

# Scarabaeus

A NEWSLETTER FOR THOSE INTERESTED IN SCARABAEIDAE

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c/o INSECT TAXONOMY LABORATORY,  
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NUMBER 13

JULY 1986

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Word about the existence of this newsletter continues to spread, with many additional requests to be added to the mailing list. This issue will be sent to 245 addresses. Many have indicated that they had recently read about this newsletter, and requested a copy. We would be interested to know where such information appeared, and any future mentions of SCARABAEUS.

There have been a few responses to the requests for opinions about the formation of a journal to be devoted to Scarabaeidae, which appeared in newsletter # 12. The majority indicated that they would like to see such a journal, and would indeed subscribe. P. B. McQuillan writes "...I am ambivalent. While I would certainly subscribe, I feel that the informality of the present format is very appealing and may, in the long term, do more for communication amongst us than a stiffly formal 'glossy'." There was one opinion that expressed doubt there would be sufficient interest, either through subscription or contribution of papers, to keep a specialty journal thriving. We will keep the question open for now.

There has been an increasing interest for the inclusion of material dealing with Lucanidae and Passalidae in this newsletter. The amount of material concerning Lucanidae is so great, and so far removed from the attention of the editors that the inclusion of material on Lucanidae would be impossible. The amount of material on Passalidae, however, seems to be of a more manageable size. Ms. Isa Montenegro, who has an interest in Passalidae, has agreed to act as an editor for materials dealing with Passalidae. If your interests are in this group, making contact with Isa and helping her to keep abreast of the developments in this area would be greatly appreciated. She will provide the material for a separate section to be published in this newsletter. She can be reached at the address on the masthead, at the Insect Taxonomy Laboratory of the California Department of Food and Agriculture.

In this issue we have a few additional photos of Scarabaeologists. We have received a few more, which will be included in future issues. There have been a number of comments about the inclusion of photos, all of them positive. We do, however, continue to need additional photos for this section. Please, if you have not already done so, send us a photo of yourself!!

We are including a form at the back of this issue to be used for announcements and notices. We are always happy to help get the word out to as many people as possible, if you have an announcement or request.

There have been a number of comments on the response sheets which we would like to cover here. A couple of readers have indicated an interest in seeing SCARABAEUS appear quarterly. At present the newsletter takes over 40 hours to prepare, per issue. The majority of the effort is by one individual. This is a substantial amount of time, when it has to be squeezed out from among other professional responsibilities. The cost of mailing and printing this newsletter is currently paid by the California Department of Food and Agriculture. To increase this expense would probably be the blow that kills the golden goose. It is thus unlikely that we would be producing more than two issues per year, at least for the immediate future.

There have been other suggestions concerning possibilities for improving SCARABAEUS. These include the following:

There has been expressed an interest in having an outlet for informal notes upon collections or distributional records. This type of material is always welcome (see note by Ron Young, below). Just send the material along.

Another interesting idea concerns a column devoted to discussion of questions involving topics of burning interest, such as differences of opinion concerning classifications or relationships. There was also a desire to have a place to send questions for response by the more knowledgeable or experienced among us. This seems to be worth trying, and so send in your questions, and we'll give it a try.

#### VANCOUVER INTERNATIONAL CONGRESS OF ENTOMOLOGY

In SCARABAEUS #12 the possibility of a symposium at the Congress was mentioned. We have received the following:

"A scarab symposium at the Vancouver Congress would be an excellent idea. If such a symposium can be organized I would be keen to see part of it devoted to the contribution of larvae to scarab taxonomy. Much descriptive work has been fragmentary and unco-ordinated and it is time to rationalize the effort and review what has been achieved and what we need to find out. After all, the larvae of Scarabaeoidea are better studied than the larvae of any other large group of Coleoptera, yet the impact of this body of knowledge on the classification at most levels has been disappointing. If through 'SCARABAEUS', you could canvass support for a session on larvae systematics I would be prepared to co-ordinate such an undertaking."

