



# Scarabaeus

A NEWSLETTER FOR THOSE INTERESTED IN SCARABAEIDAE

---

EDITED BY A.R. HARDY

c/o INSECT TAXONOMY LABORATORY,  
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE  
1220 "N" STREET, SACRAMENTO, CALIFORNIA 95814

CONTRIBUTING EDITORS: D.C. CARLSON, W.D. EDMONDS, B.C. RATCLIFFE

---

NUMBER 11

JULY 1985

---

This issue of SCARABAEUS includes the mailing addresses of the recipients of the newsletter who reside in the United States. We will update the addresses of scarabaeologists as changes are received (note some changes at the end of the list in this issue).

Also included in this number is a questionnaire, which we hope all will complete and return. From the responses we will extract pertinent information for publication in SCARABAEUS number 12. If you are currently involved in a project, and would like to examine additional material, SCARABAEUS may be your most effective means of contacting numbers of collectors, all with a single note. We would like to be kept informed about current research interests. We are also compiling a file of photographs of those who work with Scarabaeidae. If it is at all possible, we would appreciate a photograph with the returned questionnaire; if you are unable to send a photo, we would still like to have the questionnaire. In addition, we would like to thank our correspondents for the many favorable comments received to date.

---

MUSEUM FUR NATURKUNDE, BERLIN

by  
Brett Ratcliffe<sup>1</sup>

The Museum fur Naturkunde is in East Berlin in the German Democratic Republic. This is an old and prestigious museum with enormous holdings in systematic entomology. Although these collections are becoming increasingly utilized by systematists, they have not always been so, and many entomologists (particularly in the United States) remain unfamiliar with them. I was enabled by the National Academies of Science of the DDR and USA to study at the Museum for one month during 1980 as part of an inter-Academy exchange program, and I returned again for a brief visit after the International Congress of Entomology in Hamburg last August. I would like to make several observations in the hope of increasing awareness of these important collections.

The oldest part of the Museum's collections date from 1716 when the Academy of Sciences began to obtain natural history specimens. The Natural History Museum, along with the University of Berlin, was founded in 1810 and housed in the main building of the University located on the

principal avenue running through Berlin, Unter der Linden. The large, ornate building now housing the Museum fur Naturkunde at 43 Invalidenstrasse was built between 1883-1889. Three separate institutional museums (zoology, paleontology, minerology) were maintained in this one building until 1969, at which time they were administratively combined and augmented by botany and anthropology. The museum today is a unit of Humboldt University in Berlin.

The conflict during the second world war very nearly destroyed all of Berlin. The Museum fur Naturkunde (as well as most of the art and historical museums nearby) miraculously survived the heavy bombings of 1943-45. The Coleoptera wing of the Museum was totally destroyed by bombs in 1943, but the beetle collections and library had been transferred to the basement just a week earlier and so were not damaged. The gutted shell of this wing of the Museum, as well as numerous shell pockmarks over the entire building, can still be seen today. For those of us unused to experiencing firsthand the scars of war, these reminders are unsettling.

The Museum has recently begun the massive job of renovation and restoration of its exhibits. Judging from what I saw during my last visit, the results are going to be spectacular when completed. During the process of renovation, the Museum is ostensibly closed, but scientific work with the collections continues by the staff and visiting scholars.

The Coleoptera collections increased greatly between 1880-1930, and most of the scarab material dates from this period. There are about eight million prepared Coleoptera specimens and approximately two million unprepared specimens. Holdings from Africa, China and Europe are the most extensive. Material from the Oriental and Neotropical regions are less extensive (although there is quite a lot of it), and there is a very little material from North America or Australia.

The Scarabaeidae occupy an impressive 1,775 drawers (of roughly Cornell size) housed in wooden cabinets, and number approximately 1-2 million specimens. Many of the older specimens have little supporting data. Types are located in the main body of the collection. Many of the older types and type series are "buried" in the collection and are not only in need of distinctive labels, but also of being recognized as types in the first place. Material is generally arranged by catalog treatment. Unfortunately, the unit tray system is not used because of the historical precedence and the great expense involved in starting such a system. Nevertheless, the collections are very expertly curated by Joachim Schulze. Mr. Schulze is the principal curatorial assistant to Drs. Fritz Hieke (Carabidae) and Manfred Uhlig (Staphylinidae) who are the research curators. Part-time assistants are also variously employed. I have never met anyone more willing to assist a visitor and expedite research on Coleoptera than these three very dedicated entomologists.

