

CHRYSOMELA newsletter

Dedicated to information about the Chrysomelidae

Report No. 35

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Basel, SWITZERLAND: Natural History Museum of Basel



Eva Sprecher prepares to incorporate the invaluable Frey collection. (story, page 4)

Research Activities and Interests

Ross H. Arnett, Jr. (Gainesville, USA) Revising *Beetles of the United States* to be called *American Beetles* with 52 co-operating authors. Ed Riley and others doing the Chrysomelidae, *sensu lato*.

R. A. Crowson (Glasgow, UK) Phylogeny, biology and palaeontology of Chrysomeloidea and allied groups.

Andrzej O. Bienkowski (Moscow, Russia) Continues work on the review of the systematics of *Chrysolina*. Presently the subgenera *Anopachys*, *Caudatochrysa*, *Pezocrosits*, *Chalcoidea*, *Allohypericia*, *Hypericia*, *Pleurosticha*, and *Arctolina* are treated.

Maurizio Biondi (Coppito, Italy) Afrotropical flea beetles, particularly from the southern part of Africa; currently doing research on *Longitarsus*.

Franck Duhaldeborde (Mérignac, France) Always interested in palearctic

Cryptocephalinae—systematics and biology. Actually working on the distribution and classification of the species belonging to the *Cryptocephalus flavipes* F. group. Willing to identify all palearctic Cryptocephalinae.

Jose L. Fernandez-Carrillo (Ciudad Real, Spain). Currently working on the systematics and biology of bruchids under the direction of Miguel Alonso-Zarazaga (Museo Nacional de Ciencias Naturales.)

Ali Gok (Isparta, Turkey) Currently preparing Ph.D. thesis on systematics of the species of Chrysomelidae (Chrysomelinae, Clytrinae, Cryptocephalinae, Halticinae, and Cassidinae) in the Mediterranean of Turkey.

Jürgen Gross (Berlin, Germany) Chemical protection of leaf beetles against predators, parasitoids and pathogenic mi-

croorganisms. currently working on evolution of allopartic populations of the leaf beetle *Chrysomela lapponica*.

Natalie Keals (Bentley, West Australia) Taxonomy and control of bruchid pests of temperate pulse and forage legumes.

J. M. Maes (Leon, Nicaragua) Continues working on the catalogue of Nicaraguan insects (taking longer than planned).

Jasbir Singh Mann (Surrey, Canada) Wish to collaborate research in Chrysomelidae. Currently intend to publish on old and new world Cassidinae and Hispanae genitalia (eps. internal sac) and their evolutionary trends within the two sub-families. Would appreciate further information.

Lenice Medeiros (Brazil) Working on thesis "Esdudo da interaco entre *Gratiana spadicea* (Klug, 1829) e *Solanum sisymbriifolium* Lam (Solanaceae)." *cont. page 14*

THE EDITOR'S CORNER

Terry N. Seeno, Sacramento

In Memoriam

Sincere condolences to Michael Cox for the recent loss of his beloved wife.

Historical Photos Wanted

A few requests have been received for the inclusion of historical chrysomelid related photos. Please send in anything of this type you can find that would be of interest to our leaf beetle colleagues. Thanks to Catherine Duckett and Fernando Meyer for providing the first of what could be an interesting series (see page 3).

P.I.M.E. Museum Update

Occasionally (not often enough), I get a letter from my old friend Rev. Carlo Brivio at the P.I.M.E. Museum in Monza, Italy. The key to getting letters is to send some in return (some of us are particularly bad). However, this is an update on Carlo's activities and not a window into my poor

corresponding habits.

Carlo, at age 73, is still in good shape and still working hard. For the first time in quite a while, he is not teaching, but working as the librarian and secretary of the "Studio Teologico Missionario." Currently, no studies or projects are being undertaken, and entomological activity is limited to collecting and increasing the holdings of the *third* P.I.M.E. Entomological Museum.

The museum houses more than 130,000 specimens, and about 1,500 specimens are added each month. Help with identifications in some of the groups comes from colleagues at both the Museum and University of Milano.

More Web Notes

CHRYSOMELA no. 34 is still not up on the internet. With any luck, I'll be able to talk Jeremy Chau into helping me compile both 34 and 35 soon.

The last three numbers of CHRYSOMELA were sent without an attached mailing list. There have been fewer requests for a printed list, probably coincidental with the increase in the number of email addresses (about 130, pages 15 and 16).

Naturally, anything we can do to reduce the cost of this publication is worth considering. The first step is to find out if an updated mailing list is needed. Please

notice a special box on the enclosed questionnaire regarding the possibilities for an updated mailing, including posting it on the internet.

More Web Sites

●Some interesting websites from Scott Miller, Biodiversity and Conservation Programme, International Centre of Insect Physiology and Ecology (ICIPE): African Projects (*new*): www.icipe.org/environment/biodiversity_index.html; and New Guinea projects:

www.bishop.hawaii.org/bishop/natsci/ng/newguinea.html.

●Radoslaw Scibior's homepage: <http://ursus.ar.lublin.pl/users/radeks>

●CHRYSOMELA <http://www.cdfa.ca.gov/ppd/index.htm> and navigate from there. An other item of interest produced by the Plant Pest Diagnostics Laboratory is the California Plant Pest and Disease Report produced and edited by Ray Gill.

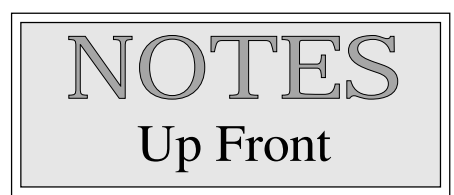
●XXI International Congress of Entomology Home Page, Londrina, Brazil: <http://www.embrapa.br/ice> Decio Luiz Gazzoni, Caixa Postal 231, 86001-970 Londrina - Brazil, Phone (+55)43-3716213 Fax (+55)43-3716100 (see page 10)

Javier Blanco (New Brunswick, USA) Received a fellowship to Rutgers to work on PhD. under Karl Kjer.

Astrid Eben (Xalapa, Mexico) is working on a chrysomelid checklist project and needs collaborators (see page 10).

