

# CURCULIO

An International Newsletter for Curculionoidea Research

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### Academic Background

Bachelor of Science in Biology, University of Washington, WA - 2005

Ph.D. Student in Biology: Ecology, Evolutionary Biology and Behavior Program, Graduate Center, City University of New York, NY - 2006 to present  
Sackler Institute for Comparative Genomics, American Museum of Natural History, NY

### Research interests

Biogeography, population genetics and molecular systematics of the New World genus *Conotrachelus*, biodiversity informatics and agricultural ecosystems.

Weevils cause damage to many of our most important crops. The plum curculio, *Conotrachelus nenuphar* (Herbst), is one such weevil. The plum curculio is native and endemic to the eastern United States. Native hosts include hawthorn trees, crabapple trees, and the Chickasaw plum. After the introduction of domesticated fruit trees, the plum curculio began using crop trees as hosts. Now, its pest status well established, the plum curculio is a problem in commercial fruit production for a number of trees in the Rosaceae family - including plums, peaches, and apples. Accordingly, "it is the considered opinion of entomologists that plum curculios, not gravity, cause apples to fall" (Berenbaum 1991). The plum curculio is the focus of my doctoral research at the American Museum of Natural History in New York. I am using genetic techniques to investigate the

### Featured Researcher

## Samuel Crane

Sackler Institute for Comparative Genomics, AMNH, New York



Samuel Crane at the American Museum of Natural History, New York; photo by Elizabeth Weinberg

history and demographics of this important crop pest as well as the evolutionary relationships among its congeners.

Perhaps unconventionally, concern over environmental problems drove me to this system and to weevils generally. I have long been interested in questions of origins and wanted to use evolution as a lens for examining environmental problems. This question-driven approach to science along with a natural fondness for beetles led me to the mega-diverse and economically important weevils. The plum curculio itself was suggested to me by Charlie O'Brien.

Adult female plum curculio oviposit in the immature fruit, leaving a telltale crescent-shaped scar. The tiny larvae burrow into the seed cavity where they spend several weeks maturing. Infected fruit drops from the tree prematurely and the grub emerges from the fallen fruit to excavate a small cavity in the soil. There it pupates and the adult weevil emerges a month or more later. In the North, these adults represent the only gene-

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**Editor:** Nico M. Franz, Department of Biology, University of Puerto Rico, PO Box 9012, Mayagüez, PR 00681, USA.  
E-mail: [franz@uprm.edu](mailto:franz@uprm.edu)

## Editorial Comments

Welcome to volume 56 of CURCULIO! As usual the issue is out a little later than expected; however, it is always nice to see it come together at the end. I am grateful to everyone who sent me their information and updates on weevil research. The “new face” this time is Samuel Crane (American Museum of Natural History, New York), who is working towards a dissertation on the molecular phylogenetics of the plum curculio and relatives. Let me use this opportunity as a reminder that our Newsletter is always looking for (typically) early career scientists to be featured on the next issue’s front page. In fact, finding someone who is willing to do so has often been the most difficult task when putting together past issues. It is probably easier to be recommended by an advisor than to volunteer personally. I would therefore like to send a strong message to anyone advising a promising young weevil researcher to help us out in this context. To finish up the housekeeping section, I should reiterate that I remain quite open to suggestions for improving CURCULIO, ranging from technical to more profound issues.

Since the appearance of the previous volume, two of the most accomplished weevil experts of past five decades have cele-

brated important anniversaries. Horace Burke, the Newsletter’s co-originator and most prolific contributor turned 82 years on April 1, 2008. Meanwhile Charles O’Brien, [insert your preferred weevil-related superlative here], turned 75 years on March 27, 2008. Henry Hespeneide, in response to a message sent out by George Benn Marshall who worked with the O’Briens for many years, made the fitting remark: “George! It’s nice to communicate with you as a co-collector of Charlie and Lois - I’ve seen your name on many collection labels! My question is when is Lois’ birthday? Much of Charlie’s success is due to Lois’ support - they are very much a team whose whole is greater than the sum of their parts. They are “C.W. & L.B. O’Brien” [and “G.B. Marshall”], or, better, CharlieandLois.” Naturally, ‘both’ Horace and CharlieandLois have news for this volume (pages 5 and 12, respectively). We wish them the best and look forward to seeing them at the upcoming Entomological Society of America (ESA) meetings in Reno, Nevada.

The volume is rounded out by contributions from Adriana Marvaldi who ably summarizes the papers given at the Weevil Symposium held at the 2007 ESA meetings (page 9); and from Robert Anderson who reviews a new volume on the entomine weevils of Canada and Alaska (page 11). Enjoy reading this new issue and be sure to contribute next time!

