

1
Ag84A1

529-146

9

02

A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO

FAMILY: ITHY CERIDAE

NAL Digitizing Project



ah529146



UNITED STATES
DEPARTMENT OF
AGRICULTURE

AGRICULTURE
HANDBOOK
NUMBER 529-146

PREPARED BY
AGRICULTURAL
RESEARCH
SERVICE

FAMILIES OF COLEOPTERA IN AMERICA NORTH OF MEXICO

| <i>Fascicle¹ Family</i> | <i>Year issued</i> | <i>Fascicle¹ Family</i> | <i>Year issued</i> | <i>Fascicle¹ Family</i> | <i>Year issued</i> | |
|------------------------------------|------------------------|------------------------------------|--------------------|------------------------------------|-------------------------|------|
| 1 | Cupedidae | 1979 | 46 | Callirhipidae | | |
| 2 | Micromalthidae | 1982 | 47 | Heteroceridae | 1978 | |
| 3 | Carabidae | | 48 | Limnichidae | 1986 | |
| 4 | Rhysodidae | 1985 | 49 | Dryopidae | 1983 | |
| 5 | Amphizoidae | 1984 | 50 | Elmidae | 1983 | |
| 6 | Haliplidae | | 51 | Buprestidae | | |
| 8 | Noteridae | | 52 | Cebionidae | | |
| 9 | Dytiscidae | | 53 | Elaterridae | | |
| 10 | Gyrinidae | | 54 | Throscidae | | |
| 13 | Sphaeridae | | 55 | Cerophytidae | | |
| 14 | Hydroscaphidae | | 56 | Perothopidae | | |
| 15 | Hydraenidae | | 57 | Eucnemidae | | |
| 16 | Hydrophilidae | | 58 | Telegeusidae | | |
| 17 | Georyssidae | | 61 | Phengodidae | | |
| 18 | Sphaeritidae | | 62 | Lampyridae | | |
| 20 | Histeridae | | 63 | Cantharidae | | |
| 21 | Ptiliidae | | 64 | Lycidae | | |
| 22 | Limulodidae | | 65 | Derodontidae | 1989 | |
| 23 | Dasyceridae | | 66 | Nosodendridae | | |
| 24 | Micropeplidae | 1984 | 67 | Dermestidae | | |
| 25 | Leptinidae | | 69 | Ptinidae | | |
| 26 | Leiodidae | | 70 | Anobiidae | 1982 | |
| 27 | Scydmaenidae | | 71 | Bostrichidae | | |
| 28 | Silphidae | 1993 | 72 | Lyctidae | | |
| 29 | Scaphidiidae | | 74 | Trogoxetidae | | |
| 30 | Staphylinidae | | 76 | Cleridae | | |
| 31 | Pselaphidae | | 78 | Melyridae | | |
| 32 | Lucanidae | | 79 | Lymexylidae | | |
| 33 | Passalidae | | 81 | Sphindidae | | |
| 34 | Scarabaeidae | 1984 | 82 | Nitidulidae | | |
| 35 | Eucinetidae | | 83 | Rhizophagidae | | |
| 36 | Helodidae | | 86 | Cucujidae | | |
| 37 | Clambidae | | 90 | Cryptophagidae | | |
| 38 | Dascillidae | | 92 | Languriidae | 1983 | |
| 39 | Rhipiceridae | | 93 | Erotylidae | | |
| 40 | Byrrhidae | | 94 | Phalacridae | | |
| 41 | Psephenidae | 1983 | 95 | Cerylonidae | 1982 | |
| 42 | Brachypsectridae | | 96 | Corylophidae | | |
| 43 | Artematopidae | | 97 | Coccinellidae | | |
| 44 | Ptilodactylidae | | 98 | Endomychidae | 1986 | |
| 45 | Chelonariidae | | 100 | Lathridiidae | | |
| | | | | 102 | Biphyllidae | |
| | | | | 103 | Byturidae | 1991 |
| | | | | 104 | Mycetophagidae | |
| | | | | 105 | Ciidae | 1982 |
| | | | | 107 | Prostomidae | |
| | | | | 109 | Colydiidae | |
| | | | | 110 | Monommatidae | |
| | | | | 111 | Cephaloidae | |
| | | | | 112 | Zopheridae | |
| | | | | 115 | Tenebrionidae | |
| | | | | 116 | Alleculidae | |
| | | | | 117 | Lagriidae | |
| | | | | 118 | Salpingidae | |
| | | | | 119 | Mycteridae | |
| | | | | 120 | Pyrochroidae | 1983 |
| | | | | 121 | Othniidae | |
| | | | | 122 | Inopeplidae | |
| | | | | 123 | Oedemeridae | |
| | | | | 124 | Melandryidae | |
| | | | | 125 | Mordellidae | 1986 |
| | | | | 126 | Rhipiphoridae | |
| | | | | 127 | Meloidae | |
| | | | | 128 | Anthicidae | |
| | | | | 129 | Pedilidae | |
| | | | | 130 | Euglenidae | |
| | | | | 131 | Cerambycidae | |
| | | | | 132 | Bruchidae | |
| | | | | 133 | Chrysomelidae | |
| | | | | 134 | Nemonychidae | 1994 |
| | | | | 135 | Anthribidae | |
| | | | | 138 | Alloccorynidae | 1991 |
| | | | | 140 | Brentidae | |
| | | | | 141 | Platypodidae | 1979 |
| | | | | 142 | Scolytidae | |
| | | | | 143 | Curculionidae | 1983 |
| | | | | 144 | Stylopidae | |
| | | | | 145 | Fossil Coleoptera | |
| | | | | 146 | Ithyceridae | 1994 |

