

A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO

FAMILY: CURCULIONIDAE
SUBFAMILY: CURCULIONINAE



UNITED STATES
DEPARTMENT OF
AGRICULTURE

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SERVICE

FAMILIES OF COLEOPTERA IN AMERICA NORTH OF MEXICO

<i>Fascicle</i> ¹	<i>Family</i>	<i>Year issued</i>	<i>Fascicle</i> ¹	<i>Family</i>	<i>Year issued</i>	<i>Fascicle</i> ¹	<i>Family</i>	<i>Year issued</i>
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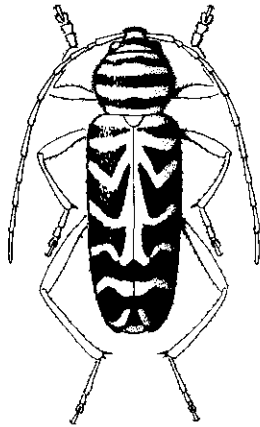
¹ Missing numbers are those assigned in the computer program to families not found in the United States and Canada.

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A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO

FAMILY: CURCULIONIDAE
SUBFAMILY: CURCULIONINAE

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FOREWORD

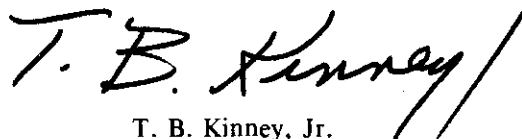
Many species of beetles are important pests of agricultural crops, stored food products, forests, wood products and structures, and fabrics. Many other species, in contrast, are beneficial in the biological suppression of pest arthropods and weeds, as well as in the decomposition of plant detritus, animal carcasses, and dung. Part of our national responsibility to American agriculture is to provide correct identification of species of American beetles so that appropriate controls can be applied.

Most information about animal species, whether agricultural, biological, or experimental, is filed under the species' scientific names. These names are therefore the keys to retrieval of such information. Because some species have been known by several names, a complete listing of these names for each species is necessary.

For the user of scientific names, an up-to-date taxonomic catalog providing currently accepted names and pertinent bibliographic and distributional data is an indispensable tool. Although taxonomic literature is constantly changing to reflect current work, the traditional published taxonomic catalog remains static with updating left to the individual user until it is revised. Production of catalogs in the past has been laborious with long printing delays resulting in data that are obsolete before being published. However, the computer now provides the capability of storing, updating, and retrieving taxonomic data; rapid publication through computer-driven typesetting machinery; and a greater degree of currentness and flexibility.

All 124 fascicles in this catalog of the beetles of America north of Mexico are produced by an original group of computer programs, designed and written during a pilot project by personnel of the Systematic Entomology Laboratory and the Communications and Data Services Division, Agricultural Research Service.

The published information is stored on computer tape, is updated periodically to reflect taxonomic progress in the family, and is available in a data base for computer searching.



T. B. Kinney, Jr.
Administrator
Agricultural Research Service

PREFACE

The Coleoptera, or beetles, are represented in the world by about 220,000 described species, of which about 24,000 occur in the United States and Canada. A comprehensive taxonomic catalog of beetles for this area has not been available except the series of world-based "Coleopterorum Catalogus" volumes (1909–present, Junk, Berlin). The Leng "Catalogue of the Coleoptera of America North of Mexico" (J. D. Sherman, Jr., Mt. Vernon, NY), which was published in 1920 with supplements to the end of 1947, is a checklist. However, it has served professional and amateur alike for nearly 60 years as the principal source of scientific names of beetles. Since 1947, many new taxa have been described and many changes in status and nomenclature have appeared in numerous scattered publications, but little effort has been made to summarize these changes.

This catalog will supplant the Leng catalog and supply additional essential information. It is produced by an original suite of storage, retrieval, and printing programs written especially for automated taxonomic catalogs.

The catalog for each family is published as a separate fascicle with its introductory text, bibliography, and index. Each family is numbered as listed, but the order of issuance of fascicles is not necessarily in numerical sequence. The publishing of separate fascicles makes data available shortly after they are assembled. Computer tapes for each fascicle are maintained for updating and necessary reprinting.

The information on each family is the responsibility of the respective author or authors. The editors modify it only to correct obvious errors and to make it conform to the requirements of the computer programs.

No original proposal for a new name, taxon, status, or classification is given, such data having been previously published, but new host and distributional data are often listed. The rules of "The International Code of Zoological Nomenclature" are followed.