NMF

## Samuel Crane (continued)

ration each year and they spend the rest of the season feeding on fruit and foliage in anticipation of overwintering. Southern plum curculio will go through another generation. The limits of the weevils’ distribution extend as far west as the 105<sup>th</sup> meridian, though records west of the 97<sup>th</sup> meridian are rare. The northern population limits reach into Canada and the southern population limits fall just short of the Gulf coast.

I currently have samples from 10 populations and am working on expanding this collection. Soon I hope to have comprehensive coverage across the known range of this fruit pest. These samples are preserved in 100% ethanol and stored at either -20°C or in liquid nitrogen. Upon collection and receipt of specimens, I process them in the laboratory for a variety of molecular loci, including cytochrome oxidase I (COI), cytochrome oxidase II (COII), and NADH dehydrogenase 5 (ND5) from the mitochondrial genome. Present plans include the application and use of hypervariable nuclear loci (i.e., microsatellites) which will be informative about recent demographic trends and possible responses to climate and habitat alterations. This work is being conducted at the Sackler Institute for Comparative Genomics at the American Museum of Natural History (see <http://www.genomics.amnh.org>). Tissue storage is provided



The plum curculio *Conotrachelus nenuphar* (Herbst); image courtesy of Clemson University - USDA Cooperative Extension Slide Series

by the Ambrose Monell Cryo Collection (<http://research.amnh.org/amcc>). My goal is to use the information gleaned from these population genetic studies to enhance our knowledge of the plum curculio as a native weevil and inform our management plans of the plum curculio as an agricultural pest.

Other work includes building environmental niche models

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## Samuel Crane (end)

and resolving the systematics of the genus. Environmental niche models (ENM) can profile suitable habitats by correlating data about the environment (e.g., temperature, precipitation, soil type) at locations where the species is found. The ENM then allows for discovery of unsampled areas with potentially suitable conditions. Preliminary results show a tight correspondence between the species distribution and areas predicted to be suitable. More interestingly, the northern and southern strains of the plum curculio yield different predictions when modeled separately. If additional study corroborates this result, the plum curculio ENM may have important implications for management plans.

There has been no systematic treatment of *Conotrachelus* Dejean since Fiedler (1940) and Schoof (1942). This may be explained in part by the fact that there are more than 1200 named species in this New World genus. I will attempt to rectify this situation by testing Schoof's (1942) treatment of the genus. This key provides descriptions and morphological characters for 28 species occurring in the north-central United States. I will use a combination of museum and fresh field-collected specimens in a molecular systematic analysis to test Schoof's (1942) groupings and make a preliminary assessment of sister species status for my focal species. Based on this work I will take a representative sampling approach towards a genus-wide treatment, pending access to the most important specimens.

All of this work fits within my broader goals of using evolutionary biology to examine issues in the agricultural and environmental sciences while simultaneously enhancing our knowledge of life's diversity. After I earn my Ph.D., I will continue using my skills to investigate tough environmental problems and hope to expand my work with weevils of economic importance by means of ecological, genomic and bioinformatic tools. Weevils play important roles, both beneficial and harmful, in agroecosystems. Only by understanding these types of interactions can we hope to implement effective management plans that will allow necessary increases in productivity while minimizing the disruptive impacts of agricultural landscapes.

As a final note, I have developed and am managing a new **on-line directory of researchers** who work with weevils. The directory, called **Weevil Workers**, can be accessed at <http://weevils.amnh.org>. I encourage anyone working with weevils to include themselves in the directory. To be included, visit the website and follow the directions posted there. The purpose of the website is to enhance communication between weevil researchers, to facilitate access to weevil specialists, and to promote the dissemination of information about weevils, a significant component of earth's biodiversity. Please visit the website and spread the word.

### Request - *Conotrachelus* Specimens

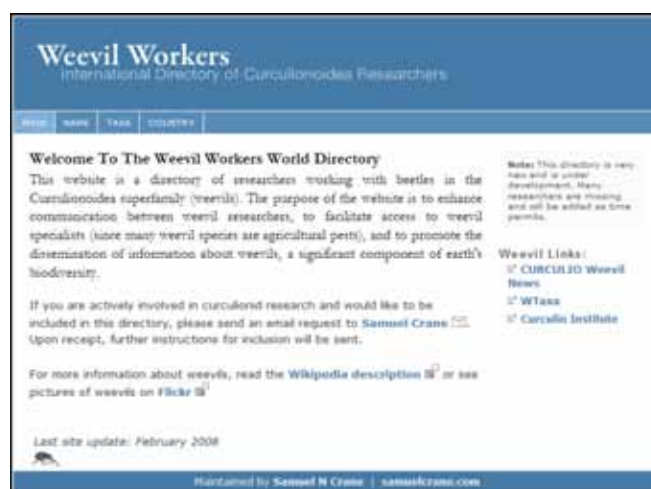
I am interested in all *Conotrachelus* specimens. The following species are of particular interest: *Conotrachelus nenuphar* (plum curculio), *C. juglandis*, *C. buchanani*, *C. albicinctus*, and *C. iowensis*. Specimens of the plum curculio from west of the Mississippi would be especially useful. Loaned specimens will be processed for DNA analysis using a non-destructive extraction protocol when possible or, with permission, by having a hind leg removed. Donated specimens will be accessioned into the American Museum of Natural History's permanent frozen tissue collection.