Jasbir Mann (Surrey, Canada) has immigrated to Canada with his family.

Scott Miller, formerly at the Bishop Museum in Honolulu, is currently leading the Biodiversity and Conservation Programme International Centre of Insect Physiology and Ecology (ICIPE) in Nairobi, Kenya. The program is in need of journals (see note page 10).



Chris Ried, (Canberra, Australia) has moved from James Cook University in Townsville and is currently working at the CSIRO in Canberra.

Jorge A. Santiago-Blay (Chicago, USA) working on a aulacosceline biology book chapter (see page 10).



Meetings and Communications

●U.S. Chrysomelidist 16th Annual Meeting to be held in conjunction with the Entomological Society of America and American Phytopathological Society meetings at the Las Vegas Hilton and Las Vegas Convention Center, Las Vegas, NV (8-12 November, 1998).

●Brazil 2000—Updates from D. L. Gazzoni, President of the XXI International Congress of Entomology—August 20-26, 2000 - Iguassu Falls. For more information, see <http://www.embrapa.br/ice>; e-mail <gazzoni@npso.embrapa.br> or FAX: 55-43-371-6100 (see page 10).

The Newsletter CHRYSOMELA—Founded 1979— is published semiannually in April and October by the California Department of Food & Agriculture, Plant Pest Diagnostics Center, 3294 Meadowview Road, Sacramento, CA 95832-1448. E-mail: tseeno@ns.net; telephone (916) 262-1160; FAX (916) 262-1190. This newsletter is sent to students of the Chrysomelidae to encourage the exchange of ideas and to disseminate information on these insects. Editor: Terry N. Seeno, Sacramento. Advisors: Catherine Duckett, San Juan; Brian D. Farrell, Cambridge; R. Wills Flowers, Tallahassee; Elizabeth Grobbelaar, Pretoria; Pierre Jolivet, Paris and Gainesville; Chris Reid, Townsville; Ed Riley, College Station; G. Al Samuelson, Honolulu; Eric H. Smith, Lynchburg; Charlie L. Staines, Edgewater; and Kunio Suzuki, Toyama.



THE FORVM

More on the Bruchid Controversy

K. K. Verma, Durg.

Whether bruchids be treated as a subfamily under the family Chrysomelidae or as a family under the superfamily Chrysomeloidea/Cerambycoidea/Phytophaga has been discussed in four consecutive numbers of CHRY-SOMELA (Kingsolver, 1995; Reid, 1996; Verma and Saxena, 1996; Lingafelter and Pakaluk, 1997). In the October, 1997 issue of CHRY-SOMELA, Duckett has reconsidered the problem, taking into account wider aspects of systematics. In a similar vein I wish to draw attention of readers to the following from Mayr and Ashlock (1991). The cited portions from these authors seem relevant to the problem of bruchid placement in the Phytophaga taxonomy.

1. "... definitions for categories above the species are arbitrary." (p. 134)

2. "There is hardly a higher taxon that is not ranked higher by some specialists and lower by others. It is by the arbitrariness of definition that all higher categories differ from the species category." (p. 135)

3. "Most taxa above the family level are sharply delimited. Mollusks, penguins,

beetles and indeed most higher taxa are separated from their nearest relatives by a decided gap, far more distinct than gaps that separate most genera and families." (p. 135)

4. "Like the genus, but perhaps to an even greater degree, the family tends to be distinguished by certain adaptive characters that fit it for a particular adaptive zone, e.g., the woodpeckers or the family Picidae, the leaf beetles or the family Chrysomelidae." (p.139)

5. "There is no criterion that will indicate whether a given group of genera should be considered a tribe, subfamily, family or superfamily." (p. 138)

6. "The same period (1930's and 40's) saw two additional aspects come to the fore. One is what might be called the biological approach to taxonomy. As taxonomists moved more and more from the museum into the field, they increasingly supplemented morphological characters with characteristics of living animals, such as behavior, voice, ecological requirements, physiology and biochemistry. Taxonomy truly became biological taxonomy..." (p.13)

As is obvious from the above citations, there is arbitrariness in making out of higher taxa (citation 1 and 2), and that the role of arbitrariness is more pronounced in case of the family and subfamily (citation 3 and 5). Quite naturally, therefore there is often difference of opinion among specialists about rank of a higher taxon (citation 2), and, as there is more of arbitrary approach at family-subfamily level, such differences of opinion

should be more expected.

In biological taxonomy ecological data may be used to supplement other characters in making out a higher taxon (citation 6), and this would be specially appropriate at the family level (citation 4). Verma and Saxena (1996) suggested ecological features as a supplement to the distinctive features of Bruchidae, pointed out by Kingsolver (1995). However, some readers, it seems, have interpreted the communication as suggesting family status for Bruchidae mainly/solely on basis of ecology.

In view of arbitrariness involved in deciding whether Bruchidae be treated as a family of a subfamily it would be best to retain the conventional family status for the group, as stability is a consideration in classification, though it may not be a major consideration.

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Historical Photo—Porto Alegre

This 1962 photo shows Fernando Meyer, Bohumila deBêchyné, Jan Bêchyné, and Padre Pio Buck on the veranda of the Anchieta Museum on Porto Alegre.

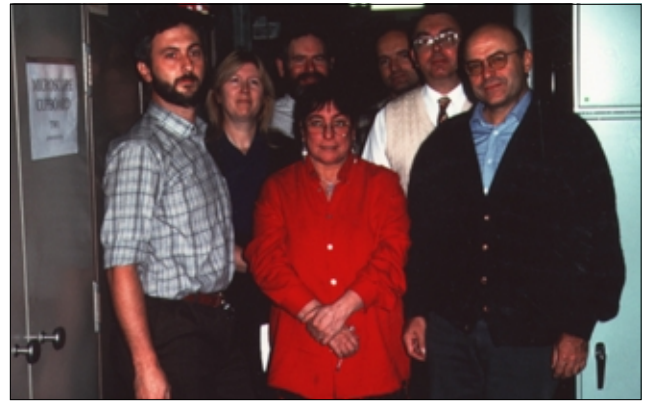
Fernando is present curator of the Anchieta Museum Collection. Padre Buck collected most of the material and many of the Bêchyné type-specimens are housed there.



