GROUVELLE. I	049	1908	
MULTIGUTTATA DILATIMAUS JAPAN* REITTER.	099	1877	
MULTIGUTTATA DILATIMANUS SIBIRICA* REIT	102	1884	
MULTIGUTTATA NIGROVARIA DISTRIBUTION* C	016	1924	
MULTIGUTTATA NIGROVARIA OCTOMACULATA ORI	050	1913	
MULTIGUTTATA STRIGOSA MARGINATA COENOSA	065	1965	
MULTIGUTTATA* GROUVELLE. BENGAL MULTIGU	042	1892	
MULTIGUTTATA* GROUVELLE. CEYLON MULTIGU	043	1893	
MULTIGUTTATA* PARSONS. GEMINATA NORTH-A	091	1972	
MURRAY. DIDYMA ORPHANA GEMINATA MADAGASC	087	1864	
NATURAL-ENEMIES PARASITE STRIGOSA* ASHM	004	1893	
NATURAL-ENEMIES PARASITE STRIGOSA* BRUE	013	1916	
NATURAL-ENEMIES PARASITE STRIGOSA* EAST	027	1929	
NATURAL-ENEMIES NEMATOES STELIDOTA-SP.*	078	1973	
NATURAL-ENEMIES MADAGASCAR NEMATODE* RE	104	1972	
NATURAL-ENEMIES NEMATODE REMELLETI* REM	105	1978	
NATURAL-ENEMIES* RILEY. PARASITE NATURA	106	1892	
NATURAL-ENEMIES STRIGOSA* WASHBURN. PAR	135	1919	
NATURAL-ENEMIES* WEISS. GEMINATA PARASI	141	1978	
NATURAL-ENEMIES GEMINATA* WEISS. PARASI	142	1979	
NATURAL-ENEMIES PARASITE GEMINATA* WEIS	143	1979	
NATURAL-ENEMIES* WEISS. BIOLOGY PARASIT	144	1979	
NATURAL-ENEMIES STRIGOSA* WILLIAMS. PAR	145	1932	
NEEL. FUNGUS VINEGAR GEMINATA HOSTS ATTR	089	1967	
NEMATODE PARASITE GEMINATA STELIDOTA-SP.	094	1979	
NEMATODE REMELLETI* REMILLET. NATURAL-E	105	1978	
NEMATODE* REMILLET. NATURAL-ENEMIES MAD	104	1972	
NEMATOES STELIDOTA-SP.* LINDEGREN. HOST	078	1973	
NEW-CALEDONIA BALANOMORPHA LIFUANA HOST*	031	1903	
NEW-CALEDONIA BALANOMORPHA* MONTROUZIER	086	1860	
NEW-CALEDONIA LIFUANA* GROUVELLE. NEW-C	046	1903	
NEW-JERSEY GEMINATA OCTOMACULATA STRIGOS	116	1910	
NEW-JERSEY OAK-FOREST GERINATA* SHUBECK	115	1977	
NEW-YORK GEMINATA* PIRONE. CARRION NEW-	093	1974	
NEW-YORK* LEONARD. GEMINATA OCTOMACULAT	077	1926	
NEW-ZEALAND TAXONOMY* BROUN. NEW-ZEALAN	012	1880	
NIGROVARIA CLAVICORNIS* FAIRMAIRE. POLY	029	1849	
NIGROVARIA DISTRIBUTION* CHATTERJEE. IN	016	1924	
NIGROVARIA DISTRIBUTION* GILLOGLY. MICR	038	1962	
NIGROVARIA MULTIGUTTATA DISTRIBUTION* G	049	1908	
NIGROVARIA OCTOMACULATA ORIENTALIS OVALI	050	1913	