Needless to say, a Coleoptera collection of this size and importance needs additional curatorial and technical staff. Management of a loan program and visiting scholars would, alone, seem to occupy a disproportionately large block of the current staff's time. The Museum

fur Naturkunde suffers the same plight of virtually all University museums in the United States: that of inadequate funding and too few staff.

Many people are unfamiliar with how easy it is to visit the Museum. There is often the assumption that, because the Museum is in East Berlin, there may be bureaucratic problems for western visitors. This is not true. From many points in Europe, East Berlin may be entered by plane, train or auto. The best way to visit the Museum from West Berlin for a day visit is to enter East Berlin at Checkpoint Charlie on Friedrichstrasse. After clearing customs and paying a small entrance fee, proceed north on Friedrichstrasse approximately 100 meters to the first bus stop. Take bus #59 (Chausseestrasse) to Invalidenstrasse (about a five minute or less trip). After getting off at Invalidenstrasse, proceed about one block west to the Museum. Advance notice of your proposed visit is, of course, to be expected. For visits of longer than one day, you may wish to correspond with the Hotel Metropole on Friedrichstrasse; I have been told this hotel is relatively inexpensive. I was also told that the hotel can arrange a longer visit with immigration officials that might obviate the need for a formal visa obtained through a consulate before one's trip. It would be wise to plan in advance and confirm what the current regulations and prices are going to be.

I believe that the Museum fur Naturkunde has been an under-utilized resource in systematic entomology in the past. An increased volume of requests and queries at this time may prove a heavy burden to the small staff. I am hopeful, however, that the Museum's collections and the science of systematic entomology will both benefit greatly by increased awareness and use of these fine collections.

The Museum's address is:  
Museum fur Naturkunde  
43 Invalidenstrasse  
1040 Berlin  
GERMAN DEMOCRATIC REPUBLIC

I thank Manfred Uhlig for providing me with much of the information included above.

<sup>1</sup> Systematics Research Collections, W436 Nebraska Hall, University of Nebraska, Lincoln, Nebraska 68588-0514.

## BOOK REVIEW

Moron Rios, Miguel Angel. 1984. Escarabajos. 200 Millones de Anos de Evolucion. Publication 14, Instituto de Ecologia, Mexico, D.F., 132 pp., \$40.00. Available from: Instituto de Ecologia (attn. Patricia Reidl), Apartado Postal 18-845, Delegacion Miguel Hidalgo, 11800 Mexico, D.F., Mexico.

This book is not a scientific treatment in the sense that it is a technical volume targeted for scientists. Rather, it is an example of science expertly distilled for presentation to the public at large. The slip cover states that the book is directed to the public and that it will be used by teachers and students at intermediate and higher levels. Scientists will also find this book useful.

The chapters are entitled (1) Morfologia, (2) Diversidad y Habitos, (3) Importancia y Utilidad, (4) Colecciones y Estudio, (5) Clasificacion General, and (6) Literatura Citada. A prologue, introduction, literature recommended, glossary, and general index are also included.

The first chapter provides a concise overview of scarab structure (both external and internal), a discussion of form, color, and strength (supplemented by many beautiful color photographs), and a commentary on the function of horns. Chapter two delves into the number of species of scarabs, the places in which they live, and gives brief, synoptic life history notes for Goliathus orientalis, Canthon humectus, Proculus mniszcechi, Megasoma elephas, and Phanaeus mexicanus. The third chapter deals with importance and utility of scarabs. Excellent, although very brief, synopses are given on the relationships between scarabs and agriculture, forestry, and cattle raising followed by a broader look at overall ecological importance. Chapter four concerns itself with collecting and studying scarabs. It is accurate and up to date and will prove especially useful to beginners. The penultimate chapter gives a general classification of the arthropods that becomes increasingly detailed (down to subtribe where applicable) for the Scarabaeoidea. Each of the scarabaeoid families or subfamilies is then characterized as to form, numbers, distribution and habits with a concluding comment on how many taxa are present in Mexico.