The geographic scope of this catalog includes the continental United States, Canada, Alaska, Greenland, and the associated continental islands. Names of taxa found only in other regions are excluded. If the range of a species extends outside these geographic limits, this fact is indicated. Inside the back cover is a map of the 12 faunal regions based on historical and faunal criteria to simplify distribution recordings. Two-letter Postal Service style abbreviations are used for States and Provinces, and faunal regions are indicated in each distribution record by a diagonal line between groups of abbreviations.

It is not the purpose of this catalog to present a complete scheme of higher classification within the order. The familial makeup is somewhat intermediate between that of R. H. Arnett in "The Beetles of the United States" (1960–62, Catholic University Press, Washington, DC) and that of R. A. Crowson in "The Natural Classification of the Families of Coleoptera" (1967, Biddles Ltd., Guildford, England). Modifications of these two systems are largely those advocated by J. F. Lawrence based in part on suggestions by taxonomic specialists for certain families.

Generic groups and higher categories within the family are arranged phylogenetically as indicated by the author of the particular fascicle, and species group names with their respective synonyms are arranged alphabetically.

Names referable to *incertae sedis* and *nomen dubium* are listed separately at the end of the nearest applicable taxon with notations as to their status.

Each available name is followed by its author, date proposed, and page number referring to the complete bibliographic citation containing the original description. Following each generic name are

the type-species and method of its designation, necessary explanatory notes, and pertinent references on immature stages, taxonomy, redescription, ecology, and keys. After the specific name entry are the original genus (if different from the present placement), type-locality, geographical distribution by State, Province, and broad extralimital units, explanatory notes, pertinent references to immature stages, taxonomy, redescription, and ecology, depository of type-specimen and its sex, and hosts.

In addition to the list under the map of faunal regions (inside back cover), the following abbreviations are used in this catalog:

ABBREVIATIONS, GENERAL

Amer. Bor.—America Borealis	Mus.—Museum
Amer. Sept.—America Septentrionalis	N. Amer.—North America
Autom.—Automatic	Orig. des.—Original designation
C. Amer.—Central America	Preocc.—Preoccupied
Co.—County	S. Amer.—South America
Cosmop.—Cosmopolitan	Sp.—Species
Design.—Designated	Subseq. monot.—Subsequent monotypy
F.—Female	Subsp.—Subspecies
Holarc.—Holarctic	Taut.—Tautonymy
Isl.—Island	Univ.—University
M.—Male	USA—United States of America
Mex.—Mexico	Var.—Variety
Monot.—Monotypy	W. Ind.—West Indies

MUSEUMS IN THE CONTINENTAL UNITED STATES, CANADA, AND HAWAII¹

AMNH—American Museum of Natural History, New York	FSCA—Florida State Collection, Gainesville
ANSP—Academy of Natural Sciences, Phila- delphia, PA	HAHC—H. & A. Howden Collection, Ottawa, Canada
BPBM—Bernice P. Bishop Museum, Honolulu	ICCM—Carnegie Museum, Pittsburgh, PA
BYUC—Brigham Young University, Provo, UT	INHS—Illinois Natural History Survey, Urbana
CASC—California Academy of Sciences, San Francisco	JGEC—J. G. Edwards Collection, San Jose, CA
CISC—University of California, Berkeley	KMFC—K. M. Fender Collection, McMinnville, OR
CNCI—Canadian National Collections, Ottawa	KSUC—Kansas State University, Manhattan
CUIC—Cornell University, Ithaca, NY	LACM—Los Angeles County Museum, CA
CWOB—C. W. O'Brien Collection, Tallahassee, FL	LSUC—Louisiana State University, Baton Rouge
DHKC—D. H. Kistner Collection, Chico State College, CA	MCZC—Museum of Comparative Zoology, Har- vard University, Cambridge, MA
ELSC—E. L. Sleeper Collection, Long Beach, CA	MSUC—Michigan State University, East Lansing
FMNH—Field Museum of Natural History, Chi- cago, IL	NCSM—North Carolina State University, Raleigh
	NYSM—New York State Museum, Albany
	OSEC—Oklahoma State University, Stillwater
	OSUC—Ohio State University, Columbus
	OSUO—Oregon State University, Corvallis

¹ Abbreviations for U.S. and Canadian museums abridged from Arnett, R. H., Jr., and Samuelson, G. A., 1969, "Directory of Coleoptera Collections of North America (Canada Through Panama)," Cushing-Malloy, Ann Arbor, MI, 123 pp.