Any interested parties should thus contact:

P. B. McQuillan  
Entomologist  
Department of Agriculture  
G.P.O. Box 192 B  
Hobart, Tasmania 7001,  
AUSTRALIA

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SEBO ENDRODI<sup>1</sup>  
(1903-1984)

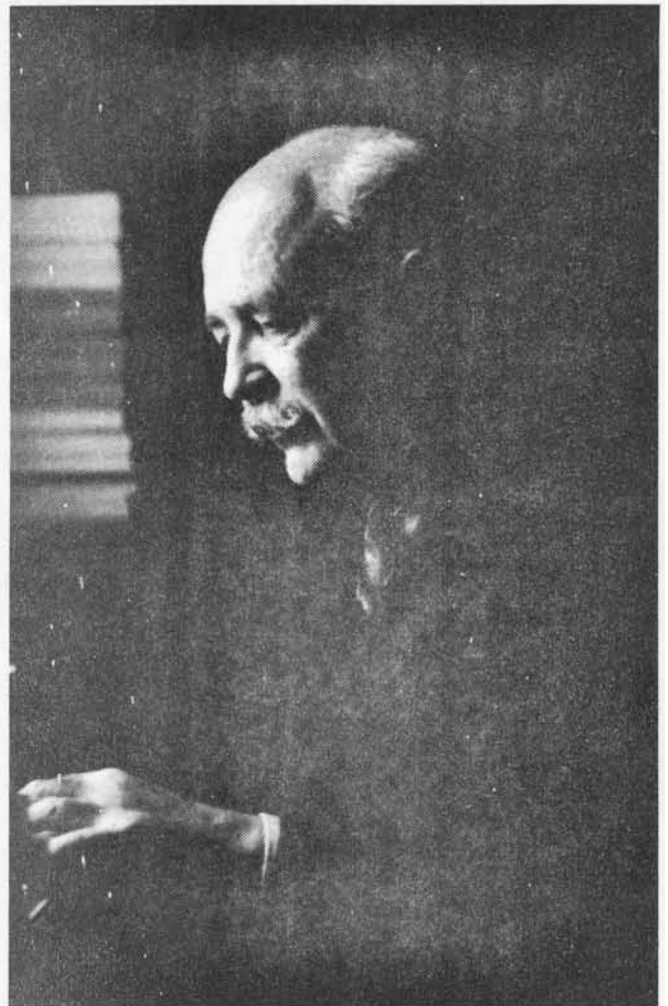
Zoltan Kaszab and Charles S. Papp

Dr. Endrodi was born on October 18, 1903 in Kassa, Hungary (now Kosice, CSSR). In 1931 he received his Doctorate in Law, and as such he was continuously active until 1947. After further assignments after the Second World War, he retired from his profession in 1966. From that time he became an associate in the Hungarian Museum of Natural History, where he was very active the rest of his life.

As a young man he was interested in insects, especially Coleoptera. With meticulous care he studied the insects of the area where he lived, the virgin terrain of the Borzsony Mts. He soon discovered that there is a lot to learn about beetles. His interest gradually narrowed towards the study of the Coleoptera, especially the families of the Lamellicornia. He wasted no time, and with the encouragement of scientists of the Hungarian Museum of Natural History, his first paper was published on the genus Oryctes, based on a new "Rassenkreis" theory.

Reactions and comments on his paper by workers from all over the World encouraged him to develop a life-long interest in the subfamily Dynastinae, and the idea of a worldwide revision was born. His work, of course, was interrupted by the Second World War. Restrictions upon correspondence and the exchange of materials with foreign museums did not discourage him. He kept his idea alive, while he worked on available material from the Hungarian museum. Finally, between 1966 and 1977 his dream became reality, and his series of papers on Dynastinae appeared in 20 parts, published in eight different scientific periodicals, and consists of some 1,600 pages, which alone is a remarkable achievement.