The literature cited is by no means complete or even synoptic (nor is it meant to be), but it is a good introduction to the kinds of publications available on Scarabaeidae. This is particularly useful to non-specialists desiring a broad overview who may wonder where to start in "getting into" the scarab literature. There are 174 figures in the book, and an impressive 92 of them are in color! Most of the line drawings were completed by the author, and all the illustrations are excellent; the visual effect of the entire book is extremely pleasing. The volume is nicely produced on good paper although I feel the binding could have been more closely stitched. Considering its moderate size, the book seems slightly overpriced, but perhaps the many color pictures negates that particular criticism.

I endorse and recommend this book to anyone interested in beetles. Those interested in Scarabaeidae, whether amateur or professional, should seriously consider obtaining it. The book is in Spanish.--BCR

MAILING LIST FOR UNITED STATES ADDRESSES

ALABAMA

Dr. Robert Turnbow, Jr.  
Supervisory Entomologist  
DEH, Bldg. 1404  
Fort Rucker,  
ALABAMA 36362

ARIZONA

Dr. Mont Cazier  
Zoology Department  
Arizona State University  
Tempe,  
ARIZONA 85281

Joe Cicero  
Department of Entomology  
University of Arizona  
Tucson,  
ARIZONA 85721

J. Eastin  
2924 W. Paradise Dr.  
Phoenix,  
ARIZONA 85029

Scott McCleve  
2210 13th Street  
Douglas,  
ARIZONA 85607

Dr. Paul Ritcher  
45 N. Los Olmos  
Green Valley,  
ARIZONA 85614

Dr. Milton Sanderson  
195 Rainbow Rock Road  
Sedona,  
ARIZONA 86336

W. B. Warner  
Dept. of Zoology  
Arizona State University  
Tempe,  
ARIZONA 85281

Dr. Floyd Werner  
Department of Entomology  
University of Arizona  
Tucson,  
ARIZONA 85721

Neil Rulien  
495 "D" Paseo Madera  
Green Valley,  
ARIZONA 85614

CALIFORNIA

Bob L. Allen  
27081 Segovia Circle  
Mission Viejo,  
CALIFORNIA 92691

Christopher Banzhof  
680 Switzer, 10th Ave.  
Marine Terminal  
San Diego,  
CALIFORNIA 92101

Larry Bezark  
521 46th Street  
Sacramento,  
CALIFORNIA 95819

Robert Brooks  
21621 Rio Verde  
El Toro,  
CALIFORNIA 92630

Dave Carlson  
5299 Butterwood Cir  
Orangevale,  
CALIFORNIA 95662

Bob Duff  
9519 Casanes Ave.  
Downey,  
CALIFORNIA 90240

David Faulkner  
Department of Entomology  
P. O. Box 1390  
San Diego,  
CALIFORNIA 92112

R. Geck  
18741 Capense St.  
Fountain Valley,  
CALIFORNIA 92708

Art Gilbert  
7817 N. Leonard  
Clovis,  
CALIFORNIA 93612

Scott Haskins  
702 Ozark Ct.  
Stockton,  
CALIFORNIA 95205

Larry Hummer  
1622 Ravine Rd.  
Vista,  
CALIFORNIA 92083

Dr. Robert Langston  
31 Windsor Ave.  
Kensington,  
CALIFORNIA 93708

Doris Lewis  
P. O. Box 2034  
Covina,  
CALIFORNIA 91722

Ron McPeak  
7989 La Brusca Way  
Carlsbad,  
CALIFORNIA 92008

Bob Crandall  
1992 N. Mar Vista  
Altadena,  
CALIFORNIA 91001

Dave Edmonds  
Calif. State Polytechnic Univ.  
3801 W. Temple Ave.  
Pomona,  
CALIFORNIA 91768

Miguel Garcia-Vidal  
351 Grove St. #1  
San Francisco,  
CALIFORNIA 94110

E. Giesbert  
9780 Drake Lane  
Beverly Hills  
CALIFORNIA 90210

Derham Giuliani  
170 Flower Alley  
Big Pine,  
CALIFORNIA 93513

Frank Hovore  
19152 W. Placerita Cyn. Rd.  
Newhall,  
CALIFORNIA 91321

Cliff Kitayama  
1050 San Pablo Ave.  
Albany,  
CALIFORNIA 94706

Delbert LaRue  
3894 McKenzie St.  
Riverside,  
CALIFORNIA 92503

Dave Marqua  
Whittier Narrows Nature Center  
1000 N. Durfee Ave.  
S. El Monte,  
CALIFORNIA 91733