NIGROVARIA*	GROUVELLE. ITALY	NIGROVARIA	040	1890
NORTH-AMERICA	BISERIATA*	PARSONS. GEMIN	090	1943
NORTH-AMERICA	GEMINATA	OCTOMACULATA* LE	072	1859
NORTH-AMERICA	OCTOMACULATA	FERRUGINEA ST	091	1972
NORTH-AMERICA	STELIDOTA*	BRADLEY. TAXON	010	1930
NORTH-AMERICA	STRIGOSA	DISTRIBUTION* CR	021	1880
NORTH-AMERICA	STRIGOSA	DISTRIBUTION* HE	057	1885
NORTH-AMERICA	STELIDOTA-SPP.*	LECONTE.	073	1861
NORTH-AMERICA	STELIDOTA-SPP.*	LECONTE.	074	1883
NORTH-CAROLINA	GEMINATA	OCTOMACULATA DIS	011	1938
NORTH-CAROLINA	DAMAGE	STELIDOTA-SPP. BAN	022	1966
OAK MARYLAND	OCTOMACULATA	HOSTS* VOGT.	132	1950
OAK DAK-WILT*	MCMULLEN.	OCTOMACULATA DI	082	1960
OAK-FOREST	GERINATA*	SHUBECK. CARRION N	115	1977
OAK-WILT	GEMINATA	DISEASE-TRANSMISSION W	024	1956
OAK-WILT	OCTOMACULATA	DISEASE-TRANSMISSI	080	1955
OAK-WILT*	MCMULLEN.	OCTOMACULATA DISEAS	082	1960
OCTOMACULATA	ALTERNANS	OCTOMACULATA THOR	096	1873
OCTOMACULATA	BLACKBERRY	PEACHES PEARS*	124	1966
OCTOMACULATA	DISTRIBUTION*	BRIMLEY. NOR	011	1938
OCTOMACULATA	DISEASE-TRANSMISSION	WISCON	080	1955
OCTOMACULATA	DISEASE-TRANSMISSION	OAK OA	082	1960
OCTOMACULATA	FERRUGINEA	STRIGOSA CLAVIGE	091	1972
OCTOMACULATA	HOSTS*	HAMILTON. PENNSYLV	054	1895
OCTOMACULATA	HOSTS NEW-YORK*	LEONARD. G	077	1926
OCTOMACULATA	HOSTS*	VOGT. GEMINATA STRI	132	1950
OCTOMACULATA	NORTH-AMERICA	STRIGOSA DIST	021	1880
OCTOMACULATA	NORTH-AMERICA	STRIGOSA DIST	057	1885
OCTOMACULATA	ORIENTALIS	OVALIS PALLENS R	050	1913
OCTOMACULATA	STRIGOSA*	DURY. OHIO GEMIN	026	1902
OCTOMACULATA	STRIGOSA DISTRIBUTION*	FAT	030	1937
OCTOMACULATA	STRIGOSA	BISERIATA* HORN.	061	1879
OCTOMACULATA	STRIGOSA*	HUBBARD. FLORIDA	062	1878
OCTOMACULATA	STRIGOSA	SOUTH-CAROLINA HOS.	068	1969
OCTOMACULATA	STRIGOSA HOSTS*	KIRK. SOUTH	069	1970
OCTOMACULATA	STRIGOSA HOSTS*	LODING. AL	079	1945
OCTOMACULATA	STRIGOSA ATTRACTANTS	BANANA	081	1961
OCTOMACULATA	STRIGOSA	NORTH-AMERICA BISE	090	1943
OCTOMACULATA	STRIGOSA DISTRIBUTION*	SMI	116	1910
OCTOMACULATA	TAXONOMY	BISERIATA* BLACKW	007	1948
OCTOMACULATA	THORACICA	FERRUGINEA GEMINA	096	1873
OCTOMACULATA	UNITED-STATES	STRIGOSA BISE	075	1920
OCTOMACULATA*	BLATCHLEY.	INDIANA DISTRI	008	1910
OCTOMACULATA*	CHAGON.	QUEBEC TAXONOMY O	015	1916
OCTOMACULATA*	GIBSON.	OHIO APPLE OCTOMA	036	1959
OCTOMACULATA*	HATCH.	MICHIGAN OCTOMACUL	055	1924
OCTOMACULATA*	LECONTE.	NORTH-AMERICA GE	072	1859
OCTOMACULATA*	SAY.	UNITED-STATES TAXONO	108	1825
OCTONATA*	GROUVELLE.	PHILIPPINES OCTONA	052	1916
OCTUSIS JAPAN	DISTRIBUTION*	HISAMATSUA.	060	1966
OCTUSIS SEXGUTTATA	SIBIRICA	HATTORII*. J	065	1965
OCTUSIS SIBIRICA*	REITTER.	EUROPE OCTUS	103	1919
OHIO APPLE	OCTOMACULATA*	GIBSON. OHIO A	036	1959
OHIO GEMINATA	OCTOMACULATA	STRIGOSA* DU	026	1902
ORANGE FLORIDA	CITRUS TEXAS*	VOGT. GEMI	133	1951
ORANGE*	ARMSTRONG.	CALIFORNIA GEMINATA	001	1976