On the basis of Dr. Endrodi's monumental work more specialists became interested in the Dynastinae, which led to the idea to combine, translate and make a book of those papers covering the revision. In 1977 he began to work on his Dynastinae of the world, which was completed in 1981. Publishing such a large manuscript wasn't easy, yet the support of the Hungarian Academy of



Sciences and the cooperation of Junk, the famous Dutch entomological publisher, made it possible for this monumental work to appear as a book of 800 pages. Ironically, Dr. Endrodi was denied the privilege of enjoying the fruits of his labors, since on December 18, 1984, at the age of 82 years he passed away, as the production of the book was nearly completed.

This monograph is Dr. Endrodi's major work. His interests were well known in other families too. His works, published in the series of "Magyarország Allatvilága" ("Fauna Hungariae") on the Lamellicornia and Rhyncophora of Hungary were well received and long overdue; one of these works alone would have secured him a permanent place among prominent entomologists. These works are based upon the enormous material in the Hungarian Museum of Natural History, and as such are not only of value as identification keys (with illustrations), but also as a documentation and inventory of a geographically unique, well isolated area, the Carpathian Basin.

Dr. Endrodi had keen interest in the Scarabaeidae not only of the palearctic region (cf. his papers on Mongolian material), but also of tropical territories, like Vietnam, India, New Guinea, Brazzaville Congo, Zaire, South Africa, Tanzania, Argentina, etc. His papers were published in 22 journals; most of them in his native Hungary (in Folia Entomologica Hungarica, Acta Zoologica Hungarica, Opuscula Zoologica, Annales Historico-naturales Musei Nationalis Hungarici, etc.), yet many of his larger monographs were published by the Museum Dresden and in the editions of the Frey Museum. His total publication amount to nearly 6,000 printed pages, and include a large number of illustrations.

In recognition of his scientific contributions, in 1957 he received the title of "Doctor of Biological Sciences," a highly respected honor. From the beginning he was on the Organizing Committee of the Central European Entomofaunistic Symposia, which also honored him in 1979 (The VIIth Symposium) with a prestigious medal of Pro entomofaunistica excellenti, an honor shared by very few.

In his free time he was also an ardent collector, and collected four times in Ghana and South Africa. His large collection was purchased by the Hungarian Museum of Natural History, including many of his type specimens.

He was laid to rest in the family tomb in Verocemaros, Hungary. His name aere perenius will live in his works, and among those many colleagues who knew him personally or by correspondence.

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1 Reprinted from an obituary soon to appear in the pages of Entomography for 1986. The complete obituary includes a complete bibliography of the papers of Sebo Endrodi. By special arrangement, anyone who desires a copy of this paper can request same from Alan Hardy [the editor here] who will forward the requests to Dr. Papp.

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LITERATURE

Neil Rulien, 495 D Paseo Madera, Green Valley Arizona 85614 USA, has a copy of Blackwelder's "Checklist of the Coleopterous Insects of Mexico, Central America, West Indies...", unbound, for exchange.

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QUESTIONS CONCERNING A MASS FLIGHT OF APHODIUS DENTICULATUS HALDEMAN

On June 23, 1985 it was my good fortune to visit a fossil quarry site in central Wyoming being excavated by a crew from the Carnegie Museum of Natural History. As soon as the Carnegie paleontologists learned that I was an entomologist, they glanced at their watches and told me that in about 3 hours (dusk), our campsite would be "swarming with small black beetles."

The campsite, at 6100 ft. elevation, was cleared of vegetation and surrounded by open, sagebrush rangeland. A small, rocky stream lay ca. 50 meters to the south, lined with the cottonwood trees so typical of the western high plains. Dessicated cattle dung was plentiful throughout the rangeland around the camp. There was no fresh dung in the area.

As predicted, just at dusk, clouds of small beetles flew into camp. As suspected, they were Aphodius; more specifically A. denticulatus Haldeman (my thanks to Bob Gordon for the determination). The flight was so dense that 10 light net sweeps through the air collected 164 beetles. All were a meter or less above the ground. As I walked away from camp to the north (towards the dung supply) I could see innumerable A. denticulatus leaving various dung pats and flying in dense "streams" towards the camp. They all ended up concentrated within a circle ca. 2.5 meters in diameter, hovering and swarming over this small area of bare, powdered dirt.