¹Missing numbers are those assigned in the computer program to families not found in the United States and Canada.

Microfiche or printed copies of this publication may be purchased from the
National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.
For additional information, contact NTIS at the address above.

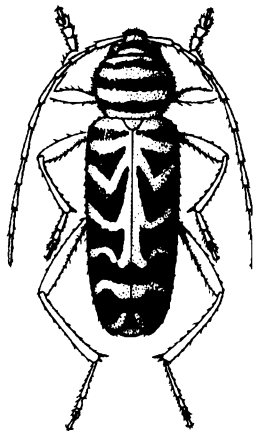
The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD).

To file a complaint, write the Secretary of Agriculture, U. S. Department of Agriculture, Washington, DC 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO

FAMILY: ITHYCERIDAE

BY
CHARLES W. O'BRIEN
DEPARTMENT OF ENTOMOLOGY
FLORIDA A & M UNIVERSITY
TALLAHASSEE, FL 32307



UNITED STATES
DEPARTMENT OF
AGRICULTURE

AGRICULTURE
HANDBOOK
NUMBER 529-146

PREPARED BY
AGRICULTURAL
RESEARCH
SERVICE

March 1994

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 the 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 Communication and Data Services Division, Agricultural Research Service.



R. D. Plowman
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 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, 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. On (or inside of) 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 (on or inside of the back cover) of faunal regions, the following abbreviations are used in this catalog:

ABBREVIATIONS, GENERAL

| | |
|-------------------------------------|------------------------------------|
| Amer. Bor.—America Borealis | Mus.—Museum |
| Amer. Sept.—America Septentrionalis | N. Amer.—North America |
| Automat.—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 UNITED STATES AND CANADA¹

| | |
|---|--|
| 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, Berkely | 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, Harvard University, Cambridge, MA |
| ELSC—E. L. Sleeper Collection, Long Beach, CA | MSUC—Michigan State University, East Lansing |
| FMNH—Field Museum of Natural History, Chicago, 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 |

¹Abbreviations 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
RUC—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
IPZE—Institut Pflanzenschutzforschung
Zweigstelle, Eberswald, 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 Staatliche Museen
Bayerischen Staates, Munich, West Germany

ACKNOWLEDGMENTS

We are indebted to many individuals who contributed to the planning and development of this catalog. We are especially grateful to the following specialists who helped to make it as complete and accurate as possible: Richard H. Foote, Systematic Entomology Laboratory (SEL), Agricultural Research Service (ARS), for his suggestions, guidance, and encouragement; C. W. Sabrosky, SEL, for valuable counsel on nomenclatural problems; J. F. Lawrence, Division of Entomology, Commonwealth Scientific and Industrial Research Organization, Canberra, Australia, for his recommendations on higher categories; and more than 50 coleopterists in Canada, the United States, and Mexico for voluntarily contributing information about their specialty groups.