Mauro Daccordi and Stefano Zoia hopped a plane and headed for the British Museum of Natural History to work among the insect treasures. Thanks to the kindness of their hosts Sharon Shute and Martin Brendell, Mauro and Stefano had a full chrysomelid immersion in this "Entomological Wanderland." The first order of business for the two travelers were the Chrysomelinae and African and Asian Eumolpinae; other subfamilies were dealt with as time permitted.

Sharon and Martin provided some needed items and assistance and the guests were able to meet with Michael Cox and staff members of the Coleoptera Section. In all, the trip was fantastic. Many thanks to Sharon and Martin.

Mauro and Stefano in "Wanderland"



Stefano, Sharon, Mauro, and friends

Book Notice

Insects of the Three Gorge Reservoir Area of the Yangtze River, 1997, Yang, Xingke (editor). Congqing Pub. House, Chongqing, 1847pp. 2 vols. 8 color plates.

This is the result of a comprehensive 3 year survey of the area in the People's Republic of China where there will be a dam constructed in the future. The volumes report on 70,000 specimens of 3,485 species of insects and invertebrates, in 1,984 genera, of 265 families, studied by 99 Chinese experts. There are 289 species and 16 genera described as new. New descriptions are in both English and Chinese. Most of the text is in Chinese with many habitus and other morphological figures.

In volume 1 there are many chapters on Coleoptera, including:

- Bruchidae (Li, H.) [2 species];
- Crioceridae (Yu, P.) [17 species in 6 genera of 4 subfamilies] - **Pedrillea flavipes n. sp.**;
- Eumolpidae (Zhou and Tan, J.) [21 species in 14 genera of 5 subfamilies];
- Chrysomelinae (Wang, S., Li, W., and Liu, Y.) [25 species in 15 genera];
- Galerucinae (Yang, X. and Li, W.) [104 species in 40 genera] - **Japonitata concaviscula n. sp.**, **J. confragosa n. sp.**, **J. striata n. sp.**, **Fleutiauxia glossophylla n. sp.**, **Cneorandea melanocephala n. sp.**, **Gallerucida asticha n. sp.**;
- Alticinae (Wang, S. and Yu, P.) [71 species in 30 genera] - **Griva curvata n. sp.**, **Hespera abdominalis n. sp.**, **Stenoluperus puncticollis n. sp.**, **Trachyaphthona rugicollis n. sp.**, **Batophila costipennis n. sp.**;
- Hispididae (Yu, P.) [18 spp. in 9 genera of 2 subfamilies].

-David G. Furth

Biographical Note—H. R. Pajni

J. S. Yadav, Kurukshetra

H. R. Pajni was born in a small village in the District of Patiala (in the Punjab State of India) in 1932. He received his education from the Government High School Amloh, D.A.V. College, Jalandhar and Government College, Ludhiana; he graduated from the Panjab University in 1956.



H. R. Pajni

Since his graduation in 1956, Dr. Pajni has been actively engaged in different aspects of Entomological research including morphology, biology, ecology, taxonomy, development and pest control programs. He has made intensive observations on local insect fauna of different orders and made notable contributions to the knowledge of Indian Chrysomelidae, Bruchidae and Curculionidae. He was the first person to study the external genitalia and internal reproductive organs of Indian Chrysomelidae. He described 20 genera and 81 species of Curculionidae and Bruchidae, and served as a member of the expert panel of Bruchidae of the Paris based International Organization for Biological Control (IOBC).

During his last 40 years, Professor Pajni has published roughly 225 research papers in international journals, as well as a review of the biology of Indian bruchids of economic importance and a volume on a subfamily of weevils for the Fauna of India. He has investigated 15 research

projects pertaining to ecology and taxonomy of Bruchidae and Curculionidae funded by various agencies, including U.S. PL.480, ICAR, DST, UGC and State Councils of Science and Technology of Haryana and Chandigarh. In addition, he has supervised 40 Ph.D. theses and more than 60 M.Sc and M.Phil. dissertations. While studying types of Indian insects, he visited the Natural History Museums in London, Paris, Munich, Hamburg, Rome, Genoa and Stockholm.

Dr. Pajni is a fellow of the Royal Entomological Society of London and Entomological Society of India and a member of several zoological and entomological societies. He was the Entomologist member of the Indian Council of Forestry Research from 1988-1992 and a member of the Selection Committee of Defense Research Organization, New Delhi (Entomology section).

Actively involved in the co-curricular activities of the Panjab University, Professor Pajni led the National Service Scheme Unit during 1975-1977, was a member of Panjab University Senate for a four year term (1989-92) and was Dean of Alumni Relations during 1991-1992. Currently, he is engaged in studies pertaining to polymorphism and biocontrol of common Indian Bruchids of economic importance.

Chrysomelid Meetings

Meeting of Central-European Leaf Beetle workers

31 October - 2 November 1997

Ron Beenen, Marsburg

Since 1987 a group of Central-European leaf beetle workers have met annually during a weekend organised by the "Arbeitsgemeinschaft südwestdeutscher Koleopterologen". During this weekend, held in an estate on a hill top near Stuttgart, papers are presented on different aspects of coleopterology. During the 1997 weekend there was one on Chrysomelidae. Dieter Siede presented an interesting paper on the possibilities to separate female specimens of the genus *Altica*. The final publication (to be published in *Entomologische Blätter*) will contain a key to identify female specimens of *Altica* from Central Europe.

Apart from the presentation of the formal papers there was plenty of room for informal meetings. One of these is the meeting on the "Faunistics of Central European Chrysomelidae and Bruchidae" (a short report on this theme has been published in *CHRYSOMELA* 19-23:17). The main conclusion this year was that although there is much progress there still is much work to

be done both in filling of the database and in the acquisition of reliable data. This year's meeting was attended by Theo Michael Schmitt (chairman), Ulf Arnold, Ron Beenen, Michel & Barbara Bergeal, Robert Constantin, Manfred Döberl, Dieter Erber, Frank Fritzlar, Elisabeth Geiser, Uwe Heinig, Michael Langer and Dieter & Charlotte Siede.