No food was being cooked: we had completed dinner and were talking over coffee. Other "unnatural" items out in the open were cookies, cigarettes, beer, carbonated drinks like Pepsi, and dish soap. It seems very unlikely that any of these would attract the Aphodius. Bob Gordon (personal communication) believes A. denticulatus to be a detritivore which will occasionally feed on horse and cattle dung. He has observed mass flights of this species on 2 evenings in the Snake River country of southern Idaho and considers it a normal event for the species.

A primary conclusion reached by Landin (1961,1968) in his exhaustive studies of the ecology and diel flight activity of the Aphodiini is that "the normal flight activity of the dung beetles is probably released by a combination of decreasing light, increasing air humidity, and a lowering of the temperature within moderate limits. These conditions occur in the evening, from about sundown." Most of us, including Landin, routinely collect dung beetles by using baited traps; that is to say the beetles actively seek out and fly to the dung source.

My questions concerning this apparently normal, unexceptional mass flight are: What were these A. denticulatus doing flying away from their dung niche to what appeared to be a small area of "sterile", powdery dirt? What, if anything, was attracting them? Does the fact that this occurred each day at dusk irrespective of human activity in the area imply the presence of an attractant in the soil? Perhaps someone reading this note might suggest some answers.

Ronald M. Young, Systematic Research Collections, UN State Museum, W436  
Nebraska Hall, Lincoln, NE., 68588-0514, USA.

BOOK REVIEW

Baraud, J. 1985. Coleopteres Scarabaeoidea. Faune du Nord de l'Afrique du Maroc au Sinai. Editions Lechevalier, Paris. 651 pp., 212 figs.

This work is a beautiful addition to the literature on the Scarabaeidae of the Palearctic. It is a comprehensive treatment of the 712 species in the fauna, mainly derived from Baraud's earlier revisions and other works upon the groups which occur in Europe and Northern Africa. The many illustrations, mainly credited to Bernard Mauchamp, provide general views of the majority of the genera treated, in some cases this is the first time these groups have been illustrated. There are also numerous illustrations of genitalia and other significant morphological features. There are keys throughout, and frequent notes (although brief) upon the biology of the taxa. There is a bibliography and complete index. The text is in French. I would highly recommend this work to those with an interest in the fauna of this area, and to those with an interest in the higher classification of the Scarabaeoidea. A truly significant contribution.

My copy was purchased from Sciences Nat., 2, rue Andre Mellenne, Venette 60200 Compiègne, FRANCE. Price 580 F. -ARH-

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NOTICE  
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RESEARCH ON AFRICAN SCARABAEOIDEA IN SOUTH AFRICA

Opportunities exist in the Department of Entomology, University of Pretoria, for research in any field of study on the African Scarabaeoidea. These are available as:

- 1) PhD grants. Supported for 3 years.
- 2) Post-doctoral fellowships. Support for 1 year.
- 3) 1-2 month projects for established biologists. Partial support.
- 4) 3-12 month projects for established biologists. Comprehensive support.

Interested persons should apply in writing to:

Dr. C. H. Scholtz,  
Department of Entomology  
University of Pretoria  
Pretoria 0002  
Republic of South Africa.

Please provide full particulars of proposed project and also an updated C.V. and the names and addresses of two people who would be prepared to provide information on your scientific background.

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RECENT LITERATURE

Allsopp, P. G. 1986.

Checklist of the Hybosorinae (Scarabaeidae). Addendum.

The Coleopterist's Bulletin. 40(1):48.

Barkhouse, J. & Ridsdill-Smith, T. J. 1986.

Effect of soil moisture on brood ball production by *Onthophagus binodus* Thunberg and *Euoniticellus intermedius* (Reiche) (Coleoptera: Scarabaeinae).