ORIENTALIS OVALIS PALLENS RUBIPES RUDERA	050	1913
ORIENTALIS TAXONOMY* ARROW. ORIENTALIS	003	1900
ORPHANA GEMINATA MADAGASCAR RUDERATA* M	087	1864
ORPHANA* ERICHSON. TAXONOMY LUSCA STRIG	028	1843
OVALIS PALLENS RUBIPES RUDERATA SOLITAR	006	1945
OVALIS PALLENS RUBIPES RUDERATA SEXGUTTA	050	1913
OVALIS STICTICA BUGABENSIS FORTIS CLAVIG	114	1890
PAINT MICHIGAN* JANTZ. ATTRACTANT GEMIN	064	1967
PAINT* USDA. ATTRACTANTS GEMINATA MICH	130	1976
PALLENS RUBIPES RUDERATA SEXGUTTATA SIGN	050	1913
PALLENS RUBIPES RUDERATA SOLITARIA STIC	006	1945
PALLENS SOLITARIA OVALIS STICTICA BUGABE	114	1890
PARASIE NATURAL-ENEMIES* WEISS. GEMINAT	141	1978
PARASITE GEMINATA STELIDOTA-SP. MADAGASC	094	1979
PARASITE GEMINATA* WEISS. NATURAL-ENEMI	143	1979
PARASITE GEMINATA NATURAL-ENEMIES* WEIS	144	1979
PARASITE NATURAL-ENEMIES* RILEY. PARASI	106	1892
PARASITE NATURAL-ENEMIES STRIGOSA* WASH	135	1919
PARASITE NATURAL-ENEMIES STRIGOSA* WILL	145	1932
PARASITE STRAWBERRY-SAP-BEETLE NATURAL-E	142	1979
PARASITE STRIGOSA* ASHMEAD. NATURAL-ENE	004	1893
PARASITE STRIGOSA* BRUES. CONNECTICUT N	013	1916
PARASITE STRIGOSA* EASTHAM. NATURAL-ENE	027	1929
PARASITE STRIGOSA* MUESEBECK. PARASITE	088	
PARSONS. GEMINATA OCTOMACULATA STRIGOSA	090	1943
PARSONS. GEMINATA NORTH-AMERICA OCTOMACU	091	1972
PATHOGENS NATURAL-ENEMIES NEMATOES STELI	078	1973
PAYNE. GEMINATA STRIGOSA SOUTH-CAROLINA*	092	1970
PEACHES PEARS* USDA. STRAWBERRY GEMINAT	124	1966
PEARS* USDA. STRAWBERRY GEMINATA OCTOMA	124	1966
PENNSYLVANIA GEMINATA OCTOMACULATA HOSTS	054	1895
PERU METABOLA THORACICA* KIRSCH. PERU M	070	1873
PHILIPPINES OCTONATA* GROUVELLE. PHILIP	052	1916
PIRONE. CARRION NEW-YORK GEMINATA* PIRO	093	1974
POINAR. NEMATODE PARASITE GEMINATA STELI	094	1979
POLYNESIA NIGROVARIA CLAVICORNIS* FAIRM	029	1849
PUERTO-RICO GEMINATA RUDERATA WEST-INDIE	076	1917
PUERTO-RICO GEMINATA RUDERATA STRIGOSA*	146	1948
QUEBEC TAXONOMY OCTOMACULATA* CHAGON. Q	015	1916
RANDELL. ILLINOIS STRAWBERRY DAMAGE* RA	095	1977
REITTER. AEQUALIS DISTRIBUTION* REITTER	097	1874
REITTER. DIDYMA* REITTER. DIDYMA* REIT	098	1875
REITTER. EUROPE OCTUSIS SIBIRICA* REITT	103	1919
REITTER. MULTIGUTTATA DILATIMANUS JAPAN*	099	1877
REITTER. MULTIGUTTATA DILATIMANUS SIBIRI	102	1884
REITTER. SEXGUTTATA BIGUTTATA* REITTER.	100	1877
REITTER. SIBERIA SIBIRICA* REITTER. SIB	101	1879
REITTER. TAXONOMY METABOLA OCTOMACULATA	096	1873
REMELLETI* REMILLET. NATURAL-ENEMIES NE	105	1978
REMILLET. NATURAL-ENEMIES MADAGASCAR NEM	104	1972
REMILLET. NATURAL-ENEMIES NEMATODE REMEL	105	1978
RICE UNITED-STATES* HINTON. GEMINATA DI	058	1945
RICE* DOUGLAS. GEMINATA RICE* DOUGLAS.	025	1941
RILEY. PARASITE NATURAL-ENEMIES* RILEY.	106	1892
RUBIPES RUDERATA SEXGUTTATA SIGNATA SOLI	050	1913
RUBRIPIES DISTRIBUTION* REITTER. TAXONOM	096	1873