PMNH—Peabody Museum, Yale University, New Haven, CT
PSUC—Pennsylvania State Museum, University Park
PURC—Purdue University, West Lafayette, IN
RUIC—Rutgers University, New Brunswick, NJ
SEMC—Snow Museum, University of Kansas, Lawrence
SJSC—San Jose State College, CA
SLWC—S. L. Wood Collection, Provo, UT

SMSH—Stovall Collection, University of Oklahoma, Norman
TAMU—Texas A. & M. University, College Station
UCDC—University of California, Davis
UICM—University of Idaho, Moscow
UMMZ—University of Michigan, Ann Arbor
UMRM—University of Missouri, Columbia
USNM—U.S. National Museum of Natural History, Washington, DC
WSUC—Washington State University, Pullman

MUSEUMS IN FOREIGN COUNTRIES

BMNH—British Museum (Natural History), London
GUHC—Glasgow University, Hunterian College, Scotland
HMOX—Hope Museum, Oxford, England
HNHM—Hungarian Natural History Museum, Budapest
IPZE—Institut Pflanzenschutzforschung Zweigstelle, Eberswalde, East Germany
IRSB—Institut Royal Sciences Belgique, Brussels
MFNB—Museum für Naturkunde (Humboldt), Berlin
MGFT—Museum G. Frey, Tutzing, Munich, West Germany
MHNL—Museum d'Histoire Naturelle, Lyon, France
MNHP—Museum National d'Histoire Naturelle, Paris
MNSL—Museum of Natural Sciences, Leipzig, East Germany
MZBS—Museum Zoologia, Barcelona, Spain
NHRS—Naturhistoriske Riksmuseet, Stockholm

NMPC—Narodni Museum, Prague, Czechoslovakia
SCUT—Spinola College, University of Turin, Italy
SMTD—Staatliches Museum für Tierkunde, Dresden, East Germany
UNAM—Universidad Nacional Autonoma, Mexico City
UZMC—University Zoological Museum, Copenhagen, Denmark
UZMH—University Zoological Museum, Helsinki, Finland
ZMAS—Zoological Museum, Academy of Sciences, Leningrad
ZMPA—Zoological Museum, Polish Academy of Sciences, Warsaw
ZMUL—Zoological Museum, University of Lund, Sweden
ZMUM—Zoological Museum, University of Moscow
ZSBS—Zoologische Sammlung Bayerischen Staates, Munich, West Germany

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We thank the following members of the Communications and Data Services Division, ARS: Sandra Strauss and Marianne Kingston for designing and writing the computer programs, and Margaret Seldin for developing the editing system.

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Family CURCULIONIDAE

Subfamily CURCULIONINAE

By Lester P. Gibson

The subfamily Curculioninae is represented in the New World by the genus *Curculio*. *Curculio* breeds in nuts of *Carya*, *Castanea*, *Castanopsis*, *Corylus*, *Lithocarpus*, and *Quercus*. In the New World, 46 species of *Curculio* are known and 27 in America north of Mexico.

Linnaeus (1758) described the genus *Curculio* and Latreille (1810) selected *Curculio nucum* L. as the type-species. Fabricius (1775) described the first American species. Say (1831) described 3 species (1 valid name), Gyllenhal (1836) renamed Say's 3 species and described 1 new species (1 valid name), Boheman (1843) described 2 (1 valid), LeConte (1857) described 1, Horn (1873) described 2 (1 valid), Blanchard (1884) described 1, Hamilton (1890) described 1, Casey (1897) described 10 (7 valid), Chittenden (1904) described 1, Chittenden (1908a) described 6 (3 valid) and mistakenly renamed 1 of Casey's species for which a valid name was available, Casey (1910) described 22 (2 valid), and Chittenden (1927) revised the genus and described 20 species (6 valid). Gibson (1969) in a monograph redescribed the species, placed many in synonymy, and associated the known biologies with the correct species. As a result, only 27 species remain valid.

One species breeds only in *Corylus* in the Eastern United States and Canada, 1 species breeds only in *Carya*, 2 only in *Castanea*, and 1 in *Castanopsis*, *Corylus*, *Lithocarpus*, and *Quercus* on the west coast of North America. All the remaining New World species north of Mexico breed in *Quercus*.

The life history and biology are basically similar for all *Curculio* species. The adults are found from early April to late November in the Southern United States and from early June to late October in the northernmost parts of the *Quercus* range in Canada. The adults feed on such fruits as *Malus*, *Prunus*, and *Pyrus*. Mitchell and Pierce (1911) reported that the adult *C. victoriensis* feeds heartily on *Ulmus* leaves but prefers *Quercus* leaves. They further reported that the adults feed every 4 or 5 days and curl up and 'sleep' in some hiding place between meals. The adults readily imbibe water from dew and rain. Adults of several species were observed feeding on immature nuts.