Journal of the Australian Entomological Society. 25:75-78. 3 figs.

#### NEW ADDRESSES AND CORRECTIONS

- John H. ACORN, Department of Entomology, University of Alberta, Edmonton, Alberta T6G 2E3, CANADA.
- Don AHART, 12433 N 47th Dr., Glendale, AZ. 85304.
- S. A. BADR, Taxonomy Department, Plant Protection Research Institute, Dokki, Giza 12611, EGYPT.
- G. David BUNTIN, University of Georgia College of Agriculture, Experiment, Georgia, 30212, USA.
- William J. CRINS, Department of Botany, University of British Columbia, Vancouver, British Columbia, V6T 1W5, CANADA.
- Giovanni DELLACASSA, Casella Postale 921, I-16121 Genova, ITALY.
- John M. DOMEK, University of Arkansas, Department of Entomology, Ag. Bldg. 320, Fayetteville, Arkansas 72701, USA.
- A. K. GUPTA, Research Associate, Division of Entomology, Indian Agricultural Research Institute, New Delhi, INDIA.
- Dr. Gonzalo HALFFTER, Cda. de Monte Kamerum #34, Lomas de Chapultepec, Deleg. Miguel Hidalgo, 11000 Mexico, D.F. MEXICO.
- Matthias HARTMANN, 5101 Apfelstadt, Schafgasse 7, GERMAN DEMOCRATIC REPUBLIC.
- Ingemar HEDSTROM, Apdo 339 (DEI), San Pedro, 2050, San Jose, COSTA RICA.
- Dr. Trevor JACKSON, Canterbury Agriculture Science Centre, P.O. Box 24, Lincoln, NEW ZEALAND.
- Dr. Donn T. JOHNSON, University of Arkansas, Department of Entomology, Ag. Bldg. 320, Fayetteville, Arkansas 72701, USA.
- Prof. Roberto MIGNANI, Dipartimento di Fisica, I Università di Roma "La Sapienza", p.le A. Moro, 2, 00185 Rome, ITALY.
- Dr. G. B. MONTEITH, Queensland Museum, P.O. Box 300, South Brisbane, QLD, Australia 4101.
- Colin R. OWEN, Chimperie Agencies, P.O. Box 1384, Somerset West 7130, SOUTH AFRICA.
- Gary L. PETERS, 1445 NW Menlo Dr., Corvallis, Oregon, 97330, USA.
- Dr. Emanuele PIATTELLA, Via Pietro Campora, 25, 00152, Rome, ITALY.
- Giorgio PONTUALE, v. Pomponio Leto, 3, 00193 Rome, ITALY.
- George C. WALTERS, 150 San Remo Rd., Carmel Highlands, California 93923 USA
- Donald A. WILSON, P.O. Box 322, Newfields, NH, 03856, USA.

#### ADDRESS NEEDED

- Gunnar DAHLGREN, Former address: Linnegaten 11, 361 00 Emmaboda, SWEDEN.

#### RECENT LITERATURE

- Bellès, Xavier & Favila, Mario E. 1983.  
Protection chimique du nid chez *Canthon cyanellus cyanellus* LeConte.  
(Col. Scarabaeidae).  
Bulletin de la Société Entomologique de France. 88:602-607. 6 fig 3 t.
- Blume, R. R. 1985.  
A checklist, distributional record, and annotated bibliography of the insects associated with bovine droppings on pastures in America North of Mexico.  
Supplement to The Southwestern Entomologist. 9:1-55. 28 maps.
- Crovetti, A, A.Raspi, B.Paparatti, L.Santini, P.Malfatti. 1983.  
Osservazioni eco-etologiche sul Coleottero Geotrupino *Thorectes intermedius* (Costa)(Coleoptera, Geotrupidae). VIII contributo alla conoscenza dei Coleotteri Scarabeoidei.  
Frustula Entomologicae. (VI)19:147-169. 19 figs.