RUBRIPES GEMINATA ALTERNANS PALLENS SOLI	114	1890
RUBRIPES RUDERATA SOLITARIA STICTICA STR	006	1945
RUDERATA BISERIATA STRIGOSA RUBRIPES DIS	096	1873
RUDERATA COENOSA ALTERNANS DIDYMA ORPHAN	028	1843
RUDERATA DISTRIBUTION* CHEVROLAT. CUBA	017	1863
RUDERATA SEXGUTTATA SIGNATA SOLITARIA ST	050	1913
RUDERATA SOLITARIA STICTICA STRIGOSA THO	006	1945
RUDERATA STRIGOSA* WOLCOTT. PUERTO-RICO	146	1948
RUDERATA WEST-INDIES* LENG. PUERTO-RICO	076	1917
RUDERATA* JACQUILIN-DUVAL. CUBA COENOSA	063	1856
RUDERATA* MURRAY. DIDYMA ORPHANA GEMINA	087	1864
RUSSIA SEXGUTTATA* SEIDLITZ. RUSSIA SEX	112	1872
RUSSIA SEXGUTTATA* SEIDLITZ. RUSSIA SEX	113	1888
SAHLBERG. SEXGUTTATA* SAHLBERG. SEXGUTT	107	1834
SAPOTE FIGS CALIFORNIA* USDA. GEMINATA	120	1959
SAY. UNITED-STATES TAXONOMY GEMINATA OCT	108	1825
SCHALL. STRAWBERRY STRIGOSA* SCHALL. ST	111	1884
SCHAUFUSS. EUROPE TAXONOMY* SCHAUFUSS.	110	1916
SCHAUFUSS. MADAGASCAR COSTATA* SCHAUFUS	109	1891
SEIDLITZ. RUSSIA SEXGUTTATA* SEIDLITZ.	112	1872
SEIDLITZ. RUSSIA SEXGUTTATA* SEIDLITZ.	113	1888
SEXGUTTATA BIGUTTATA* REITTER. SEXGUTTA	100	1877
SEXGUTTATA SIBIRICA HATTORII* JELINEK.	065	1965
SEXGUTTATA SIGNATA SOLITARIA STICTICA ST	050	1913
SEXGUTTATA* SAHLBERG. SEXGUTTATA* SAHL	107	1834
SEXGUTTATA* SEIDLITZ. RUSSIA SEXGUTTATA	112	1872
SEXGUTTATA* SEIDLITZ. RUSSIA SEXGUTTATA	113	1888
SEXGUTTATA* SPORNRAFT SEXGUTTATA* SPOR	118	1967
SHARP. CENTRAL-AMERICA STRIGOSA RUBRIPES	114	1890
SHUBECK. CARRION NEW-JERSEY OAK-FOREST G	115	1977
SIBERIA SIBIRICA* REITTER. SIBERIA SIBI	101	1879
SIBIRICA DILATIMANA* CHUJO. JAPAN SIBIR	020	1960
SIBIRICA HATTORII* JELINEK. GEMINATA MU	065	1965
SIBIRICA* REITTER. SIBERIA SIBIRICA* R	101	1879
SIRIRICA* REITTER. MULTIGUTTATA DILATIM	102	1884
SIBIRICA* REITTER. EUROPE OCTUSIS SIBIR	103	1919
SIGNATA SOLITARIA STICTICA STRIGOSA THOR	050	1913
SMITH. NEW-JERSEY GEMINATA OCTOMACULATA	116	1910
SOLITARIA MULTIGUTTATA* PARSONS. GEMINA	091	1972
SOLITARIA OVALIS STICTICA BUGABENSIS FOR	114	1890
SOLITARIA STICTICA STRIGOSA THORACICA TR	006	1945
SOLITARIA STICTICA STRIGOSA THORACICA TR	050	1913
SOUTH-AMERICA DISTRIBUTION AEQUALIS ALTE	006	1945
SOUTH-AMERICA* WEISS. DISTRIBUTION STRA	140	1978
SOUTH-CAROLINA HOSTS* KIRK. GEMINATA OC	068	1969
SOUTH-CAROLINA GEMINATA OCTOMACULATA STR	069	1970
SOUTH-CAROLINA* PAYNE. GEMINATA STRIGOS	092	1970
SPORNRAFT SEXGUTTATA* SPORNRAFT SEXGUTT	118	1967
STELIDOTA* BRADLEY. TAXONOMY NORTH-AMER	010	1930
STELIDOTA-SP. MADAGASCAR* POINAR. NEMAT	094	1979
STELIDOTA-SP.* LINDEGREN. HOSTS PATHOGE	078	1973
STELIDOTA-SP.* WEISS. FUNGUS HOST STELI	139	1921
STELIDOTA-SPP. CORN* CONNELL. STELIDOTA	019	1975
STELIDOTA-SPP. BANANA* DAUGHERTY. SWEET	022	1966
STELIDOTA-SPP.* LECONTE. NORTH-AMERICA	073	1861
STELIDOTA-SPP.* LECONTE. NORTH-AMERICA	074	1883