Active life usually begins 2-3 weeks before the nuts start to ripen. The female drills a hole through the shell into the nut meat and excavates one or more egg chambers near or in the inner surface of the shell. She then turns and thrusts her telescoping ovipositor into the hole and deposits one egg in each chamber.

The eggs usually hatch in 5-14 days, depending on the species, the air temperature, or both. The larvae mine the nut for 2 to several weeks and feed on the nut meat. *C. neocorylus* feeds also on other parts of the nut. When mature, the larvae cut an exit hole in the nutshell. This action may take from 2 hours to 2 or 3 days depending on the thickness and hardness of the nutshell. Most larvae usually leave the nuts in the autumn in northern areas, but they may occasionally overwinter in the nut and exit in early spring. The larvae rarely move more than 2 or 3 inches from the nut before entering the soil. They burrow from one-half to 12 inches deep and form an earthen cell approximately twice their size.

Depending on the species, the larvae diapause for either 1 or 2 years before the first pupation. However, some larvae do not pupate for as long as 5 years after entering the soil. The pupal period usually lasts 2-3 weeks. The callow adults require 9-20 days to harden and become fully colored. Some adults may emerge from the ground immediately, whereas others require several weeks after becoming fully colored. Emergence may be delayed by dryness of the soil or accelerated by rain. On emergence they move to a nearby tree bearing nuts. Rarely are they found on trees without fruit. Many species are attracted to light traps.

This manuscript was received April 1979 and modified February 1983.

Genus CURCULIO Linnaeus

Curculio Linnaeus, 1758: 377. Type-species: *Curculio nucum* Linnaeus (design. by Latreille, 1810: 430).

Balaninus Germar, 1817: 340. Type-species: *Curculio nucum* Linnaeus (design. by Leach, 1819: 203). Pierce, 1925, cites Leach, 1819, in Samouelle, 1819: 203, with the

subsequent designation of the type-species of *Balaninus nucum*. The title page and the preface acknowledge Leach's assistance, but type-species are not specifically listed. Some authors think that Leach is author of part of this work. First, second, etc., species are listed for each genus that Pierce apparently took to mean type-species designation.

TAXONOMY: Chittenden, 1927 (revision); Gibson, 1969 (monograph).

REDESCRIPTION: Gibson, 1969: 244.

ECOLOGY: Gibson, 1969: 242; Brezner, 1960: 24.

KEYS: Chittenden, 1927: 138; Gibson, 1969: 245.

aurivestis Chittenden, 1927: 185, fig. 33. CA: Mt. Wilson; BC WA OR/ CA.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

brevinasus Chittenden, 1927: 185. CA: Catalina Isl.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 261.

ECOLOGY: Gibson, 1969: 262.

HOST: Breeds in acorns of *Quercus chrysolepis*, *Q. dumosa*, and *Q. garryana*.

caryae (Horn), 1873: 460 (*Balaninus*). NY: Brooklyn; NE KS IA MO IL IN OH KY/ NY PA NJ DE MD DC WV VA/ TX OK/ AR LA MS AL TN GA SC NC FL.

TYPE DEPOSITORY: ANSP.

SEX OF TYPE: M.

IMMATURE STAGES: Leiby, 1925: 39 (egg and larva).

REDESCRIPTION: Gibson, 1969: 265.

ECOLOGY: Brooks, 1910: 162; Kumpe and Isely, 1936: 15; Gibson, 1969: 267; Gill, 1917: 13.

HOST: Breeds in nuts of *Carya*.

caryatrypes (Boheman), 1843: 276 (*Balaninus*). 'Amer. Sept. '; MI ON/ MO IL IN OH KY/ NY PA NJ DE MD DC WV/ ME NH VT MA RI CT/ AR MS AL TN GA SC NC.

TYPE DEPOSITORY: NHRS.

SEX OF TYPE: F.

picus Boheman, 1843: 277 (*Balaninus*). Brasilia: Minidias.

TYPE DEPOSITORY: NHRS.

SEX OF TYPE: M.

cylindricollis Casey, 1910: 115 (*Balaninus*). TN.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

hariolus Casey, 1910: 114 (*Balaninus*). None given.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: M.

proboscideus, of authors, not Fabricius.

IMMATURE STAGES: Chittenden, 1904: 27 (larva), and 1908b: 3 (larva and pupa).

REDESCRIPTION: Gibson, 1969: 247; Horn, 1873: 458.