## QUESTIONNAIRE RESPONSES

In the summaries below we have used a few abbreviations, and a standard format. First will be the NAME of the worker, followed by the GENERAL FIELD OF INTEREST; [(T) taxonomy, (BC) biological control, (Be) behavior, (Bi) biogeography, (LH) life histories, (L) larvae]; the TAXONOMIC AREA OF INTEREST; how many PAPERS PUBLISHED on Scarabaeidae; indication of a PRIVATE COLLECTION and its size; if there is a desire to EXCHANGE SPECIMENS; if there is a willingness to IDENTIFY MATERIAL; and any further comments.

Please remember that an indication of a willingness to identify material should be confirmed in correspondence before sending any specimens.

DONALD N. AHART, USA; Interested in world-wide Scarabaeidae, esp. Cetoniinae, Dynastinae, Rutelinae and dung beetles; 0; colln of 25 cases; will exchange; no identifications. Not involved in research.

DR. JACQUES BARAUD, France; T;Be;Bi; all Scarabaeoidea of western Palearctic: Europe, North Africa, Near East, Middle East; 115; colln of 90 boxes, 40x50; will exchange all groups; will identify; current research is on the fauna of Europe and the Near East. Would like to borrow material for this work.

LARRY G. BEZARK, USA; T;BC; Scarabaeidae, Lucanidae of Nearctic; 0; colln of 1500 specimens; will exchange; will identify.

TRISTAO BRANCO, Portugal; T;Bi; interests in all Scarabaeidae, with special interest in some groups of Scarabaeinae, Aphodiinae and Melolonthinae, mostly of the west Palearctic, but not exclusively; 7; colln of approx 30,000 specimens; will exchange; will identify. Working on a monograph on Portuguese Scarabaeoidea and a revision of the Chasmatopterini. Would like to borrow more material for these works.

DR. EVERARD B. BRITTON, Australia; T; Melolonthinae of Australia; 9; no colln; no exchanges; no identifications. Currently involved in a revision of the genus Heteronyx (342 spp.).

G. DAVID BUNTIN, USA; BC;LH;L;management and control; grass-root feeding species, primarily southwestern US; 0; no colln; no identifications. Interested in determining species composition and evaluating control methods for white grubs in pasture grasses.

DR. LINDA A. BUNTIN, USA; BC; Japanese Beetle and related groups of turf/forage/pasture pests; 0; no colln; no identifications. Research on survey of Japanese Beetle presence in Georgia and the introduction of Biological controls.

MARIA LUISA CASTILLO, Mexico; Be;Lh; ecology of Lamellicornia, Passalidae; 3; no collection; no exchanges; no identifications. Interested in the biology, ecology and behavior of Passalid beetles and associated fauna.



WILLIAM J. CRINS, Canada; T;Bi; nearctic, esp. Canada; 0; no colln; no exchange; no identifications. Working on systematics of vascular plants-sedges and composites; main interest in Scarabaeidae is as an amateur collector, with the specimens deposited in university collections.

DR. ROBERT L. CROCKER, USA; BC;Be;LH;L; pest management; interested in Phyllophaga and Cyclocephala, other phytophagous species secondarily, worldwide; no colln; no identifications. Research on seasonal flight patterns of Phyllophaga, etc., and ovipositional preference of Phyllophaga congrua, and sex pheromones of P. crinita and P. congrua.

DOUGLAS D. DRYSDALE, USA; T;Be;Bi;LH;Parasites; Dynastinae, Cetoniinae, Scarabaeinae (esp. Phanaeus) worldwide; 0; small collection; will exchange for groups of interest; no identifications. Will collect for others.

DR. CORNELL O. DUDLEY, Malawi; T;BC;LH; Scarabaeinae of Africa, especially central and southern Africa; 2; colln of 18 drawers; will exchange Scarabaeinae; will identify with restrictions. Currently researching the biology of Diastellopalpus.