We wish to acknowledge the extensive computer-programming and editing-system support provided by members of the former Communications and Data Services Division of ARS during the early years of this project. We also thank Elaine Jamison for the data entry necessary for each fascicle.

R. D. Gordon, editor in chief

J. C. Barch, associate editor

F. C. Thompson, computer program advisor

Systematic Entomology Laboratory, Agricultural Research Service
Washington, DC

Editorial Board

J. M. Campbell, Biosystematics Research Institute, Agriculture Canada, Ottawa, ON

T. L. Erwin, Department of Entomology, Smithsonian Institution, Washington, DC

H. F. Howden, Department of Biology, Carleton University, Ottawa, ON

J. M. Kingsolver, Florida State Collection of Arthropods, Gainesville, FL

P. J. Spangler, Department of Entomology, Smithsonian Institution, Washington, DC

T. J. Spilman, Systematic Entomology Laboratory, ARS, Washington, DC

R. E. White, Systematic Entomology Laboratory, ARS, Washington, DC

CONTENTS

| | |
|--------------------------|---|
| Family Ithyceridae | 1 |
| Bibliography | 2 |
| Index | 4 |

Family ITHYCERIDAE Schoenherr, 1826

By C. W. O'Brien

Ithycerides Schoenherr, 1826; *Ithycerides* Lacordaire, 1863; "subfamily Ithyceridae" LeConte, 1876; Belidae Sharp, 1918; Ithyceridae Morimoto, 1976.

This monobasic family contains the genus *Ithycerus*, which Schoenherr described in 1826 and for which he designated as type-species *Rhynchites noveboracensis* Forster described in 1771. Schoenherr (1826) placed the genus in his Division 8, Ithycerides. LeConte (1876) recognized the subfamily Ithyceridae [sic] for the same genus and species in the Curculionidae. In 1918, Sharp (in error) included the subfamily in the family Belidae, a group known to be only from the southern continents. Crowson (1955) transferred the subfamily to the Apionidae, and Kissinger (1968) followed this. In 1976, Morimoto raised the tribe Ithycerini, subfamily Ithycerinae, to family rank and placed it near the Belidae. Sanborne (1981) treated Ithyceridae as a family near the Brentidae. Anderson (1991) treated the genus as a member of the subfamily Brachycerinae, family Curculionidae. The final placement of the genus requires further study.

I. noveboracensis (Forster) has been called the "New York weevil," and it is collected most frequently on beech, hickory, and oak. Riley (1871) reported damage to young buds of apple and peach trees. Blatchley and Leng (1916) said that the females oviposit in twigs and tender branches of bur oak and pignut hickory. Sanborne (1981) said that adults are regularly associated with three plant families, e.g., Betulaceae, Juglandaceae, and Fagaceae, but that large numbers of adults occasionally are collected on introduced species of cultivated fruit trees such as apple, plum, and peach (Rosaceae). He also reported that Fagaceae are the preferred hosts, particularly white oak (*Quercus alba* L.) and American beech (*Fagus grandifolia* Ehrh.).

This manuscript was received April 1979 and revised November 1993.

Genus ITHYCERUS Schoenherr

Ithycerus Schoenherr, 1826: 55. Type-species: *Rhynchites curculionoides* Herbst (orig. des.) = *noveboracensis* (Forster).

Pachyrhynchus Kirby, 1837: 203 (preoccupied Germar, 1824). Type-species: *Pachyrhynchus schoenherri* Kirby (monot.) = *noveboracensis* (Forster).

Ithusycer (error). (*In* Laporte, 1840: 291).

Ithusycerus (error). (*In* Dalla Torre and Voss, 1935: 1).

REDESCRIPTION: Lacordaire, 1863, 406; LeConte and Horn, 1876: 121; Blatchley and Leng, 1916: 92; Kissinger, 1968: 10.

noveboracensis Forster, 1771: 35 (*Curculio*). "Americae septentrionalis provincia noveboracensi"; WI MI ON PQ/ IA MO IL IN OH KY/ NY PA NJ DE MD DC WV VA/ ME NH VT MA RI CT/ TX/ AR AL TN GA SC NC.