G. H. Nelson  
COMP 309  
Pomona Mall E.  
Pomona,  
CALIFORNIA 91766

J. Robertson  
10839 Kelmore  
Culver City,  
CALIFORNIA 90230

Jim Saulnier  
12968 Central Ave.  
Chino,  
CALIFORNIA 91710

Kirk Smith  
1227 F Street  
Davis,  
CALIFORNIA 95616

Barney Streit  
2218 N. First Ave.  
Upland,  
CALIFORNIA 91786

Pat Sullivan  
Eaton Canyon Nature Center  
1750 N. Altadena Dr.  
Pasadena,  
CALIFORNIA 91107

Dave Verity  
Botanical Gardens-Herbarium  
University of California  
Los Angeles,  
CALIFORNIA 90024

George C. Walters  
3650 Watseka, Apt. 2  
Los Angeles,  
CALIFORNIA 90034

Bob Potts  
P. O. Box 336  
Coarsegold,  
CALIFORNIA 93614

#### COLORADO

Carl Kamp  
15984-B E. Rice Place  
Aurora,  
COLORADO 80015

Chris Mosenender  
8073 S. Newport Ct.  
Englewood,  
COLORADO 80112

#### CONNECTICUT

C. L. Remington  
Yale University  
Peabody Museum of Natural History  
New Haven,  
CONN. 06511

#### DISTRICT OF COLUMBIA

Norman E. Woodley  
Systematic Entomology Laboratory-USDA  
U.S. National Museum NHB 168  
WASHINGTON DC. 20560

#### FLORIDA

Dr. Ross Arnett, Jr.  
Florida State Colln. of Arthropods  
P. O. Box 1269  
Gainesville,  
FLORIDA 32602

Bert Klein  
Department of Zoology  
University of Florida,  
Gainesville,  
FLORIDA 32611

Paul Choate  
USDA SEA IAML  
PO Box 14565  
Gainesville,  
FLORIDA 32604

Dr. R. E. Woodruff  
Florida Dept. of Agriculture  
Plant Industry  
P.O. Box 1269  
Gainesville,  
FLORIDA 32602

GEORGIA

L. Orsak  
Dept. of Entomology  
University of Georgia  
Athens,  
GEORGIA 30602

Dr. Orrey P. Young  
Southern Grain Insects Res. Lab  
Tifton,  
GEORGIA 31793

ILLINOIS

Randall Lundgren  
815 S. Fell Ave.  
Normal,  
ILLINOIS 61761

IOWA

T. L. Chandler  
Dept. of Zoology & Entomology  
Iowa State University  
Ames,  
IOWA 50010

J. E. Wappes  
904 50th Street  
W. Des Moines,  
IOWA 50265

LOUISIANA

Dr. T. Stewert  
School of Veterinary Medicine  
Louisiana State University  
Baton Rouge,  
LOUISIANA 70803

MARYLAND

John D. Glaser  
6660 Loch Hill Rd.  
Baltimore,  
MARYLAND 21239

Dr. Robert Gordon  
12402 Round Tree Lane  
Bowie,  
MARYLAND 20715

Charles L. Staines, Jr.  
3302 Decker Place  
Edgewater,  
MARYLAND 21037

MASSACHUSETTS

Dr. Gary Alpert  
46 Oxford Street  
Cambridge,  
MASS. 02138



MICHIGAN

Gary Dunn  
147 Natural Science Bldg.  
Michigan State University  
E. Lansing,  
MICHIGAN 48824

MISSISSIPPI

Dr. Paul Lago  
Department of Biology  
University of Mississippi  
University,  
MISSISSIPPI 38677

MONTANA

Wendell Morrill  
Department of Biology  
Montana State University  
Bozeman,  
MONTANA 59717

NEBRASKA

Dr. Brett Ratcliffe  
Univ. of Nebraska State Museum  
W436 Nebraska Hall  
Lincoln,  
NEBRASKA 68588

Alex Reifschneider  
5429 Cleveland Ave.  
Lincoln,  
NEBRASKA 68504

NEVADA

Thomas Lugaski  
P. O. Box 18219  
Steamboat Branch  
Reno,  
NEVADA 89511

NEW HAMPSHIRE

Donald Wilson  
RFD Lampray Rd.  
E. Kingston,  
NEW HAMPSHIRE 03827

NEW MEXICO

W. G. Whitford  
New Mexico State University  
Department of Biology  
Box 3AF  
Las Cruces,  
NEW MEXICO 88003

NEW YORK

Dr. R. G. Helgesen  
Department of Entomology  
Cornell University  
Ithaca,  
NEW YORK 14853