ECOLOGY: Brooks, 1910: 157; Gibson, 1969: 248; Hamilton, 1890: 2; Van Leeuwen, 1952: 1089.

HOST: Nuts of *Castanea dentata*, *C. pumila*, *C. melissima*, and other imported *Castanea* spp.

confusor (Hamilton), 1893: 309 (*Balaninus*). PA: (probably Allegheny); ON/ NE KS IA MO IL IN OH KY/ NY PA NJ DE MD DC WV VA/ TX/ AR MS AL TN SC NC.

TYPE DEPOSITORY: ICCM.

SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 257.

ECOLOGY: Gibson, 1969: 258.

HOST: Acorns of *Quercus alba*, *Q. michauxii*, *Q. muehlenbergii*; also rarely in other *Quercus* species of the white oak group.

fulvus Chittenden, 1927: 165 (original description as variety of *C. victoriensis* Chittenden). SC: Georgetown; LA MS AL GA SC NC.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 275.

ECOLOGY: Gibson, 1969: 276.

HOST: Acorns of *Quercus virginiana*.

humeralis (Casey), 1897: 657 (*Balaninus*). FL; MO/ NJ/ TX OK/ AR LA MS AL TN GA SC NC FL.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

parvidens Chittenden, 1908a: 24 (*Balaninus*). TX: Victoria.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 252.

ECOLOGY: Kumpe and Isely, 1936: 14; Gibson, 1969: 263.

HOST: Acorns of *Quercus*, primarily *Q. laurifolia*, *Q. nigra*, *Q. marilandica*, *Q. falcata*, *Q. palustris*, *Q. phellos*, *Q. stellata*, *Q. virginiana*, and *Q. margaretta*.

iowensis (Casey), 1910: 122 (*Balaninus*). IA: Keokuk; SK MB ND SD/ MN WI MI ON PQ/ NS/ KS IA MO IL IN OH KY/ NY PA NJ MD DC VA/ MA RI/ GA NC.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

exilis Chittenden, 1927: 182. ON: Ottawa.

TYPE DEPOSITORY: CNCI.
SEX OF TYPE: F.

funicularis Chittenden, 1927: 179, fig. 29. NM: Las Vegas.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

ibis Chittenden, 1927: 181. AZ: Williams.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

numenius Chittenden, 1927: 178, fig. 28. IA: Lake Okoboji.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 273.

ECOLOGY: Gibson, 1969: 274.

HOST: Acorns of *Quercus macrocarpa* in Canada; acorns of *Q. stellata* and rarely *Q. alba* in N. E. United States.

longidens Chittenden, 1927: 155, figs. 7, 8. MD: Cumberland; IA MO KY/ NY NJ MD/ TX OK/ MS AL TN GA SC NC FL.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 270.

ECOLOGY: Gibson, 1969: 271.

HOST: Acorns of *Quercus falcata*, *Q. laurifolia*, *Q. nigra*, *Q. marilandica*, *Q. incana*, *Q. palustris*, *Q. laevis*, *Q. coccinea*, *Q. borealis*, *Q. phellos*, and *Q. velutina*.

longinatus Chittenden, 1927: 158, fig. 14. AZ: Paradise; AZ NM TX/ Mex.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

longinatus mandibularis Chittenden, 1927: 158, fig. 15 (as variety). AZ: Paradise.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

REDESCRIPTION: Gibson, 1969: 256.

ECOLOGY: Gibson, 1969: 257, and 1977: 10.

HOST: Acorns of *Quercus falcata* and *Q. elliptica*.

macrodon Chittenden, 1927: 154, fig. 6. TX; AZ TX/ Mex.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

ruficristatus Chittenden, 1927: 156. TX: Chisos Mts.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

REDESCRIPTION: Gibson, 1969: 267.

monticola (Casey), 1897: 663 (*Balaninus*). CO: Colorado Springs; CO/ AZ NM TX.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