COMMON NAME: New York weevil.

punctatulus Fabricius, 1781: 187 (*Curculio*). America.

curculionoides Herbst, 1797: 136 (*Rhynchites*). North America.

schoenherri Kirby, 1837: 203 (*Pachyrhynchus*). "Taken in Canada Also in Georgia?".

nova-boracensis (error). (*Curculio*) (*In* Smith, 1910: 380).

novoboracensis (error). (*Curculio*) (*In* Dalla Torre and Voss, 1935: 1).

IMMATURE STAGES: Sanborne, 1981 (larva, pupa).

REDESCRIPTION: Horn, 1873; Blatchley and Leng, 1916; Bruhn, 1947; Sanders, 1960; Kissinger, 1964 and 1968; Sanborne, 1981.

ECOLOGY: Sanborne, 1981.

HOST: Feeds on buds of apple and peach; on oak, hickory, and beech; female oviposits in twigs and tender branches of *Quercus macrocarpa* and probably also in those of *Hicoria glabra* (Blatchley and Leng, 1916); larvae develop on roots of white oak and American beech, feeding on the vascular cambium and phloem (Sanborne, 1981).

Anderson, R. S.

- 1991 Larva and pupa of *Cleonidius erysimi* (Fall) with a discussion of the phylogenetic position of Lixini (*sensu* Kuschel) (Coleoptera: Curculionidae). Proceedings of the Entomological Society of Washington, vol. 93, no. 2, pp. 288-297, illus.

Blatchley, W. S. and C. W. Leng

- 1916 Rhynchophora or weevils of north eastern America. The Nature Publishing Company, Indianapolis, 682 pp., illus.

Bruhn, A. F.

- 1947 The external male genitalia of some Rhynchophora. The Great Basin Naturalist, vol. 8, pp. 1-35, illus.

Crowson, R. A.

- 1955 The natural classification of the families of Coleoptera. Nathaniel Lloyd and Co., Ltd., London, 187 pp., illus.
Reprinted in 1967 by E. W. Classey, Ltd., Middlesex, England.

Dalla Torre, K. W. von and E. Voss

- 1935 Subfam. Ithycerinae. *In* Coleopterorum catalogus auspiciis et auxilio W. Junk editus a S. Schenkling. W. Junk, Berlin and 's-Gravenhage [= The Hague], vol. 28, pt. 144, pp. 1-2.

Fabricius, J. C.

- 1781 Species insectorum exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphosin adiectis observationibus, descriptionibus. C. E. Bohnii, Hamburgi et Kilonii [= Hamburg and Cologne], vol. 1, iii-viii and 552 pp.

Forster, J. R.

- 1771 Novae species insectorum. Centuria I. Davies and White, London, viii and 100 pp.

Germar, E. F.

- 1824 Insectorum species novae aut minus cognitae, descriptionibus illustratae. I. C. Hendelii et filii, Halae [= Halle], xxiv and 624 pp., illus.

Herbst, J. F. W.

- 1797 Natursystem aller bekannten in- und auslaendischen Insekten, als eine Fortsetzung der von Bueffonschen Naturgeschichte. Pauli, Berlin, vol. 7, 346 pp., illus.

Horn, G. H.

- 1873 Contributions to a knowledge of the Curculionidae of the United States. Proceedings of the American Philosophical Society, vol. 13, pp. 407-469.

Kirby, W.

- 1837 The insects, Coleoptera. *In* J. Richardson, Fauna boreali-Americana; or the zoology of the northern parts of British America, containing descriptions of the objects of natural history collected on the late northern land expeditions, under the command of Captain Sir John Franklin, R. N. Josiah Fletcher, Norwich, pt. 4, xxxix and 325 pp., illus.

Kissinger, D. G.

- 1964 Curculionidae of America north of Mexico, a key to the genera. Taxonomic Publications, South Lancaster, MA, 143 pp., illus.

Kissinger, D. G.

- 1968 Curculionidae subfamily Apioninae of North and Central America with reviews of the world genera of Apioninae and world subgenera of *Apion* Herbst (Coleoptera). Taxonomic Publications, South Lancaster, MA, 559 pp., illus.