Dr. John Stamatov  
Box 117-27 Annadale Street  
Armonk,  
NEW YORK 10504

NORTH CAROLINA

J. F. Cornell  
2033 S. Blvd.  
Charlotte,  
NORTH CAROLINA 28203

Lester Lampert, Jr.  
17 Hillview Circle  
Asheville,  
NORTH CAROLINA 28805

N. H. Newton  
North Carolina St. Univ.  
Department of Entomology  
P. O. Box 5215  
Raleigh,  
NORTH CAROLINA 27650

NORTH DAKOTA

Dr. Myron Andrews  
Professor, Veterinary Science  
North Dakota State University  
Fargo,  
NORTH DAKOTA 58105

Dr. Alan Ashworth  
Department of Geology  
North Dakota State University  
Fargo,  
NORTH DAKOTA 58105

Dr. D. P. Schwert  
Geology Department  
North Dakota State University  
Fargo,  
NORTH DAKOTA 58105

OHIO

Michael G. Klein  
USDA Japanese Beetle Laboratory  
Ohio Agric. Research & Develop. Cntr.  
Wooster,  
OHIO 44691

OKLAHOMA

Jiri Zidek  
830 Van Vleet Oval, Rm. 163  
The University of Oklahoma  
Norman,  
OKLAHOMA 73019

OREGON

Bill Gavin  
Dept. of Entomology  
Oregon State University  
Corvallis,  
OREGON 97331

Jack Lattin  
Dept. of Entomology  
Oregon State University  
Corvallis,  
OREGON 97331

Gary Parsons  
Dept. of Entomology  
Oregon State University  
Corvallis,  
OREGON 97331

Gary Peters  
Dept. of Entomology  
Oregon State University  
Corvallis,  
OREGON 97331

Rick Westcott  
State Dept. of Agriculture  
635 Capitol St. N. E.  
Salem,  
OREGON 97310

TENNESSEE

Dr. L. R. Johnson  
Memphis State University  
History Department  
Memphis,  
TENNESSEE 38152

TEXAS

Dr. G. T. Fincher  
USDA-ARS-VTERL  
P. O. Drawer GE  
College Station,  
TEXAS 77841

W. P. Foerster  
Department of Entomology  
Texas A & M University  
College Station,  
TEXAS 77843

G. Frankie  
Dept. of Entomology  
Texas A & M University  
College Station,  
TEXAS 77843

Dan Sundberg  
Rt. 1, Hillbrook Rd #16  
Cibolo,  
TEXAS 78108

Terry Taylor  
P. O. Box 1446  
Fort Davis,  
TEXAS 79734

Dr. Donald Thomas  
USDA-ARS Livestock Insects Lab.  
P. O. Box 232  
Kerrville,  
TEXAS 78028

VIRGINIA

John Coffman  
Route 1, Box 331,  
Timberville,  
VIRGINIA 22853

WASHINGTON

Paul Johnson  
1408 28th St. S. E.  
Auburn,  
WASHINGTON 98002

Dr. W. J. Turner  
Dept. of Entomology  
Washington State University  
Pullman,  
WASHINGTON 99164

WISCONSIN

Dr. Daniel K. Young  
237 Russell Labs  
1630 Linden Dr.  
Madison,  
WISCONSIN 53706

-----  
ADDRESS CORRECTIONS

The following are new addresses or corrections to the addresses printed in SCARABAEUS number 10:

Antonio Martinez, Juan Carreras 508- C.C.21, Rosario de Lerma (4405), Salta, ARGENTINA.  
Renaud Paulian, La Rouviere, Port Sainte Foy, F-33220 Sainte Foy la Grande, FRANCE.  
D. & C. Rougon, Laboratoire d'Ecole animale, Universite d'Orleans, 45046 Orleans cedex, FRANCE.

NEW ADDRESSES:

Heinz Freude, D-8000 Munchen 19, Landshuter Allee 156, DEUTSCHE BUNDES REPUBLIK.  
John Lawrence, CSIRO Entomology, G.P.O. Box 1700, Canberra, A.C.T. 2601, AUSTRALIA.  
J. Roggeman, Tulpentuin 81, Voorburg, NETHERLANDS.  
Nicole Stiernet, 20, rue du Marche, B-4020 Liege, BELGIUM.  
T.A. Weir, CSIRO Entomology, G.P.O. Box 1700, Canberra, A.C.T. 2601, AUSTRALIA.  
G. A. Williams, C/-Post Office Lansdowne, via Taree, NSW, 2430, AUSTRALIA.