STICTICA BUGABENSIS FORTIS CLAVIGERA CHO	114	1890
STICTICA STRIGOSA THORACICA TRIMACULATA	006	1945
STICTICA STRIGOSA THORACICA TRIMACULATA	050	1913
STIERLIN. BIGUTTATA* STIERLIN. BIGUTTAT	117	1877
STRAWBERRY CONTROL WOODLOTS* USDA. GEMI	126	1968
STRAWBERRY DAMAGE* RANDELL. ILLINOIS ST	095	1977
STRAWBERRY GEMINATA OCTOMACULATA BLACKBE	124	1966
STRAWBERRY GEMINATA* USDA. STRAWBERRY G	127	1970
STRAWBERRY HOSTS ATTRACTANTS* GERTZ. BI	034	1968
STRAWBERRY HOSTS ATTRACTANTS CONTROL* G	035	1968
STRAWBERRY INDIANA* USDA. GEMINATA STRA	129	1978
STRAWBERRY MARYLAND* USDA. GEMINATA STR	122	1964
STRAWBERRY MELONS* USDA. GEMINATA TOMAT	125	1967
STRAWBERRY MICHIGAN WOODLOTS* USDA. GEM	128	1971
STRAWBERRY STRIGOSA* SCHALL. STRAWBERRY	111	1884
STRAWBERRY* FUNT. MARYLAND DAMAGE STRAW	033	1977
STRAWBERRY-SAP-BEETLE GEMINATA* SUTHERL	119	1978
STRAWBERRY-SAP-BEETLE GEMINATA UNITED-ST	140	1978
STRAWBERRY-SAP-BEETLE NATURAL-ENEMIES GE	142	1979
STRIGOA HOSTS* KIRK. SOUTH-CAROLINA GEM	069	1970
STRIGOSA ATTRACTANTS BANANA* McMULLEN.	081	1961
STRIGOSA BISERIATA* HORN. UNITED-STATES	061	1879
STRIGOSA BISERIATA LUSCA DISTRIBUTION*	075	1920
STRIGOSA CLAVIGERA CHONTALENSIS SOLITARI	091	1972
STRIGOSA COCONUT-PALM* CARRILLO-S. MEXI	014	1966
STRIGOSA DISTRIBUTION* CROTCH. GEMINATA	021	1880
STRIGOSA DISTRIBUTION* FATTIG. GEORGIA	030	1937
STRIGOSA DISTRIBUTION* HENSHAW. GEMINAT	057	1885
STRIGOSA DISTRIBUTION* SMITH. NEW-JERSE	116	1910
STRIGOSA GEMINATA RUDERATA COENOSA ALTER	028	1843
STRIGOSA HOSTS* LODING. ALABAMA GEMINAT	079	1945
STRIGOSA LUSCA* GYLLENHAL. STRIGOSA LUS	053	1808
STRIGOSA MARGINATA COENOSA OCTUSIS SEXGU	065	1965
STRIGOSA NORTH-AMERICA BISERIATA* PARSO	090	1943
STRIGOSA OAK MARYLAND OCTOMACULATA HOSTS	132	1950
STRIGOSA ORANGE FLORIDA CITRUS TEXAS* V	133	1951
STRIGOSA RUBRIPES DISTRIBUTION* REITTER	096	1873
STRIGOSA RUBRIPES GEMINATA ALTERNANS PAL	114	1890
STRIGOSA SOUTH-CAROLINA HOSTS* KIRK. GE	068	1969
STRIGOSA SOUTH-CAROLINA* PAYNE. GEMINAT	092	1970
STRIGOSA SWEET-CORN* USDA. STRIGOSA SWE	123	1965
STRIGOSA THORACICA TRIMACULATA VICINA*	006	1945
STRIGOSA THORACICA TRIMACULATA VICINA ZE	050	1913
STRIGOSA* ASHMEAD. NATURAL-ENEMIES PARA	004	1893
STRIGOSA* BRUES. CONNECTICUT NATURAL-EN	013	1916
STRIGOSA* DURY. OHIO GEMINATA OCTOMACUL	026	1902
STRIGOSA* EASTHAM. NATURAL-ENEMIES PARA	027	1929
STRIGOSA* HUBBARD. FLORIDA MICHIGAN GEM	062	1878
STRIGOSA* MUESEBECK. PARASITE STRIGOSA*	088	
STRIGOSA* SCHALL. STRAWBERRY STRIGOSA*	111	1884
STRIGOSA* WASHBURN. PARASITE NATURAL-EN	135	1919
STRIGOSA* WILLIAMS. PARASITE NATURAL-EN	145	1932
STRIGOSA* WOLCOTT. PUERTO-RICO GEMINATA	146	1948
SUTHERLAND. STRAWBERRY-SAP-BEETLE GEMINA	119	1978
SWEET-CORN NORTH-CAROLINA DAMAGE STELLO	022	1966
SWEET-CORN VIRGINIA MELONS ALABAMA* USD	121	1963