DR. SEBASTIAN ENDRODY-YOUNGA, South Africa; Bi;LH; interested in all Scarabaeoidea as far as maintaining the collections of the Transvaal Museum; Interests are in Africa South of the Sahara and Madagascar; Colln of approx 50,000 specimens; will exchange African groups; no identifications. Research on the Biogeography of Southern Africa, in systematics of Tenebrionidae, Clambidae and Cybocephalidae, and would like to borrow material for this work.

SCOTT E. HASKINS, USA; Be;Bi;LH;L; isolated and relictual populations; interested in Cotalpa, Paracotalpa, Pseudocotalpa, Pleocoma, and all southwestern US and Mexican species, main interest in North American desert areas; 0; colln of 2 drawers; no exchange, no identifications. Currently looking for additional populations of Paracotalpa puncticollis and P. desertas in San Diego Co., California.

DR. HENRY F. HOWDEN, Canada; T;Be;Bi; primarily Geotrupinae, some Scarabaeinae, world-wide; 100; collection of 320 drawers; exchange rarely for selected groups; will identify occasionally. Current research is on Australian Geotrupinae and some Central American Scarabaeinae. Would like to borrow Australian material.

DR. MIRCEA-ALEXANDRU IENISTEA, Romania; T;Be;Bi; European coprophaga and Rutelidae of central and eastern Europe; 4; colln of ca. 3000 specimens; no exchange; no identifications. Working on Romanian coprophagous.

MICHAEL G. KLEIN, USA; BC;Be;LH;L; plant-feeding Scarabaeidae, worldwide; 27; no colln; no exchange; no identifications. Research on attractants and biological control of turf-inhabiting Scarabaeidae.

G. W. KRANTZ, USA; Be;Bi; Macrochelidae (Acari) phoretic on Scarabaeoidea; interested in all Scarabaeoidea, worldwide; 15; no colln; no exchange; will identify mites; current research is on a review of the genus Macrocheles and satellite projects on subgroups.

- MAX KUH BANDER, FDR (West Germany); T;Be;Bi;LH; Cetoniinae, Trichiinae of world, esp Ethiopian; 2; colln of 700 species; will exchange Cetoniinae; no identifications.
- JEAN-PIERRE LUMARET, France; Be;Bi;L; ecology; principally Scarabaeinae, Aphodiinae, Geotrupinae of the Palearctic area, Mediterranean; 50; no colln; no exchange; no identifications. Research on the ecology and taxonomy of Mediterranean dung beetles and studies on larval morphology. Would like to borrow larvae for this work.
- EUGENE MARAIS, South Africa; T; Cetoniinae; 0; no colln; will exchange; will identify. Presently revising the genus Oxythyrea Mulsant from the Ethiopian Region. Would like to borrow material for this research.
- DR. ERIC G. MATTHEWS, Australia; T;Be;Bi;LH; Scarabaeinae; 18; no colln; no exchanges; no identifications. Current research is now in Tenebrionidae.
- ROBERT L. MINCKLEY, USA; Be;Bi;LH; all groups, esp. Cetoniinae; 0; no colln; no exchange; no identification. Interested in the ecological uses of horns.
- DR. I. C. MITTAL, India; T;Be;Bi; Scarabaeidae of India, esp. NW; 13; has collection; no exchanges; no identifications. Working on taxonomic studies of the Scarabaeidae of NW India.
- DR. G. B. MONTIETH, Australia; T;Be;Bi; interested in Scarabaeinae of Australia; 2; no colln; no exchanges; no identifications.
- PHILIPPE MORETTO, France; T;Be;Bi;L; interested in 1) Scarabaeidae 2) other laprostickt 3) Passalidae, worldwide. 6; has colln; will exchange; no identifications. Interested in systematics of Passalidae.
- GARY L. PETERS, USA; T;Be;LH; all groups, but especially Dynastinae, worldwide; 0; colln of ca. 3000 specimens; will exchange all Coleoptera; no identifications. Working in Gypsy Moth detection, interested in exchanging western US for material from the eastern US.
- DR. EMANUELE PIATTELLA, Italy; T;Be;Bi;LH; Interested in Laprostickti in general; 0; colln of 6000 specimens; no exchange; no identifications. At present not involved in research.
- GIORGIO VALERIO PONTUALE, Italy; T;Bi; Coprophagous Scarabaeidae except Aphodiinae, Onthophagini, of Palearctic, Ethiopian and Neotropical regions; colln of 10,000 specimens; will exchange.
- GEMMA QUINTERO, Mexico; T;Bi; interested in Passalidae of the Neotropics; 3; no collection; no exchanges; no identifications. Research on the taxonomy of the genus Verres (Passalidae).
- DR. ANDREAS REICHENBACH, DDR (East Germany); T; all Scarabaeoidea worldwide; 1; colln of 12,000 specimens; will exchange; no identifications.