- brevirostris* Casey, 1897: 662 (*Balaninus*) (preoccupied Pascoe, 1886). NM: Las Vegas.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
- caseyi* Chittenden, 1908a: 26 (*Balaninus*). NM: Las Vegas.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
- crassirostris* Chittenden, 1927: 184. AZ: Paradise.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
 REDESCRIPTION: Gibson, 1969: 259.
 HOST: Unknown.
- nanulus* (Casey), 1897: 658 (*Balaninus*). NM: Las Vegas; UT/ AZ NM TX.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.
- emarginatus* Chittenden, 1927: 165. NM: Las Vegas.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
 REDESCRIPTION: Gibson, 1969: 279.
 ECOLOGY: Gibson, 1969: 280.
 HOST: Acorns of *Quercus gambeli*, *Q. pungens*, and *Q. sinuata*.
- nasicus* (Say), 1831: 16 (*Balaninus*). PA: Grove City; WI MI ON PQ/ NB PE NS/ NE KS IA MO
 IL IN OH KY/ NY PA NJ DE MD DC WV VA/ ME NH VT MA RI CT/ TX/ AL
 TN GA SC NC.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
- auctus* Casey, 1910: 124 (*Balaninus*). NY: Buffalo.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.
- ordinatus* Casey, 1910: 124 (*Balaninus*). TN.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.
 REDESCRIPTION: Gibson, 1969: 268.
 ECOLOGY: Brooks, 1910: 169; Gibson, 1969: 269.
 HOST: Acorns of *Quercus borealis*, occasionally in *Q. coccinea*, *Q. velutina*, and *Q. imbricaria*.
- obtusus* (Blanchard), 1884: 106 (*Balaninus*) (resurrected name). MA: Tyngs (boro); MB ND/ MN
 WI MI ON PQ/ CO/ NE IA IL OH/ NY PA NJ MD DC WV VA/ ME NH/ MA RI
 CT/ TX/ GA.
 TYPE DEPOSITORY: MCZC.
 SEX OF TYPE: F.
- neocorylus* Gibson, 1969: 251 (unjustified replacement name). MA: Tyngs (boro).
 REDESCRIPTION: Gibson, 1969: 251.
 ECOLOGY: Brooks, 1910: 165; Gibson, 1969: 252; Hutchings, 1927: 10; Hamilton, 1890: 6.
 HOST: Nuts of *Corylus* spp.
- orthorhynchus* (Chittenden), 1908a: 26 (*Balaninus*). WV: French Creek; MN WI MI/ IA MO IL
 OH KY/ NY NJ DE MD DC WV VA/ NH/ TX/ AR MS AL TN GA SC NC FL.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
- microdon* Chittenden, 1927: 175. TX: Dallas.
 TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.
- rectus*, of authors, not Say.
microdon rectitibialis Chittenden, 1927: 176 (as variety; nomen nudum validated by
 Gibson, 1969). Not given.
 REDESCRIPTION: Gibson, 1969: 263.
 ECOLOGY: Brooks, 1910: 171; Gibson, 1969: 264.
 HOST: Acorns of *Quercus* spp. of red oak group; rarely in white oaks.

pardalis (Chittenden), 1908a: 24 (*Balaninus*). DC; SD/ MN WI MI ON/ KS IA MO IL IN OH
KY/ NY PA NJ DE MD DC WV VA/ MA RI CT/ TX OK/ AR LA MS AL TN GA
SC NC FL.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

appalachius Casey, 1910: 125 (*Balaninus*). WV.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

parvicollis Casey, 1910: 125 (*Balaninus*). NJ.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

virginicus (in part, of Casey) Casey, 1910: 123. The lectotype of *B. virginicus* is a specimen of *C. strictus* (Casey), but the original description and type-series include *C. pardalis* Chittenden.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

multifasciatus Chittenden, 1927: 159, fig. 16. WI: Wingra Lake, near Madison.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

REDESCRIPTION: Gibson, 1969: 274.

ECOLOGY: Brooks, 1910: 175; Chittenden, 1908a: 24; Kumpe and Isely, 1936: 14; Gibson, 1969: 275.

HOST: Acorns of *Quercus* spp. of white oak group; rarely in spp. of red oak group.

pardus Chittenden, 1927: 160, fig. 17. CA: Alhambra; WA OR/ CA.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: F.

cervulinus Chittenden, 1927: 174, fig. 26. CA: Santa Clara Co., Panchico Pass.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

REDESCRIPTION: Gibson, 1969: 264.

ECOLOGY: Gibson, 1969: 265.

HOST: Acorns of *Quercus douglasii*, *Q. agrifolia*, *Q. chrysolepis*, *Q. dumosa*, *Q. lobata*, and *Q. wislizenii*.

proboscideus Fabricius, 1775: 142. 'Amer. Bor.'; MN WI MI ON PQ/ NE KS IA MO IL IN OH
KY/ NY PA NJ DE MD DC WV VA/ NH VT MA RI CT/ TX OK/ AR MS AL TN
GA SC NC FL.

TYPE DEPOSITORY: BMNH.
SEX OF TYPE: F.

nasutus Say, 1831: 16 (*Balaninus*). 'Amer. Bor.'