We now have no current address for the following Scarabaeologists. If you have a recent address for any of these people, please send it to the editors. Thank you.

J. A. Green, Ohio, USA.  
Ingemar Hedstrom, COSTA RICA.  
B. Kohlman, MEXICO.  
Bill Reid, New York, USA.  
Robert Aronheim, Connecticut, USA.

We are informed that Dr. Michel Desiere (Belgium) died in July, 1984.

-----  
RECENT LITERATURE

- Allard, Vincent. 1982. Notes sur le genre Coelorrhina Burmeister (Col. Scarabaeidae Cetoniinae). Sciences Nat. 36:3-7.
- Bertrand, M. & J. P. Lumaret. 1984. Reaction des populations de microarthropodes a l'enfouissement des feces de mouton par les Insectes Scarabaeidae en mileux a fortes contraintes climatiques. Pedobiologia 27:51-66.
- Allsopp, P. G. 1984. Lectotype designations for four species of Aclopus Erichson and for Xenaclopus borneensis Arrow (Coleoptera: Scarabaeidae: Aclopinae). Coleopt. Bull. 38(3):209-210.
- Blom, Paul E. & William H. Clark. 1984. Phobetus desertus, a New Melolonthine Scarabaeidae (Coleoptera) from the Central Desert of Baja California, Mexico. Pan-Pac. Entomol. 60(4):304-312.
- Branco, Tristao & Jacques Baraud. 1984. Observations sur le genre Heptaulaculus Dellacassa & Baraud avec description d'une nouvelle espece du Portugal. Boll. Soc. Entomol. Ital. 116(1-3):29-40.
- Dechambre, R.-P. 1983. Contribution a l'etude du peuplement des iles du Golfe de Guinee. Coleopteres Dynastidae Phileurinae de l'Ile Principe. Rev. Fr. Entomol. (N.S.), 5(3):110-112.
- Dechambre, R.-P. 1983. Contribution a l'etude phylogenetique des Oryctes de la region malagache: utilisation des stries stridulatoires propygidiales (Col. Dynastidae). Bull. Soc. Entomol. France 88(5-6):436-448.
- Dechambre, R.-P. 1984. Une nouvelle espece de Phyllognathus (Coleoptera, Dynastidae). Rev. Fr. Entomol. (N.S.) 6(2):73-74.
- Dechambre, R.-P. & S. Endrodi. 1984. Quatre nouvelles especes de Cyclocephala (Coleoptera Dynastidae). Rev. Fr. Entomol. (N.S.) 6(3):168-172.
- Downie, N. M., 1984. Onthophagus gazella Fabricius, new to Florida (Coleoptera:Scarabaeidae). Coleopt. Bull. 38(4):304.
- Evans, Arthur V. 1985. New host plant associations for adult scarabs (Coleoptera: Scarabaeidae: Melolonthinae) from Arizona and California. Coleopt. Bull. 39(1):86-88.
- Garcia-Vidal, Miguel. 1984. The Genus Phyllophaga Harris, 1826 (Coleoptera : Scarabaeidae) in Cuba. II. Descriptions of eleven new species and illustrations of female genitalia of twelve other Phyllophaga. Pan-Pac. Entomol. 60(4):313-325.