Ulf Arnold, Uwe Heinig and Ron Beenen in search for the egg masses of *Galeruca pomonae*.

In another meeting some workers discussed faunistic and taxonomic aspects of Galerucinae of Nepal. This meeting was attended by Lev Medvedev, Eva Sprecher and Ron Beenen. Lev and Eva are preparing a catalogue for Nepal. Ron had been working on the Galerucinae of Nepal from the Natural History Museum in Erfurt.



Lev Medvedev and Eva Sprecher discussing Galerucinae of Nepal.

Galeruca pomonae inhabiting the hill was subject for our observations and study.



Dieter Siede and Frank Fritzlar discussing chrysomelids.

The First Italian Chrysomelidologists Meeting Milan October 19, 1997

The first meeting of the Italian Chrysomelidists was held at the Milan Natural History Museum. Participants attending the meeting were Carlo Leonardi, Walter Fogato and wife, Mauro Daccordi, Renato Regalin, Davide Sassi, and Stefano Zoiz. Because of prior work commitments, Sandro Ruffo, Maurizio Biondi, and Rev. Carlo Brivio were unable to attend.

The participants discussed their current research projects, common programs in the Chrysomelidae, and the basis for a book on the



(from left) Leonardi, Fogato, Sassi, Daccordi, Zoia, and Regalin.

leaf beetles of Italy. The group also celebrated Carlo Leonardi's retirement and presented him with some gifts including the last volume of *The Biology of the Chrysomelidae*, (Jolivet and Cox) and a photo of Carlo in the field collecting beetles; in any case, Carlo enters his retirement with new strength, and more free time to work on the Alticinae and the museum's Coleoptera collection.

The next meeting is scheduled for 1998. Date and location to be announced.

Frey Collection Moved to Basel

Eva Sprecher, Basel

As many of you have heard by now, the German Ministry in Bonn granted our Museum permission to export the famous collection of Dr. Georg Frey to Basel. On October 24, 1997, the beetle collection entered Switzerland and is now in the Museum of Natural History. We have placed this wonderful collection into new museum shelving. Once more, it is ready for use by all scientists.

Due to the inaccessibility of the collection during the relocation process, loan transactions could not be completed. Please let us know if you need specimens for your studies or wish to return Frey collection material.

For further information, contact the entomological department of the Natural History Museum of Basel. All correspondence concerning loans and visits should be directed to the curator of the collection, Mrs. Eva Sprecher, Naturhistorisches Mu-



The Frey finally comes to rest and available to Science museum, Augustinergasse 2, CH-4001 Basel, Switzerland. Tel. +61 266 55 81; Fax +61 266 55 46; e-mail <eva.sprecher@afibs.ch>.

Mid-Atlantic States Chrysomelid Workers—Two 1997 Field Trips

Charlie and Suzy Staines, Edgewater

Field Trip No. One

June 13-15, 1997, Blacksburg, Virginia

Local arrangements and collecting site plans were made by Eric Day, Insect Identification Lab, VPI&SU. Ed Riley



was vacationing in the area, so the field trip was planned around his visit.

Chrysomelid workers attending were Shawn Clark, Dave Furth, Alex Konstantinov, Steve Lingafelter, Ed Riley, Eric Smith, and Charlie and Suzy Staines. Invited Guests were Eric Day, Sam Wells (Elateridae), and Volker Hollmann-Schirmacher (Diptera).

The trip started out on a formal note with Charlie Staines presenting a seminar to the Entomology Department of BPI&SU entitled "An Inside Look at a Tropical Biodiversity Project." Charlie showed slides and discussed the Arthropods of La Selva Survey, the work of the Instituto Nacional de Biodiversidad (INBio), and the University of Costa Rica. In addition to the chrysomelid workers, about 12 VPI&SU faculty and students attended. Not too bad for Friday at 3:00 pm.

After the seminar, we went to Eric Day's farm for collecting, blacklighting, and a cookout. Collecting was fairly good until a series of rain showers moved through the area. Eric, Dave, and Charlie got a workout by helping Eric Day put hay into his barn before the rain started.

During the evening, we enjoyed conversation about chrysomelids. Eric Day and his wife, Nan Gray, and their two young sons extended hospitality to the group for both nights of the trip. Some of the group slept in the hay loft.

After a sumptuous breakfast of pancakes and Nan's own blueberry syrup, the group went to examine the VPI insect collection. The first collecting site was at one of the BPI research farms. The area along the river and the railroad tracks yielded some interesting specimens. At the second site on the main VPI campus, it began to rain again. Following a late lunch, three members of the group departed while the remainder went to a site in the Jefferson National Forest for average collecting in some interesting habitat.

Thanks to Eric Day and Nan Gray, the trip was enjoyable and profitable.

Field Trip No. Two

August 23, 1997, Held at the Patuxent Research Refuge in Laurel, Maryland

This trip was to allow Kunio Suzuki (Toyama University, Japan) to meet with various chrysomelid workers and collect some North America beetles.

Chrysomelid workers attending were Shawn Clark, Dave Furth, Jung E. Lee, Steve Lingafelter, Eric Smith, Charlie and Suzy Staines, and Kunio Suzuki. Invited guests were Warren Steiner (Smithsonian Institution), Jill Swearingen (National Park Service), Alex Harman (USDA-SEL con-



tractor), Jennifer Fairman, Jennifer Gentry, and Bill Scavone (Johns Hopkins University students).

The weather on the 23rd was beautiful. The group assembled at the Refuge contact station at 9:30 am for an orientation. Warren Steiner, who has done field work at the Refuge for several years, took the group to three locations looking for chrysomelids. Collecting was fair, with over 20 species taken. Due to the drought in Maryland, most of the late summer species were not present in the usual large numbers.

The group finished the day with a good dinner at a Mexican food restaurant in Greenbelt which was recommended by Jill and Warren.



