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A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO

FAMILY: ALLOCORYNIDAE

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FAMILIES OF COLEOPTERA IN AMERICA NORTH OF MEXICO

<i>Fascicle¹</i>	<i>Family</i>	<i>Year issued</i>	<i>Fascicle¹</i>	<i>Family</i>	<i>Year issued</i>	<i>Fascicle¹</i>	<i>Family</i>	<i>Year issued</i>
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2	Micromalthidae	1982	47	Heteroceridae	1978	103	Byturidae	1991
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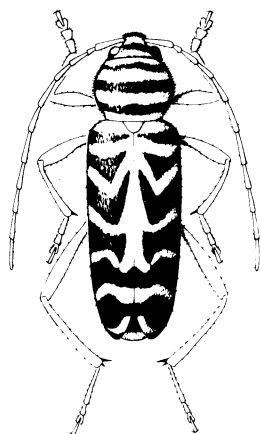
¹Missing numbers are those assigned in the computer program to families not found in the United States and Canada.

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A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO

FAMILY: ALLOCORYNIDAE

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



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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 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
Autom.—Automatic	Orig. des.—Original designation
C. Amer.—Central America	Preocc.—Preoccupied
Co.—County	S. Amer.—South America
Cosmop.—Cosmopolitan	Sp.—Species
Design.—Designated	Supseq. 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 CANADA

AMNH—American Museum of Natural History, New York	FSCA—Florida State Collection, Gainesville
ANSP—Academy of Natural Sciences, Philadelphia, 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, 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
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
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 Autónoma, Mexico City
UZMC—University Zoological Museum, Copenhagen, Denmark
UZMH—University Zoological Museum, Helsinki, Finland
ZMAS—Zoological Museum, Academy of Sciences, Leningrad
ZMPA—Zoological Museum, 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 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

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Family ALLOCORYNIDAE

By C. W. O'Brien

This primitive family of weevils is composed of a single genus with 4 described species. Only one species found in the southeast is native to our region and one species is introduced from Mexico and established in southern Florida. One species is known in Cuba and a second in Mexico.

The genus *Rhopalotria* has traditionally been placed in the Oxycorynidae and Kuschel (1959) has discussed the relationships of this group of disjunct genera. A basic morphological difference between the 2 families is the presence of a large gula between the widely separated gular sutures of the Oxycorynidae and the nearly complete fusion of the gular sutures in the Allocorynidae. Further studies are underway concerning the relationships of these 2 families and will be published elsewhere.

All *Rhopalotria* have been associated with Cycadaceae. *Rhopalotria slossonae* Schaeffer has been reared from the male strobili of the coontie, *Zamia integrifolia*. The larvae develop in the scales of the male strobili and pupate there as well. The adults are attracted to the strobili when they open, and the weevils feed on the pollen and oviposit at that time. *Rhopalotria mollis* (Sharp) breeds in a similar way in male strobili of *Zamia furfuracea* (Norstg, 1987). The Cuban *Rhopalotria* also is associated with *Zamia* (Muniz and Barrera, 1969) whereas I have reared 2 undescribed Mexican species from other cycads, *Dioon edule* and *Dioon spinulosum*.

This manuscript was received in March 1983 and updated July 1990.

Subfamily ALLOCORYNINAE Sharp

Genus RHOPALOTRIA Chevrolat

Rhopalotria Chevrolat, 1878: 97. Type-species: *Rhopalotria dimidiata* Chevrolat (monot) = *dimidiata* Chevrolat.

Allocorynus Sharp, 1890: 46. Type-species: *Allocorynus mollis* Sharp (monot) = *mollis* Sharp.

IMMATURE STAGES: Muniz and Barrera, 1969: 213 (larva); Emden, 1938: 9 (larval key).

REDESCRIPTION: Blatchley and Leng, 1916: 90; Sharp, 1890: pl. II, fig. 18.

mollis Sharp, 1890: 46 (*Allocorynus*) (Introduced into North America). Mexico; FL; Mex.

TYPE DEPOSITORY: BMNH.

HOST: Adults pollinate *Zamia furfuracea*; larvae develop within somatic tissue of male cones (Norstg, 1987).

slossonae Schaeffer, 1905: 139 (*Allocorynus*). FL: Biscayne Bay; FL. justified emendation, *slossoni* to *slossonae* (Alonso-Zarazaga in Wibmer and O'Brien, 1989: 2).

TYPE DEPOSITORY: USNM.

IMMATURE STAGES: Emden, 1938: 29 (larval characters).

REDESCRIPTION: Blatchley & Leng, 1916: 91.