- Gill, B. D. & H. F. Howden. 1985. A review of the North American genus Aphonus LeConte (Coleoptera: Scarabaeidae: Dynastinae). Coleopt. Bull. 39(2):119-129.
- Halfpfer, Gonzalo, Violeta Halfpfer & Carmen Huerta. 1983. Comportment sexuel et nidification chez Canthon cyanelus cyanelus LeConte. Bull. Soc. Entomol. France. 88:585-594.
- Howden, H. F. 1985. A revision of the South American genus Parathyreus Howden and Martinez (Coleoptera: Scarabaeidae: Geotrupinae). Coleopt. Bull. 39(2):161-173.
- Howden, H. F. & B. Gill. 1984. Two new species of Neoathyreus Howden and Martinez from Costa Rica with distribution notes on other Athyreini from Mexico and Central America (Coleoptera: Geotrupinae). Canad. Entomol. 116:1637-1641.
- Kirk, A. A. & J. E. Feehan. 1984. Note. Method for increased production of eggs of Copris hispanus L. and Copris lunaris L. (Coleoptera: Scarabaeidae). Aust. Entomol. Soc. 23:293-294.
- Kohlmann, Bert & Salvador Sanchez Colon. 1984. Structure of a Scarabaeinae community: a numerical-behavioral study (Coleoptera: Scarabaeinae). Acta Zool. Mexicana 2:1-27.
- Koybayashi, A number of papers, in Japanese, including: Coleopt. News, no. 58:1-4; 59:1-5; 60:1-4, 1982; 61:1-4, 1983; Gekkan-Mushi, no. 143:13-16; 145:15-18; 147:21-25; 150:15-18; 1983; 155:17-20; 1984.
- Krikken, J. 1984. A new genus of small Goliathini from East Africa. Deut. Entomol. Zeitsch. N.F. 31(4-5):237-240.
- Krikken, J. 1984. A new key to the suprageneric taxa in the beetle family Cetoniidae, with annotated lists of the known genera. Zool. Verhandl. 210:1-75.
- Kuijten, P. J. 1984. Some new taxa of Asian Hybosorinae and notes on further species (Coleoptera, Scarabaeidae). Proc. Konin. Nederl. Akad. Wetensch., ser. C 87(1):43-49.
- Lago, P. K., J. R. McDonald & W. H. Cross. 1984. Mexican records for Onthophagus gazella Fabricius (Coleoptera: Scarabaeidae). Coleopt. Bull. 38(3):214.
- Lobanov, Andrej L., Wjatscheslaw F. Schilow & Leonid M. Nikritin. 1981. Zur Anwendung von Computern für die Determination in der Entomologie. Duet. Entomol. Zeit. N.F. 28 I-III:29-43.
- Lumaret, Jean-Pierre & Nicole Stiernet. 1984. Contribution à l'étude de la faune des Alpes suisses. Description de la larve d'Aphodius (Agolius) Abdominalis Bonelli, 1812 (Coleoptera, Aphodiidae). Mittl. Schweiz. Entomol. Gesell. 57:335-340.

- Lumaret, Jean-Pierre & Nicole Stiernet. 1984. Contribution a l'etude de la faune des alpes suisses. Description de la larve d'Aphodius (Agolius) abdominalis Bonelli, 1812 (Coleoptera, Aphodiidae). Mitt. Schweiz. Entomol. Gesell. [Bull. Soc. Entomol. Suisse] 57:335-340.
- Lumaret, Jean-Pierre. 1984. Description de la larve de Ceratophyus hoffmannseggii Fairmaire et position taxonomique du genre (Coleoptera: Geotrupidae). Ann. Soc. Entomol. France 20(3):283-289.
- Martinez, Antonio. 1983. Nueva especie de Bothynus de Brasil (Coleoptera, Scarabaeidae, Dynastinae, Pentodontini). Rev. Bras. Entomol. 27(3-4):297-300.
- Moron, Miguel Angel & Brett C. Ratcliffe. 1984. Description of the larva and pupa of Argyripa lansbergei (Salle) with new distributional records of the genus and a key to new world Gymnetini larvae (Coleoptera: Scarabaeidae: Cetoniinae). Proc. Entomol. Soc. Wash. 86(4):760-768.
- Nagai, Shinji. 1984. Two new may-beetles of the genus Fruhstorferia from Malaysia, with the description of a new subgenus (Coleoptera: Scarabaeidae). Trans. Shikoku Entomol. Soc. 16(4):25-31.
- Oberprieler, R. G. 1984. An improved light trap for obtaining undamaged insect specimens. J. Entomol. Soc. S. Afr. 47(2):329-335.
- Paulian, Renaud & Jean-Pierre Lumaret. 1982. La Larve des Orphnidae. Bull. Soc. Entomol. France 87:263-272.
- Paulian, Renaud & Henry F. Howden. 1982. Un nouveau genre de Ceratocanthides des Antilles. Bull. Soc. Entomol. France 87:78-85.
- Paulain, Renaud. 1984. Notes sur les Coleopteres Scarabaeidae du Museum de Geneve, I. Rev. Suisse Zool. 91(2):471-474.
- Paulain, Renaud & Yves Cambefort. 1984. Un nouvel Helictopleurus de Madagascar et une nouvelle synonymie [Coleoptera, Scarabaeidae]. Rev. Fr. Entomol. (N.S.) 6(3):113-114.
- Paulian, Renaud. 1983. Un nouvel Aneilobolus Hesse (Col. Ceratocanthidae). Bull. Soc. Entomol. France 88:x-xi.
- Paulian, Renaud. 1983. Sur quelques Coleopteres Scarabaeoidea de la region Orientale. Rev. suisse Zool. 90(3):615-622.
- Paulian, Renaud. 1982. Observations sur quelques Ceratocanthides de Sumatra. Bull. Soc. Entomol. France 87:196-197.
- Paulian, Renaud & Dominique Pluot-Sigwalt. 1984. Les Canthonines de Nouvelle-Caledonie (Coleoptera, Scarabaeidae) Etude systematique et biogeographique. Bull. Mus. natn. Hist. nat. Paris 4 ser. 6(A:4)1091-1133.
- Paulian, Renaud. 1982. Observations sur quelques Ceratocanthides de Sumatra. Bull. Soc. Entomol. France 87:196-197.