DR. CHARLES L. REMINGTON, USA; T;Bi; hybridization, evolutionary genetics, esp. Polyphylla; Interested in species diversity of Onthophaqus and in Trox biology, worldwide; maintains Yale University colln of ca. 20,000 specimens; will exchange, esp. for Polyphylla, Onthophaqus and Trox; no identifications. Current research is on suture-zone hybridization, supra-tribal classification, and disjunct distributions within species.

NEIL RULIEN, USA; T;Be;Bi;LH; all groups worldwide; colln of 60 drawers; will exchange; no identifications.

CLARKE H. SCHOLTZ, South Africa; T;Bi;LH;L; interest in primitive groups; 20; no colln; will exchange for primitive groups; will identify but not for private collections; working on the systematics of primitive groups, as Ochodaeinae, Glaresis. Would like to borrow material.

MARIA TYNDALE-BISCOE, Australia; BC;Be;LH; of all groups worldwide; 10; no colln; no exchanges; no identifications. Current research is on the biological control of dung, and behavior of dung breeding flies.

GEORGE C. WALTERS, USA; T; all groups; 0; colln of 3000 specimens; will exchange; will identify.

NORMAN E. WOODLEY, USA; T; Scarabaeinae, Lucanidae; 0; colln of 12 drawers; will exchange; will identify. Present research is on Diptera.



SOME SCARABAEOLOGISTS- Top, L.-R.; Dr. Robert Gordon, USA; Dr. J. Baraud, France; Dr. H. F. Howden, Canada; Bruce Gill, Canada. Bottom, L.-R.; Dr. E. B. Britton, Australia; Dr. R.-P. Dechambre, France; Dr. David Carlson, USA; Dr. Paul Lago, USA.

## RECENT LITERATURE

- East, R. & Kain, W. M. 1982.  
Prediction of grass grub, *Costelytra zealandica*, (Coleoptera: Scarabaeidae) populations.  
New Zealand Entomologist. 7(3):222-227. 4 figs.
- East, R., Henzell, R. F., & Lauren, D. R. 1982.  
An evaluation of sex attractant traps for monitoring grass grub, *Costelytra zealandica*, populations (Coleoptera: Scarabaeidae).  
New Zealand Entomologist. 7(3):262-265. 1 fig.
- Edmonds, W. David. 1983.  
Intervention des facteurs écologiques dans l'évolution de la nidification chez les Scarabaeinae (Col. Scarabaeidae).  
Bulletin de la Société Entomologique de France. 88:470-481. 15 figs.
- Evans, Arthur V. & Smith, Kirk A. 1986.  
Four new species of *Coenonycha* Horn from California and Nevada with an illustrated key to all species in the genus (Coleoptera: Scarabaeidae).  
The Coleopterist's Bulletin. 40(1):81-92. 20 figs.
- Galante, Eduardo. 1985.  
Nuevos datos sobre *Anthypna iberica* Drioli, 1980, y descripción de la hembra (Col. Scarabaeoidea, Glaphyridae).  
Graellsia. XLI:3-6. 4 figs.
- Hardy, Alan R. & Andrews, F. G. 1986.  
Studies in the Coleoptera of western sand dunes. 2. Notes on four Scarabaeidae from the Algodones dune system.  
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