ECOLOGY: Tang, 1987: 90-99 (pollination by adults, biology, and larval habits).

HOST: Breeds in the cone-shaped aments of flowers and fruits of the "coontie" (arrow-headed plant) *Zamia integrifolia*, Cycadaceae.

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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;

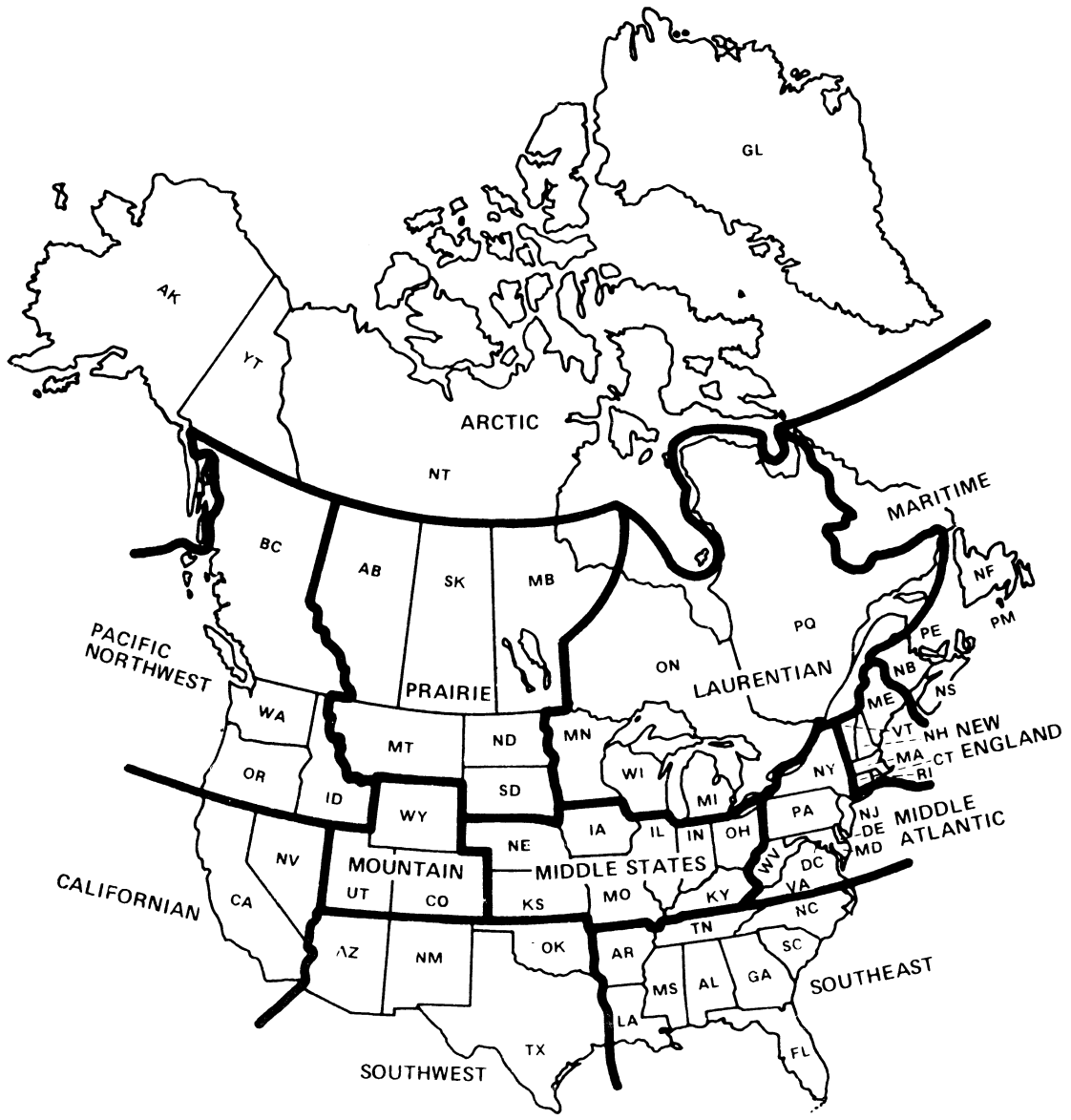
Roman: Valid specific and subspecific names;

Italics: 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 in-

dicates the present placement of the species. Synonyms of species-group names are listed with the original spelling.

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|--------------------------------|---------------------------------|--------------------------------|
| 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 |
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| FL Florida | NE Nebraska | TX Texas |
| GA Georgia | NF Newfoundland | UT Utah |
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| 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 | |