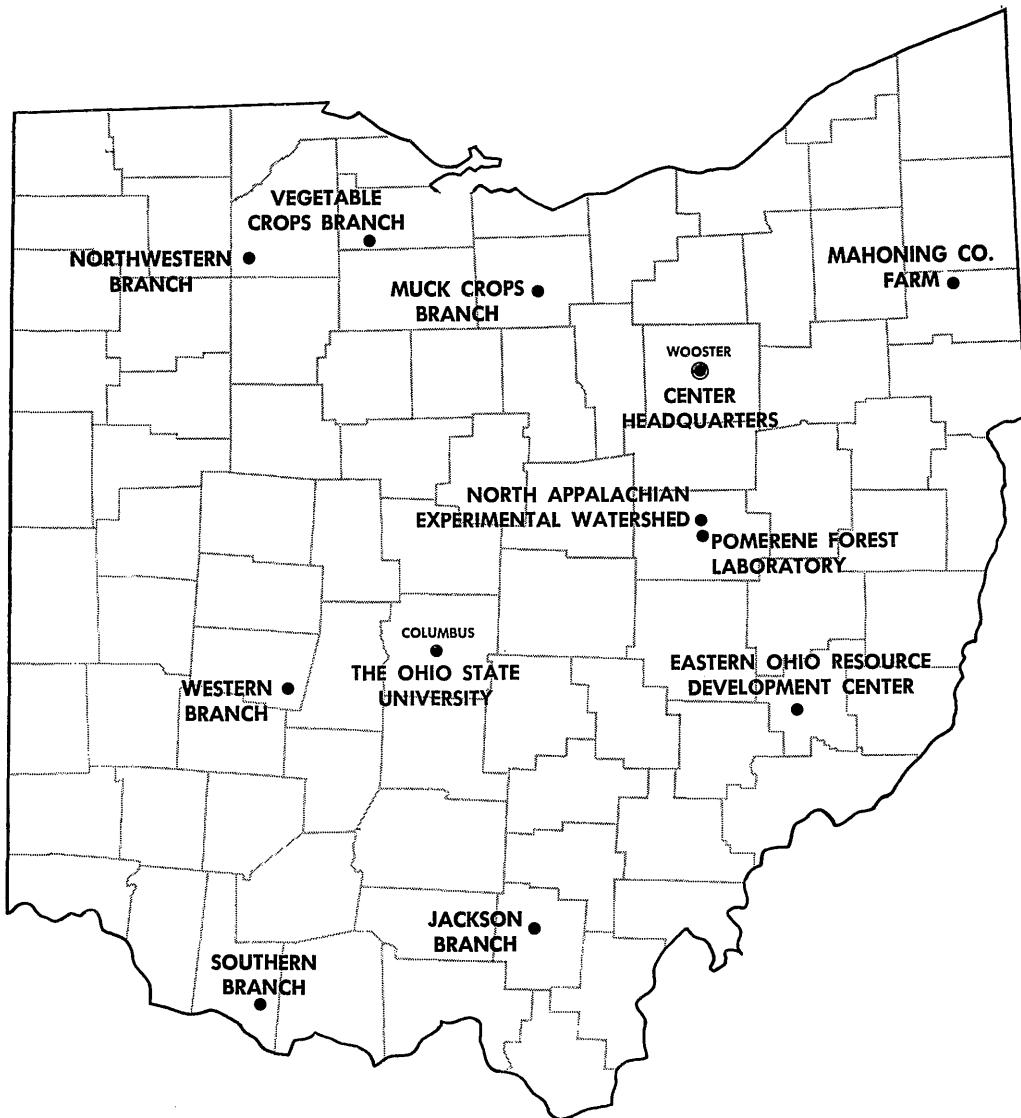
SWEET-CORN*	USDA.	STRIGOSA SWEET-CORN*	123	1965
TAXONOMY BISERIATA*	BLACKWELDER.	OCTOMA	007	1948
TAXONOMY GEMINATA*	ARNETT.	TAXONOMY GEM	002	1960
TAXONOMY GEMINATA HOST*	BOVING.	TAXONOM	009	1962
TAXONOMY GEMINATA HOSTS*	CONNELL.	DELAW	018	1956
TAXONOMY GEMINATA*	DILLON.	TAXONOMY GEM	023	1964
TAXONOMY GEMINATA*	HEADSTROM.	TAXONOMY	056	1977
TAXONOMY GEMINATA OCTOMACULATA*	SAY.	UN	108	1825
TAXONOMY LUSCA STRIGOSA GEMINATA RUDERAT			028	1843
TAXONOMY METABOLA OCTOMACULATA ALTERNANS			096	1873
TAXONOMY NIGROVARIA DISTRIBUTION*	GILLO		038	1962
TAXONOMY NORTH-AMERICA STELIDOTA*	BRADL		010	1930
TAXONOMY OCTOMACULATA*	CHAGON.	QUEBEC T	015	1916
TAXONOMY*	ARROW.	ORIENTALIS TAXONOMY*	003	1900
TAXONOMY*	AUBE.	EUROPE ALGERIA LATA TAX.	005	1850
TAXONOMY*	BROUN.	NEW-ZEALAND TAXONOMY*	012	1880
TAXONOMY*	GILLOGLY.	VENEZUELA DISTICHA	037	1962
TAXONOMY*	GILLOGLY.	TAXONOMY* GILLOGLY	039	1965
TAXONOMY*	GROUVELLE.	VENEZUELA MARGINAT	041	1891
TAXONOMY*	SCHAUFUSS.	EUROPE TAXONOMY*	110	1916
TEXAS*	VOGT.	GEMINATA STRIGOSA ORANGE F	133	1951
THORACICA FERRUGINEA	GEMINATA COENOSA RU		096	1873
THORACICA GEMINATA CHONTALENSIS	DISTRIBU		045	1902
THORACICA TRIMACULATA VICINA*	BLACKWELD		006	1945
THORACICA TRIMACULATA VICINA ZEALANDICA*			050	1913
THORACICA*	KIRSCH.	PERU METABOLA THORAC	070	1873
TOMATO STRAWBERRY MELONS*	USDA.	GEMINAT	125	1967
TRIMACULATA VICINA*	BLACKWELDER.	MEXICO	006	1945