TYPE DEPOSITORY: NHRS.
SEX OF TYPE: F.

rectus Say, 1831: 16 (*Balaninus*). 'Amer. Bor.'

TYPE DEPOSITORY: NHRS.
SEX OF TYPE: F.

rectirostris Gyllenhal, 1836: 376 (*Balaninus*). 'Amer. Bor.'

TYPE DEPOSITORY: NHRS.
SEX OF TYPE: F.

rostratus Gyllenhal, 1836: 374 (*Balaninus*). 'Amer. Bor.'

TYPE DEPOSITORY: NHRS.
SEX OF TYPE: F.

quercus Horn, 1873: 458 (*Balaninus*). None given. The lectotype has no locality label.

TYPE DEPOSITORY: ANSP.
SEX OF TYPE: F.

cuneatus Casey, 1910: 115 (*Balaninus*). WV.

TYPE DEPOSITORY: USNM.
SEX OF TYPE: M.

quercus sparsellus Casey, 1910: 116 (*Balaninus*). NJ.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: M.
 REDESCRIPTION: Gibson, 1969: 277.
 ECOLOGY: Brooks, 1910: 168; Kumpe and Isely, 1936: 14; Gibson, 1969: 278; Hamilton, 1890: 3.
 HOST: Acorns of *Quercus* spp. of red oak group; sparingly in spp. of white oak group.

quercusgriseae (Chittenden), 1908a: 22 (*Balaninus*). AZ: Ft. Grant; AZ/ Mex.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.

q.-griseae Chittenden, 1908a: 22 (*Balaninus*) (original spelling, emended by Gibson, 1969).
 AZ: Ft. Grant.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.

proprius Casey, 1910: 121 (*Balaninus*). Unknown.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.
 REDESCRIPTION: Gibson, 1969: 271.
 ECOLOGY: Gibson, 1969: 273, and 1977: 37.
 HOST: Acorns of *Quercus grisea*, *Q. emoryi*, *Q. gambeli*, and *Q. hypoleucoides*.

rubipililineus Gibson, 1969: 257. AZ; AZ.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.

undulatus Casey, 1897: 659 (*Balaninus*) (preoccupied Herbst, 1795). AZ.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.
 REDESCRIPTION: Gibson, 1969: 257.
 HOST: *Quercus* sp.

sayi (Gyllenhal), 1836: 375 (*Balaninus*). 'Amer. Bor.'; MI ON/ MO IL IN OH KY/ NY PA NJ
 DE MD DC WV VA/ ME NH VT MA RI CT/ TX OK/ AR LA MS AL TN GA SC
 NC FL.

TYPE DEPOSITORY: NHRS.
 SEX OF TYPE: F.

proboscideus: Say, 1831: 16 (*Balaninus*).

sparsus Gyllenhal, 1836: 379 (*Balaninus*). 'Amer. Bor.'

TYPE DEPOSITORY: NHRS.
 SEX OF TYPE: M.

rectus: Horn, 1873: 459 (*Balaninus*).

acuminatus Casey, 1910: 119 (*Balaninus*). Unknown.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.

algonquinus Casey, 1910: 118 (*Balaninus*). IN.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.

auriger Casey, 1910: 117 (*Balaninus*). AZ.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.

auriger mollis Casey, 1910: 118 (*Balaninus*) (as subspecies). Unknown.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.

macilentus Casey, 1910: 120 (*Balaninus*). WV.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.

perexilis Casey, 1910: 120 (*Balaninus*). NJ.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: F.

setosicornis Casey, 1910: 119 (*Balaninus*). WV.

TYPE DEPOSITORY: USNM.
 SEX OF TYPE: M.

strigosus Casey, 1910: 118 (*Balaninus*). AZ.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

IMMATURE STAGES: Chittenden, 1908b: 4 (larva and pupa).

REDESCRIPTION: Gibson, 1969: 250.

ECOLOGY: Brooks, 1910: 160; Kumpe and Isely, 1936: 15; Gibson, 1969: 251; Hamilton, 1890: 3.

HOST: Nuts of *Castanea* spp.

strictus (Casey), 1897: 660 (*Balaninus*). NM: Las Vegas; MB ND SD/ MN WI MI ON/ WY UT CO/ NE KS IA MO IL IN OH KY/ NY PA NJ DE MD DC WV VA/ MA RI CT/ AZ NM TX OK/ AR AL TN GA SC NC FL.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

longipes Casey, 1897: 661 (*Balaninus*). CO: Manitou.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

tubulatus Casey, 1910: 126 (*Balaninus*). UT: Stockton.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

utensis Casey, 1910: 126 (*Balaninus*). UT: Provo.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: M.

virginicus Casey, 1910: 123 (*Balaninus*). WV. The lectotype of *Balaninus virginicus* is a specimen of *Curculio strictus* (Casey), but the original description and type-series include *C. pardalis* Chittenden.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

confusor, of authors, not Hamilton.

nasicus, of authors, not Say.