The 15th Annual Meeting of the North American Chrysomelid Workers

The meeting of U. S. Chrysomelidists was held on December 16, 1997 in conjunction with the Annual Meetings of the Entomological Society of America in Nashville Tennessee. Sixteen people attended: Fred Andrews, Greg Bartman, Joe Cavey, Shawn Clark, Brian Farrell, Henry Hesperheide, Alex Konstantinov, Steve Lingafelter, Wenhua Lu, Patrick Marquez, John Pickle, Bill Ruesink, Terry Seeno, Eric Smith, Mike Thomas, and Bill Warner. Dave Furth did his usual excellent job of presiding over the introductions and presentations.



Notes on Distribution and Host Range of *Lilioceris* in China (Coleoptera: Chrysomelidae)

Wenhua Lu (Jamestown) & Richard Casagrande (Kingston)

A European pest of lilies, *Lilioceris lili* (Scopoli), has been established in the USA since 1992 (Day 1993) and is reported to be a serious pest on cultivated lily plants (Livingston 1996). The origin of this genus appears to be in China because of the high diversity of both *Lilioceris* and lily species there. Of 142 species of *Lilioceris* catalogued (Berti & Rapilly 1976), 60 are Oriental. The senior author went to China during the summer of 1996 in search of potential biocontrol agents for *L. lili*, where museum specimens and the Chinese literature were reviewed.

L. lili was first questionably reported in China, from East Mongolia and Kirin, by Liu (1935). Liu did not see the specimens himself, did not verify the localities, and cited no references. Wu (1936) also reported *L. lili* from the same localities in his voluminous Catalogue, apparently independent of Liu's work. Gressitt & Kimoto (1961) recorded 41 species for China, but they raised doubt as to the occurrence of *L. lili* in China and did not include it in their keys for Chinese *Lilioceris* species. Since the definitive work of Gressitt & Kimoto, three more new species have been described from South China, increasing the list of Chinese *Lilioceris* (Long 1988).

L. lili is widespread throughout Europe and Russia east from the Caucasus to Siberia and Tuva. It occurs in Kazakhstan's Dzhungan Mountains and Mongolia's Altai Ranges (Lopatin 1977), both of which border China. It seems unlikely that there is any natural barrier preventing *L.*

lili from crossing the Chinese border, thus increasing the probability the *L. lili* also exists in China.

The work of re-examining specimens used by earlier Chinese workers was limited to the collections in Zhongshan University in Guangzhou and the Institute of Zoology, Academia Sinica, in Beijing, neither of which held specimens of *L. lili*. The fact that we found no records of *L. lili* in China probably simply reflects the lack of systematic work done on *Lilioceris* in China.

However, we found ample evidence of pest species in the genus *Lilioceris* in China. Nineteen species are reported to be economically important (Tan et al. 1980). They feed on species of *Lilium* (Liliaceae, wild lily), *Tricyrtis* (Liliaceae), *Smilax* (Liliaceae, greenbriar), *Triticum* (Graminae, wheat), *Dioscorea* (Dioscoreaceae, yam), *Quercus* (Fagaceae, oak), *Polygonum* (Polygonaceae, knotweed), *Corylus* (Corylaceae, hazel), and *Schefflera* (Araliaceae) (Tan et al. 1980, Long 1986). Among the pest records, more than 50% were found feeding on lilies, and almost 80% on monocotyledons. Most of these pest species occur south of 38° N, but three occur north of 45° N.

We believe that the species diversity and widespread distribution of *Lilioceris* in China suggests an excellent potential for finding natural enemies of *Lilioceris* there. It is probable the *L. lili* not only exists in Jilin (Kirin), a northeastern province, as previously reported, but also in the

northeastern most Heilongjiang province, and provinces to the west such as Xinjiang and Inner Mongolia the broadly border Kazakhstan's Dzhungan Mountains and Mongolia's Altai Ranges. However, collecting there would be more challenging than other places.

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Looking for larvae in Brazil

Catherine Duckett, San Juan

I went to Brazil to collect adults and larvae of oedionychines (big round, colorful flea beetles with globose hind tarsi). The Oedionychina contains about 26 genera dispersed in the continents which once formed Gondwana (minus Australia) and, like many chrysomelid groups, are lacking in good phylogenies and larval descriptions. While in Brazil, my primary goals were to get larvae, investigate larval life histories, and obtain adults for morphological and DNA analysis.

At the generic level, the oedionychine fauna of southern Brazil is one of most diverse in the world. This group is relatively well known thanks to the efforts of various individuals like Padre Pio Buck (and his collection at Colegio Anchieta), and Jan and Mila Bechyné. Porto Alegre is also home to Fundacao Zoobotanica where my hosts Maria H. Galileo (Cerambycidae) and Luciano Moura work.

My secondary goals were to explore more ecologically based collection methods with Luciano, the results of which provided for me some of the biggest surprises (discussed below). Brazil is famed for its diversity, and I had a chance to marvel at the amazing insect fauna. In the process of working with alticines, I reared other groups as well. That has led to an infatuation with cassidines and a serious affair with galerucines (mediated partly by Luciano, we are now describing several galerucine larvae together).

I am also continuing to get to know Brazil and Brazilians and the very active and interesting chrysomelid and beetle based research community in Brazil. Brazil is great; the people are a very friendly, hard working, hard playing people, easy to work with and have fun with. There is a great deal of intellectual energy circulating in Brazil that we are going to see and experience at the international meetings in Foz do Iguacu in 2000.

This hard work/play style is epitomized by Lenice Medeiros and Luciano. I started off in Porto Alegre where Luciano

and his advisor, Maria Helena, were my hosts at Fundacao Zoobotanica and Lenice was my host at her home. It was very exciting to discuss chrysomelid systematics during the day with Luciano and then go home and discuss ecology with Lenice. Later in the season, I brought live field collected samples home where Lenice and I often discussed them at the dinner table. (Her husband is incredibly patient.)