TRIMACULATA VICINA ZEALANDICA*	GROUVELL		050	1913
TRIMACULATA*	ARGENTINA GROUVELLE.	MERID	047	1906
UNITED-STATES CANADA MEXICO CENTRAL-AMER			140	1978
UNITED-STATES DISTRIBUTION GEMINATA OCTO			061	1879
UNITED-STATES STRIGOSA BISERIATA LUSCA D			075	1920
UNITED-STATES TAXONOMY GEMINATA OCTOMACU			108	1825
UNITED-STATES*	HINTON.	GEMINATA DISTRIB	058	1945
UNITED-STATES* MELSHEIMER.	GEMINATA UNI		083	1853
USDA. ATTRACTANTS GEMINATA MICHIGAN PAIN			130	1976
USDA. GEMINATA SAPOTE FIGS CALIFORNIA*			120	1959
USDA. GEMINATA SWEET-CORN VIRGINIA MELON			121	1963
USDA. GEMINATA STRAWBERRY MARYLAND*	USD		122	1964
USDA. GEMINATA TOMATO STRAWBERRY MELONS*			125	1967
USDA. GEMINATA MICHIGAN STRAWBERRY CONTR			126	1968
USDA. GEMINATA STRAWBERRY MICHIGAN WOODL			128	1971
USDA. GEMINATA STRAWBERRY INDIANA*	USDA		129	1978
USDA. STRAWBERRY GEMINATA OCTOMACULATA B			124	1966
USDA. STRAWBERRY GEMINATA* USDA. STRAWB			127	1970
USDA. STRIGOSA SWEET-CORN* USDA. STRIGO			123	1965
VAN-DYKE. GALAPAGOS-ISLANDS INSULARIS EC			131	1953
VENEZUELA DISTICHA GUACHARENSIS TAXONOMY			037	1962
VENEZUELA MARGINATA TAXONOMY* GROUVELLE			041	1891
VICINA ARGENTINA*	GROUVELLE.	VICINA ARG	048	1906
VICINA ZEALANDICA*	GROUVELLE.	DISTRIBUT	050	1913
VICINA*	BLACKWELDER.	MEXICO CENTRAL-AME	006	1945
VINEGAR GEMINATA HOSTS ATTRACTANTS WEST-			089	1967
VIRGINIA MELONS ALABAMA*	USDA.	GEMINATA	121	1963
VOGT. GEMINATA STRIGOSA OAK MARYLAND OCT			132	1950