### References

- Berenbaum, M. 1991. Plum curculio. *Horticulture*, May: 77-79.
- Fiedler, K. 1940. Monograph of the South American weevils of the genus *Conotrachelus*. The British Museum, London 365 pp.
- Schoof, H. F. 1942. The genus *Conotrachelus* Dejean (Coleoptera, Curculionidae) in the North Central United States. *Illinois Biological Monographs* 19: 1-170.

### Contact Address

Samuel Crane  
Sackler Institute for Comparative Genomics  
American Museum of Natural History  
Division of Invertebrate Zoology  
Central Park West at 79<sup>th</sup> Street  
New York, NY 10024-5192, USA  
Office phone: (212) 313-7648  
Laboratory phone: (212) 313-7617  
E-mail: [scrane@amnh.org](mailto:scrane@amnh.org)  
Homepage: <http://www.samuelcrane.com>  
Weevil workers: <http://weevils.amnh.org>



## Research Activities and Requests for Specimens

**Roberto Caldara** (Italy: r.caldara@tin.it). With regards to the Mecinini, the revision of Palearctic *Gymnetron* is in press, whereas the revision of the Palearctic *Mecinus* is nearly completed and the revision of the Palearctic *Rhinusa* is in progress. Also the revision of *Picia* (Eirrhinidae) is nearly completed.

**Mahmut Erbey** (Turkey: merbey@gazi.edu.tr). Currently enrolled as a doctoral student at the Ahi Evran Üniversitesi in southern Turkey and studying Curculionidae.

**Nico Franz** (USA: franz@uprm.edu). Continuing his studies of Neotropical weevils. The revision of *Cotithene* has been published in *Zootaxa*. A manuscript describing a new genus and species of Eustylini from southwestern Puerto Rico, co-authored with graduate student Jennifer Girón, is in press in *Neotropical Entomology*. A manuscript with redescriptions of critical type species in the Entiminae: Eustylini is nearing completion. Has completed collecting trips in the summer of 2008 to Mona Island (Puerto Rico; one week) and to the Dominican Republic (three weeks), as part of the Caribbean *Exophthalmus* project. The trip to Mona Island produced 24 weevil species (including platypodines and scolytines), up from 8 species that were included in the most recent summary [Ramos, J. A. 1946. The insects of Mona Island (West Indies). *Journal of Agriculture of the University of Puerto Rico* 30: 1-74]. The potentially new reports include species of *Anthonomus*, *Conotrachelus*, *Cossonus*, Anchonini, and a possibly new and endemic species of Entiminae. The weevil material from the Dominican Republic is still being sorted and mounted, but likely includes several new species of *Apodrosus* Marshall. Graduate students Jennifer Girón, Juliana Cardona, and Anyimilehidi Mazo are currently associated with our lab and work on weevil systematics; see <http://academic.uprm.edu/~franz/>. Among other news, thanks to a NSF collection enhancement grant, we will upgrade the UPRM invertebrate collection in the coming three years, including a new infrastructure of cabinets (etc.), databasing and imaging of Puerto Rican insects. We invite specialists to travel to Puerto Rico and join us for field trips and other entomological activities, and are available for exchanging weevil specimens, primarily from Puerto Rico and surrounding Caribbean islands.

**María Guadalupe del Río** (Argentina: gdelrio@fcnym.unlp.edu.ar). Currently undertaking a taxonomic revision of Naupactini genera from the high Andes, especially *Amitrus* Schoenherr, *Amphideritus* Schoenherr and *Asymmathetes* Wibmer and O'Brien, and a phylogenetic reconstruction of the Naupactini using morphological evidence. Working towards her Ph.D.

thesis at the Universidad de La Plata, Argentina, under the direction of Dr. Analía Lanteri and Dr. Adriana Marvaldi.