Lacordaire, J. T.

- 1863 Histoire naturelle des insectes. Genera des coleopteres ou expose methodique et critique de tous les genres proposes jusqu'ici dans cet ordre d'insectes. Roret, Paris, vol. 6, 637 pp.

Laporte, F. L. de (Comte de Castelnau)

- 1840 Histoire naturelle des insectes coleopteres. P. Dumenil, Paris, vol. 2, 563 pp., illus.
The author is listed as Castelnau on the title page.

LeConte, J. L.

- 1876 *In* LeConte and Horn, The Rhynchophora of America north of Mexico. Proceedings of the American Philosophical Society, vol. 15, no. 96, pp. 1-455.

LeConte, J. L. and G. H. Horn

- 1876 The Rhynchophora of America north of Mexico. Proceedings of the American Philosophical Society, vol. 15, no. 96, pp. 1-455.

Morimoto, K.

- 1976 Notes on the family characters of Apionidae and Brentidae (Coleoptera), with key to the related families. Kontyu, vol. 44, pp. 469-476, illus.

Riley, C. V.

- 1871 Third annual report on the noxious, beneficial and other insects, of the state of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the state. Jefferson City, MO, 175 and 7 pp., illus.

Sanborne, M.

- 1981 Biology of *Ithycerus noveboracensis* (Forster) (Coleoptera) and weevil phylogeny. Evolutionary Monographs, vol. 4, pp. 1-80, illus.

Sanders, H. O.

- 1960 The female genitalia and spermathecae of some of the Rhynchophora. The Great Basin Naturalist, vol. 20, nos. 1 & 2, pp. 1-22, illus.

Schoenherr, C. J.

- 1826 Curculionidum dispositio methodica cum generum characteribus, descriptionibus atque observationibus variis seu prodromus ad synonymiae insectorum partem IV. F. Fleischer, Lipsiae, pt. 4, 338 pp.

Sharp, D.

- 1918 Studies in Rhynchophora, VI. "The New York weevil." Journal of the New York Entomological Society, vol. 26, pp. 215-218, illus.

Smith, J. B.

- 1910 Report of the insects of New Jersey. Annual Report of the New Jersey State Museum, (1909) pp. 377-399.

INDEX

Names are indexed as follows:

CAPITALS: All names for taxa above the generic level;