- Peck, Stewart B. & Henry F. Howden. 1984. Response of a dung beetle guild to different sizes of dung bait in a Panamanian rainforest. *Biotropica* 16(3):235-238.
- Pittino, Riccardo & Miloslav Rakovic. 1984. A new species of the genus *Rhyssmodes* Reitt. from Asiatic Turkey (Coleoptera Aphodiidae Psammodiini). *Giorn. Ital. Entomol.* 2(7):167-174.
- Rakovic, Miloslav. 1984. Psammodiini of Sudan (Coleoptera, Scarabaeidae, Aphodiinae). *Annot. Zool. Bot.* 163:1-20.
- Rakovic, Miloslav. 1984. A review of the genus *Tesarius* Rakovic (Coleoptera, Scarabaeidae, Aphodiinae). *Acta Entomol. Bohemoslov.* 81:448-452.
- Ridsdill Smith, T. J. & J. N. Matthiessen. 1984. Field assessments of the impact of night-flying dung beetles (Coleoptera: Scarabaeidae) on the bush fly, *Musca vetustissima* Walker (Diptera: Muscidae), in south-western Australia. *Bull. Entomol. Res.* 74:191-195.
- Ridsdill Smith, T. J. & G. P. Hall. 1984. Seasonal patterns of adult dung beetle activity in south-western Australia. *Proc. 4th Internat. Conf. on Mediterranean Ecosystems. MEDECOS IV.* PP. 139-140.
- Ridsdill Smith, T. J. & G. P. Hall.. 1984. Beetles and mites attracted to fresh cattle dung in Southwestern Australian pastures. *CSIRO Div. Entomol. Rept.* 34:1-29.
- Ridsdill Smith, T. J., G. P. Hall & G. F. Craig. 1982. Effect of population density on reproduction and dung dispersal by the dung beetle *Onthophagus binodus* in the laboratory. *Entomol. Exp. & Appl.* 32:80-85.
- Rojewski, Cezary. 1983. Observations on the nesting behavior of *Aphodius erraticus* (L.) (Coleoptera, Scarabaeidae). *Polskie Pismo Entomol.* 53:271-279.
- Rougon, Daniel & Christiane Rougon. 1984. Description de la larve et de la nymphe d'*Onitis alexis* Klug (Coleoptera, Scarabaeidae). *Ann. Soc. Entomol. France (NS)* 20(4):411-417.
- Rougon, Daniel & Christiane Rougon. 1983. Nidification des Scarabaeidae et cleptoparasitisme des Aphodiidae en zone sahelienne (Niger). *Bull. Soc. entomol. France* 88:496-513.
- Rust, Richard W. 1985. Notes on the Biology of *Pseudocotalpa giulianii* Hardy (Coleoptera: Scarabaeidae). *Pan-Pac. Entomol.* 61(2):105-109.
- Warner, William B. 1985. A revision of the *Cremastocheilus* (*Myrmecotonus*: the Robinsoni group (Coleoptera: Scarabaeidae). *Coleopt. Bull.* 39(2):103-110.
- Young, Orrey P. 1984. Perching of Neotropical Dung Beetles on Leaf Surfaces: An Example of Behavioral Thermoregulation? *Biotropica* 16(4):324-327.