VOGT. GEMINATA STRIGOSA ORANGE FLORIDA C	133	1951
WANKOWICZ. INTEGRA* WANKOWICZ. INTEGRA*	134	1867
WASHBURN. PARASITE NATURAL-ENEMIES STRIG	135	1919
WEBER. BIOLOGY GEMINATA DISTRIBUTION* W	136	1971
WEBER. GEMINATA HOST* WEBER. GEMINATA H	137	1975
WEISS. BIOLOGY PARASITE GEMINATA NATURAL	144	1979
WEISS. DISTRIBUTION STRAWBERRY-SAP-BEETL	140	1978
WEISS. FUNGUS GEMINATA HOST* WEISS. FUN	138	1920
WEISS. FUNGUS HOST STELIDOTA-SP.* WEISS	139	1921
WEISS. GEMINATA PARASIE NATURAL-ENEMIES*	141	1978
WEISS. NATURAL-ENEMIES PARASITE GEMINATA	143	1979
WEISS. PARASITE STRAWBERRY-SAP-BEETLE NA	142	1979
WEST-INDIES SOUTH-AMERICA DISTRIBUTION A	006	1945
WEST-INDIES SOUTH-AMERICA* WEISS. DISTR	140	1978
WEST-INDIES* LENG. PUERTO-RICO GEMINATA	076	1917
WEST-VIRGINIA* DORSEY. OAK-WILT GEMINAT	024	1956
WEST-VIRGINIA* NEEL. FUNGUS VINEGAR GEM	089	1967
WILLIAMS. PARASITE NATURAL-ENEMIES STRIG	145	1932
WISCONSIN GEMINATA OCTOMACULATA STRIGOSA	081	1961
WISCONSIN* McMULLEN. OAK-WILT OCTOMACUL	080	1955
WOLCOTT. PUERTO-RICO GEMINATA RUDERATA S	146	1948
WOODLOTS* USDA. GEMINATA MICHIGAN STRAW	126	1968
WOODLOTS* USDA. GEMINATA STRAWBERRY MIC	128	1971
ZEALANDICA* GROUVELLE. DISTRIBUTION AEQ	050	1913

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The State Is the Campus for Agricultural Research and Development



Ohio's major soil types and climatic conditions are represented at the Research Center's 12 locations.

Research is conducted by 15 departments on more than 7000 acres at Center headquarters in Wooster, eight branches, Pomerene Forest Laboratory, North Appalachian Experimental Watershed, and The Ohio State University.

Center Headquarters, Wooster, Wayne County: 1953 acres

Eastern Ohio Resource Development Center, Caldwell, Noble County: 2053 acres

Jackson Branch, Jackson, Jackson County: 502 acres

Mahoning County Farm, Canfield: 275 acres

Muck Crops Branch, Willard, Huron County: 15 acres

North Appalachian Experimental Watershed, Coshocton, Coshocton County: 1047 acres (Cooperative with Science and Education Administration/Agricultural Research, U. S. Dept. of Agriculture)

Northwestern Branch, Hoytville, Wood County: 247 acres

Pomerene Forest Laboratory, Coshocton County: 227 acres

Southern Branch, Ripley, Brown County: 275 acres

Vegetable Crops Branch, Fremont, Sandusky County: 105 acres

Western Branch, South Charleston, Clark County: 428 acres