R i o Grande do Sul, the southernmost state in Brazil, was the principal site of my field collecting trip. I was very impressed by two things: first, the great difference between the “pampas” area of the state and the Atlantic rainforest (both faunistically and ecologically); and second, the importance of ecological data to collecting. I was principally in two places: Canguçu in the southern part of the state is a grassland area composed of rolling hills with



Luciano Moura outside Colegio Anchieta

trees and brush in swampy areas and near streams; Maquiné, is in the southern most part of Brazil's Atlantic rainforest, where high hills meet the costal plain. In Canguçu, I was on a ranch managed using native grasses in an attempt at sustainable agriculture; in Maquiné I was at an experiment station with primary and secondary native forest, as well as swamps, pastures and patches of nonnative trees. Canguçu is at 31° S and Maquiné at 28.5° S. Because of the latitude, the fact that Canguçu is a grassland environment, and because of land use history, I was not surprised to find fewer species of chrysomelids and other insects than in Maquiné, which is very diverse floristical-

ly. However, the difference between the two habitats was extremely marked despite significant overlap in potential host plants. Canguçu is a resource controlled system for chrysomelids, and Maquiné is a predator controlled system. In Canguçu many species of pasture plants, such as the *Solanum* that Lenice Medeiros works on (and other species), were dripping with cassidines, another *Solanum* species “cried” *Schematiza* (Galerucinae) larvae. Around the stream beds, *Lema apicalis* and their larvae were ubiquitous; *Megistops*,



Catherine Duckett, Cibele Ribeiro-Costa, and Marcelo Caxambú at the University of Paraná

Paranaita and *Alagoasa* were sometimes found more than a dozen to a plant. In Canguçu it wasn't quite as simple as “if you find the host plant you can find the insect,” but if the host plant was abundant, beetles could be found and often in large numbers. The only significant natural enemies I found were tachinid parasitoids of larvae. I did not ever see adults or larvae directly victimized by predators.

In Maquiné the situation was entirely reversed. Host plants could be common and beetles unseen; predators were the order of the day. I found a fair amount of the host plant of *Schematiza flavofaciata*, the beetle that I had found so many of in Canguçu, and not one single *Schematiza* found in 22 days collecting; that was also true of *Paranaita*. Other species whose host plants were abundant though beetles were not, included *Megistops vandepolli* and *Alagoasa 10-gutatta*. However, I did find abundant Reduviidae, Pentatomidae, Tachinidae as well as parasitic Hymenoptera. I also saw predation in the act, which is unusual to me—cassidines being pried off leaves by Reduviidae—their larvae sticking off the probosci of Pentatomidae, as were adult flea beetles and Galerucinae as well. The level of parasitism in the field was also very high. 100% of *Drepanocassis profana* that I tried to rear yielded tachinid larvae (n=3, not from the same clutch). A very common cassidine, *Cistudinella notata*, was 20% parasitized in a large rearing (n=45). Only one larva yielded a hymenopterous hyperparasite

(currently being identified by Ayers Menezes, who I met in Maquiné through Lenice's advisor, Gilson Moreira).

The parasitoids also get to the larvae early; 10% of *Yngaresca holosericea* larvae appeared to be parasitized in their first day of larval life. While in Canguçu, I really had to work hard to find most of the beetles I was working on, so I became re-



Ayres Menezes Jr. and Lenice Medeiros working on cassidines

ally quite attuned to their abundance and to ecological factors which seemed to be correlated with finding them. These factors include light levels, time of day and presence of other potential food plants in the area. I got to the point where I would make a mental note of all these factors each time I found a desired beetle. This was to be very important in the field later in Maquiné with Luciano.

My first important hypothesis formulated with this data concerned *Paranaita* sp. The 'keystone species' in the Canguçu plant community (as far as Oedionychini are concerned) is *Buddeleja* sp; *Megistops vandipolli*, *Alagoasa 10-guttata*, *Alagoasa scissa*, and *Paranita opima* and *P. bilimbata* all feed on it at least part of the time. I noticed that I always found *Paranita bilimbata* in the shade and then not in large numbers. I hypothesized that it might be a deep shade species and started looking for verbenaceous trees in the woods. I found five individuals in the first hour! Looking in deep shade also led me to the larvae of *Alagoasa hypolysia* (previously only known from four specimens).

In Maquiné, at first I did not have to be so tuned to time of day and shade or sun, because the beetles were so diverse that I was always collecting. However,

later when I needed to lengthen my series and to try to find gravid females for egg laying, I again needed to take notice of when and how I found beetles. This led Luciano and I to *Neolochmea* (low light levels, shade or night) and enabled us to distinguish habitats for *Yngaresca difficilis* (shade) from *Y. holosericea* (full sun to light shade). *Omophoita 8-guttata* and *O. personata* are a daytime, high light level species, *O. 8-guttata* becoming active earlier than *O. personata* (noonish); whereas *Walterianella bucki* and *Caprिता clarissa* become really active only at night. Some species appear more aphasic such as *Megistops* and *Alagoasa arcifera*. In terms of finding larvae not as many of the species of Oedionychini, as expected, have nocturnal larvae. I had to be creative in terms of getting species to lay eggs in the "lab" and trying to rear larvae. In the course of this I have discovered the usefulness of plastic boxes. Eggs laid on or in soil need extremely high humidity, and field cages offer too much ventilation. I should have bought stock in Plasvale®, (the Brazilian equivalent of Tupperware®). Most Oedionychina lay eggs on/in soil, even if their larvae are folivorous (as are all of the *Alagoasas* I found in the field). I have found that at least the above mentioned species of *Walterianella* and *Caprिता* definitely have interstitial larvae and had some success rearing them in plastic ware.

After I left the field I traveled to the collections in Curitiba and São Paulo. In São Paulo, I had the pleasure of meeting Tiago C. Ramos for the first time and renewing my friendship with my collaborator Sônia Casari. Sônia's principal work



Sônia Casari and Tiago C. Ramos in the São Paulo Natural History Museum

is on Elateridae, but she has published more than one larval description in the Chrysomelidae. Tiago is a young energetic biologist who is interested both in theoretical and field aspects of chrysomelid biology. We had several stimulating discussions, both in the museum and on a field trip he graciously organized. Needless to say, we spent a lot of time draped over



José Henrique Pedrosa and Marcello Caxambú collecting in the Atlantic rainforest of Paraná

drawers of their magnificent collection, commenting on bugs we knew.