REDESCRIPTION: Gibson, 1969: 269.

ECOLOGY: Brooks, 1910: 173; Gibson, 1969: 270.

HOST: Acorns of *Quercus prinus*, *Q. muehlenbergii*, *Q. gambeli*, and *Q. reticulata*; to a lesser extent in acorns of *Q. macrocarpa*, *Q. bicolor*, *Q. alba*, *Q. stellata*, and *Q. lyrata*.

sulcatulus (Casey), 1897: 661 (*Balaninus*). NM: Las Vegas; ND/ MN WI MI ON/ NS/ UT CO/ NE KS IA MO IL IN OH KY/ NY PA NJ DE MD DC WV VA/ ME VT MA RI CT/ AZ NM TX/ AR LA MS AL TN GA SC NC FL/ Mex.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

baculi Chittenden, 1908a: 20, fig. 3 (*Balaninus*). NY: Ithaca.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

baculi curtus Chittenden, 1908a: 21 (*Balaninus*) (as variety). TX: Boerne.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

striatus Chittenden, 1927: 187. TX: Chisos Mts.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

uniformis, of authors, not LeConte.

REDESCRIPTION: Gibson, 1969: 253.

ECOLOGY: Brooks, 1910: 172; Chittenden, 1908a: 20; Kumpe and Isely, 1936: 14; Gibson, 1969: 254.

HOST: Acorns of almost all *Quercus* within its range.

timidus (Casey), 1910: 121 (*Balaninus*). TX: Alpine, 4400-6000 ft; CO/ AZ NM TX.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 262.

ECOLOGY: Gibson, 1969: 263.

HOST: Acorns of *Quercus* sp.

uniformis (LeConte), 1857: 57 (*Balaninus*) (resurrected name). CA; BC WA OR/ CA/ UT/ AZ NM.

TYPE DEPOSITORY: MCZC.

SEX OF TYPE: F.

occidentis Casey, 1897: 658 (*Balaninus*). CA: Sonoma Co.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: M.

REDESCRIPTION: Gibson, 1969: 258.

ECOLOGY: Keen, 1958: 43; Gibson, 1969: 259.

HOST: Nuts of *Quercus* spp., *Lithocarpus densiflorus*, *Corylus californica*, and probably *Castanopsis chrysophylla*.

victoriensis (Chittenden), 1904: 30, fig. 9 (*Balaninus*). TX: Victoria; KS/ AZ NM TX OK/ Mex.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

REDESCRIPTION: Chittenden, 1908: 23; Gibson, 1969: 276.

ECOLOGY: Chittenden, 1908: 23; Mitchell and Pierce, 1911: 53; Gibson, 1969: 277.

HOST: ACORNS of *Quercus stellata*, *Q. virginiana*, *Q. laurifolia*, *Q. velutina*, *Q. durandii*, and possibly others.

wenzeli Chittenden, 1927: 161, fig. 18. TX: Chisos Mts.; UT/ AZ NM TX.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

albidus Chittenden, 1927: 189. TX: Chisos Mts.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: M.

gracilis Chittenden, 1927: 161 (preoccupied Beck, 1817). AZ: Yavapai Co.

TYPE DEPOSITORY: USNM.

SEX OF TYPE: F.

REDESCRIPTION: Gibson, 1969: 254.

ECOLOGY: Gibson, 1969: 256.

HOST: ACORNS of *Quercus* sp.

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INDEX

Names are indexed as follows:
CAPITALS: All names for taxa above the generic level;

Boldface: Valid generic and subgeneric names;

Roman: Valid specific and subspecific names;

Italic: All invalid names such as synonyms, nomina nuda, and extra-limital taxa even though valid.

Parentheses around an author's name indicate that the specific name has been transferred from its original genus. The generic name following the author's name indicates the present placement of the species. Synonyms of species-group names are listed with the original spelling.

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<i>microdon</i> Chittenden, Curculio	4	<i>striatus</i> Chittenden, Curculio	7
<i>mollis</i> (Casey), Curculio	6	<i>strictus</i> (Casey), Curculio	7
		<i>strigosus</i> (Casey), Curculio	6
		<i>sulcatulus</i> (Casey), Curculio	7
		<i>timidus</i> (Casey), Curculio	7
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