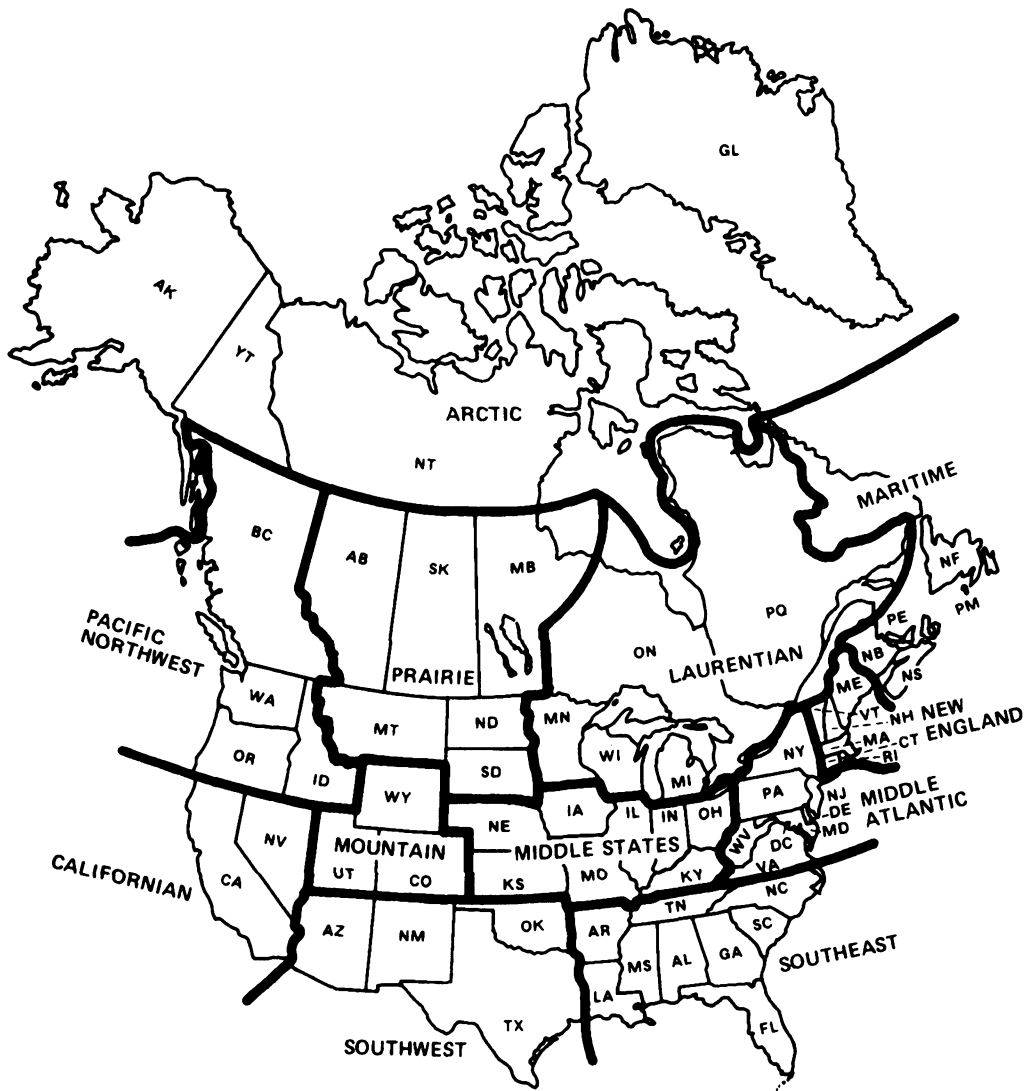
Boldface: Valid generic and subgeneric names;

Roman: Valid specific and subspecific names;

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

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.

| | |
|--|---|
| <i>curculionoides</i> Herbst, <i>Ithycerus</i> | 1 |
| <i>Ithusycer</i> , error | 1 |
| <i>Ithusycerus</i> , error | 1 |
| ITHYCERIDAE | 1 |
| <i>Ithycerus</i> Schoenherr | 1 |
| <i>nova-boracensis</i> , error, <i>Ithycerus</i> | 1 |
| <i>noveboracensis</i> Forster, <i>Ithycerus</i> | 1 |
| <i>novoboracensis</i> , error, <i>Ithycerus</i> | 1 |
| <i>Pachyrhynchus</i> Kirby | 1 |
| <i>punctatulus</i> Fabricius, <i>Ithycerus</i> | 1 |
| <i>schoenherri</i> Kirby, <i>Ithycerus</i> | 1 |



| | | |
|--------------------------------|---------------------------------|--------------------------------|
| AB Alberta | MB Manitoba | ON Ontario |
| AK Alaska | MD Maryland | OR Oregon |
| AL Alabama | ME Maine | PA Pennsylvania |
| AR Arkansas | MI Michigan | PE Prince Edward Island |
| AZ Arizona | MN Minnesota | PM St. Pierre-Miquelon |
| BC British Columbia | MO Missouri | PQ Quebec |
| CA California | MS Mississippi | RI Rhode Island |
| CO Colorado | MT Montana | SC South Carolina |
| CT Connecticut | NB New Brunswick | SD South Dakota |
| DC District of Columbia | NC North Carolina | SK Saskatchewan |
| DE Delaware | ND North Dakota | TN Tennessee |
| FL Florida | NE Nebraska | TX Texas |
| GA Georgia | NF Newfoundland | UT Utah |
| GL Greenland | NH New Hampshire | VA Virginia |
| IA Iowa | NJ New Jersey | VT Vermont |
| ID Idaho | NM New Mexico | WA Washington |
| IL Illinois | NS Nova Scotia | WI Wisconsin |
| IN Indiana | NT Northwest Territories | WV West Virginia |
| KS Kansas | NV Nevada | WY Wyoming |
| KY Kentucky | NY New York | YT Yukon Territory |
| LA Louisiana | OH Ohio | |
| MA Massachusetts | OK Oklahoma | |