In Curitiba I also caught up on the news with Cibele Ribero-Costa and met the up and coming Marcello Caxambú. He has just finished his master's thesis on *Lamprosoma* sp. in the school of forestry under the guidance of Lucia de Alemeida and José H. Pedrosa. Pedrosa (as he likes to be called) and Marcello took me collecting in the Atlantic rainforest of Paraná for a day, and I almost died of felicity. There were abundant *Buddeleja*, and I collected nine species in seven genera just of Oedionychina! My companions were also impressed. The Pedrosa lab is working on several projects for biocontrol of weeds in Hawaii, using chrysomelids. I was charmed by their kindness and desire for collaboration. Needless to say I had an excellent time with them, as I had on my entire trip. I think the chrysomelid community is very lucky that we have such friendly active colleagues in Brazil. I predict a wonderful International Congress.

Acknowledgments: I would like to thank the Moreira family for their kind hospitality during my stay at their farm. The personnel of the FAPAGRO experiment station in Maquiné, Lenice Medeiros and Artur Müller of Porto Alegre, also provided abundant aide and comfort for which I am grateful. NSF grant RPG9707544 is also gratefully acknowledged.



Four Notes From ICE XXI President Gazzoni

Dear Entomologist: The organizing committee of the XXI International Congress of Entomology is now calling for symposia. We are accepting suggestions for symposia according to the rules that can be found at <http://www.embrapa.br/ice/symposia.htm>. We will receive suggestions up to June 1998. The scientific program committee will organize each session with 12 symposia, chosen among the ones that fulfill the formal and scientific requirements of the XXI ICE. All the entomologists that have asked us information about symposia, along this year, should formally submit the symposia now, as we did not register any of the previous ideas as a formal submission. Thank you for helping the organizing committee. (12/10/97)

Dear Entomologist: If you have any suggestion or need any kind of information regarding the XXI ICE symposia, or other scientific issues of the Congress, you can contact the President of the Scientific Program Committee, Dr. F. Moscardi, at <moscardi@cnpso.embrapa.br>. Non scientific issues of the Congress can be obtained at <ice@sercomtel.com.br>. (1/19/98)

Dear Entomologist: As we informed before, up to June 30 the organizing committee will consider suggestions for symposia. After that date, the convenors of each one of the 23 sessions will prepare the final program, and we regret not to consider suggestions received after June 30. We received a lot of suggestions up to now, but if you are interested in organizing or suggesting a symposia, please contact the President of the Scientific Committee, Dr. F. Moscardi, at <moscardi@cnpso.embrapa.br>. During next July we will call for plenary lectures suggestions, so, just start thinking about ideas for these conferences. (3/13/98)

Dear Entomologist: We have received a lot of suggestions for the XXI ICE symposia. Some of them needed several negotiation rounds as they did not conform to the symposia rules. This way, we strongly recommend to the entomologists desiring to submit a symposia to carefully read the symposia instructions on our homepage (<http://www.embrapa.br/ice>).

We were asked about the possibility of a symposium cover more than one peri-

od (morning or afternoon). At first, there will be no problem. It will all depend on the session convenor, as each session will be limited to only 12 possible symposia. If a symposium is to cover 3 periods, we will be limited to only 10 symposia on that session.

We deeply express our thanks to the entomologists that are cooperating with the scientific committee, and remember, we will accept suggestions only until June (4/20/98).

-Decio Luiz Gazzoni
President XXI ICE
ice@sercomtel.com.br

ICIPE needs literature

Scott Miller reports that the library of **The International Centre of Insect Physiology and Ecology** (an international research center based in Nairobi) is very poor in taxonomic literature. Holdings of North American entomological journals are especially poor, although journals from other areas of the world are slightly better represented. Ent. Soc. Amer. publications and Proc. Ent. Soc. Wash. are relatively complete from the mid-1970's to present, otherwise the library has few US or Canadian journals or monograph series in entomology.

ICIPE's books and monographs are databased and Scott hopes to get the holdings on the WWW soon. The journals, however, are not catalogued; there are so few of them it's easy just to check the shelves.

Any good runs of major journals that anyone may have surplus for redistribution will be put to good use. ICIPE would be happy to pay the postage. Anyone interested should contact Scott at <scottm@bishop.bishop.hawaii.org> or <smiller@icipe.org>.

Wanted— Information on Aulacoscelinae Biology

Seeking information for a chapter being written on aulacoscelines. Contributions will be acknowledged. Please send inquiries and information to: Jorge A. Santiago-Blay, Department of Ecology and Evolution, 1101 East 57th Street, The University of Chicago, Chicago, IL 60637.

Collaborator Wanted for Mexican Chrysomelids

Astrid Eben (Xalapa, Mexico) is looking for specialists on all subfamilies of Chrysomelidae who want to collaborate on a project on the Biogeography and Taxonomy of Mexican Chrysomelidae. The objective of the project is to compile a species list on Chrysomelidae in the State of Veracruz, including host plant records whenever possible. The specimen collected would need to be identified to the lowest possible level by the subfamily specialists. Galerucinae are especially important.

If you are interested in this project and are willing to identify neotropical species, please contact Dr. Astrid Eben, Instituto de Ecología, A.C., Apdo. Postal 63, 91000 Xalapa, Veracruz, Mexico; Fax: (52) 28 18 78 09; email: astrid@sun.ieco.conacyt.mx

Eumolpine Paper in Short Supply

The September issue of Florida Entomologist has an article, *Feeding Records of Costa Rican Leaf Beetles (Coleoptera: Chrysomelidae)* by R. Wills Flowers and Daniel H. Janzen [1997, 80:334-366].

Very few "normal" reprints will be available, and most of those are already earmarked for project collaborators. The article is on the Internet at <http://www.fcla.ufl.edu/FlaEnt/fempg.htm>.

You can make your own reprint by opening to the article with the Adobe application, Acrobat and printing it at 600 dpi. One small problem—you can't actually read our article on line unless you roll your monitor on its side! The guts of our paper is a very large table set up in landscape format. Acrobat can only display things in the portrait format (another pot-hole in the Information Superhighway).

-Wills Flowers



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Research Activities and Interests

(cont. from page 1)

Geoff Morse (Cambridge, USA)

General interests include molecular and morphological phylogenetics of the Bruchidae (defined as most common recent ancestor of *Rhaebus* & *Acanthoscelides* & all of its descendants), as well as the evolution of host affiliation in seed predators. Currently working on a molecular phylogeny of the Bruchidae and planning thesis work on the evolution of host affiliation in the bruchid group *Stator*. Willing to identify specimens of *Stator* (quickly) and other Bruchidae (not as quickly).

K. D. Prathapan (Bangalore, India)

Field collecting Chrysomelidae; biology, ecology, evolution and taxonomy of Indian Chrysomelidae, especially Alticinae; currently working on doctoral degree at the University.

Antoni Sacarés Mas (Palma, Spain)

Distribution of Chrysomelidae around Balearic Islands; chrysomelid caryotypes.

Matthias Schöller (Berlin, Germany)

Just published book chapter on the biological control of arthropod pests in stored products; protection with predators and parasitoids. The chapter contains a bibliography on the natural enemies of seed beetles attacking stored products.

Radoslaw Scibior (Lublin, Poland)

Cryptocephalinae and Alticinae; Effect of environmental pollution on the life cycles, morphology, etc. of selected leaf beetle species; Distribution of Chrysomelidae in the southeastern regions of Poland.

Peter Sprick (Hanover, Germany)

Interaction plant-insect: ecology; identification of the host plants of unknown relations; life cycles of species; Europe; role of chemical compounds.

Arturo L. Teran (Tucumán, Argentina) Bruchidae of Argentina; *Megacerus* and *Stator* of the Americas (projects with J. M. Kingsolver and S. M. de L'Argentier, and C. D. Johnson, respectively)

Ferit Turanli (Bornova, Turkey)

Plans to study the histology of Colorado potato beetle *Leptinotarsa decemlineata* Say.

K. K. Verma (Durg, India) Currently engaged in classification and ecology of Chrysomelidae of the Indian Region.


Alfredo Veiga Fernández (Ourense,

Spain) Distribution and taxonomy of palearctic Chrysomelidae.

Niilo Virkki (San Juan, Puerto Rico) Retired. (But still has papers coming out-Ed.).

J. S. Yadav (Kurukshetra, India) Cytogenetic investigations on Coleoptera (worldwide) in general and from Indian fauna, in particular.

J. E. Wappes (Bulverde, USA) Interests include systematics of North and Central American Chrysomelidae.

J. K. Winkelman (Amsterdam, the Netherlands) Chrysomelinae of The Netherlands. 

LITERATURE AVAILABLE OR NEEDED

Maurizio Biondi (Coppito, Italy) All literature on flea beetles, worldwide.

Ali Gok (Isparta, Turkey) Needs all literature (especially keys) pertaining to identification of palearctic genera and species of chrysomelids.

Jay B. Karren (Logan, USA) Chrysomelidae and Chlamisinae.

Jasbir Singh Mann (Surrey, Canada) Would appreciate information or literature on Sagrinae and its immature stages.

Antoni Sacarés Mas (Palma, Spain) Chrysomelidae, palearctic and systematics.

K. D. Prathapan (Bangalore, India) Needs: Scherer, G. 1969. Die Alticinae des indischen Subcontinentes. Pac. Ins. Monog. 22:1-251; and Seeno & Wilcox. 1982. Leaf Beetle Genera. Entomography 1:1-221 (*I'm out of reprints-ed.*)

Ferit Turanli (Bornova, Turkey) Needs literature on histological or physiological study on *Leptinotarsa decemlineata*.

K. K. Verma (Durg, India) Would like to receive copies of publications on classification and ecology of Chrysomelidae of the Indian Region.

J. S. Yadav (Kurukshetra, India) Needs literature on molecular taxonomy of Coleoptera, especially pertaining to techniques.

J. K. Winkelman (Amsterdam, The Netherlands) Needs: Balsbaugh, E. U. 1983. North Dakota Insects. Schaffer Post Series 15:7-73; and Barabás, L. 1975. Zpravy Csl. Spol. ent.

SPECIMENS AVAILABLE OR NEEDED

Maurizio Biondi (Coppito, Italy) Flea beetles from the Afrotropical region.

Andrzej O. Bienkowski (Moscow, Russia) Would like to borrow or exchange specimens of certain *Chrysolina* species. Please write for the list of species needed.

R. A. Crowson (Glasgow, UK) Would like to borrow mandibles of any adult Palophaginae.

Franck Duhaldeborde (Mérignac, France) Interested in receiving specimens of Cryptocephalinae (palearctic region) for determinations.

Jürgen Gross (Berlin, Germany) All species of the genus *Chrysomela*; living (if possible) specimens of all life stages of *Chrysomela (Melasoma) lapponica*.

Antoni Sacarés Mas (Palma, Spain) Chrysomelids of the Balearic Islands; also interested in Chrysomelidae from other places.


Geoff Morse (Cambridge, USA) Need freshly ETOH preserved specimens of Bruchidae, especially members of the Pachymerinae. NOTE—Specimens of *Rhaebus* from Russia would be of paramount importance in understanding the relationships of the bruchids within the Chrysomelidae.

K. D. Prathapan (Bangalore, India) Willing to exchange Indian Alticinae for Alticinae of other regions, preferably identified material.

Matthias Schöller (Berlin, Germany) Would like to see specimens of *Thelyterotarsus* from northern Africa and the Arabian Peninsula, and *Acolastus* and neotropical *Pachybrachis* and *Mylassa*.

Arturo L. Teran (Tucumán, Argentina) Would like to borrow Bruchidae of Argentina, and specimens of *Megacerus* of any country for current research.

J. E. Wappes (Bulverde, USA) Willing to loan specimens for taxonomic studies. Collection includes about 18,000 chrysomelid specimens.

J. S. Yadav (Kurukshetra, India) Needs live male specimens or 1:3 acetic alcohol fixed testicular material of any group of Coleoptera, air-mailed for collaborative study. 

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