**Noelia Guzmán** (Argentina: noneguzman@yahoo.com.ar). Conducting a phylogeographic study of *Naupactus xanthographus* (Germar), *N. leucoloma* Boheman, and *N. minor* (Buchanan), as part of her Ph.D. thesis at the Universidad de Buenos Aires, Argentina, under the direction of Dr. Analía Lanteri and Dr. Viviana Confalonieri.

**Luigi Magnano** (Italy: luigimagnano@libero.it). Interested in Curculionidae, especially Entiminae. Currently studying the species of the tribe Otiorhynchini for the compilation of a catalogue for the Palearctic species. **Would appreciate receiving *Otiorhynchus* species for study from Turkey, Greece, and from Central Asia.**

**Helio Pierotti** (Italy: hpierotti@notariato.it). **Interested in studying and exchanging Peritelini from Europe and in purchasing Peritelini from Europe, North Africa and North America.**

**Marcela Rodriguero** (Argentina: rodriguero@ege.fcen.uba.ar). Studying the presence of the endosymbiotic bacteria *Wolbachia* in parthenogenetic species of the tribe Naupactini (Coleoptera: Curculionidae) and their relation to phenomena such as polyploidy, apomixis, and colonization capacity. Also carrying out a phylogeographic study of *Naupactus cervinus* Boheman. Both projects are part of her Ph.D. thesis at the Universidad de Buenos Aires, Argentina, under the direction of Dr. Analía Lanteri and Dr. Viviana Confalonieri.

**María Rosas Echeverría** (Mexico: maventurar@yahoo.com.mx). Studying the species of *Pantomorus* Schoenherr from Mexico, using molecular and morphological characters. Working towards her Ph.D. at the Universidad Nacional Autónoma de México under the direction of Dr. Juan José Morrone, with the tutorial advice of Dr. Analía Lanteri. Visiting the Museo de La Plata from February to June, 2008.

**Antonio Velázquez de Castro** (Spain: velazquezdecastro@wanadoo.es). Currently working on a website with photos of Iberian insect fauna; see [www.insectariumvirtual.com](http://www.insectariumvirtual.com). Nearly 300 photos of Curculionoidea have been posted so far, and are ordered according to subfamilies and tribes; see <http://www.insectariumvirtual.com/galeria/Superfamilia-Curculionoidea-cat138.html>. Also working on the fauna of Sitonini of Israel and North Africa.

## Notable Weevil Specialists of the Past

By **Horace R. Burke** (USA: hrburke@tamu.edu)

As we have seen in previous columns about “Notable Weevil Specialists”, general coleopterists of the past have occasionally gravitated toward specialization on weevils. Some, like Herbert S. Barber, never completely made the switch to weevils but still contributed significantly to the biology and taxonomy of the group. Barber is yet another of several United States Department of Agriculture (USDA) entomologists stationed in Washington, D.C. who studied and wrote about weevils as part of their official duties. Barber’s life and overall contributions to the knowledge of Coleoptera have been well documented by Anderson *et al.* (1950), Snyder (1950), Hall (1950), and Mallis (1972). Drawing upon these sources, an abbreviated biographical account of him is presented here as a basis for a more specific assessment of his work on weevils. I am indebted to Jens Prena for his incisive review (quoted below) regarding Barber’s few, but significant, papers on the Baridinae. The photograph included here is from an obituary of Barber that Anderson *et al.* (1950) published in the Proceedings of the Entomological Society of Washington.

### Herbert Spencer Barber (1882-1950)

Herbert S. Barber was born in Yankton, South Dakota, on April 12, 1882. As with many of our predecessors, we know little about his early life. Thanks, however, to USDA colleagues who worked closely with him we do know that his father was an engineer whose work in land surveying offered many opportunities for Herbert to accompany him and experience outdoor life. Being outside, often camping in remote places for extended periods of time, he became familiar with a broad range of plants and animals, an interest that his natural science-oriented father promoted. His gradually developing fascination for insects was further encouraged by a book on British insects that his father gave him when he was 10 years of age. While this book was far from being an adequate guide to local insects, Herbert was still able to use it to make general comparisons between the specimens he observed and collected and those illustrated in the book. Making such comparisons introduced him to the great diversity of insects as well as emphasized the need for attention to detail in distinguishing taxa; these lessons must have served him well in launching his career in taxonomic and biological study of insects. His lifetime love for camping, canoeing, insect collecting and other outdoor activities evolved from those boyhood days when he roamed the fields and forests with his father.

As in other aspects of his early life, not much is known of

Barber’s education. He attended public schools in Orlando, Florida and Washington, D.C. His secondary education ended in 1899 after completing only two years of high school. He later took evening classes in foreign languages and technical subjects in Washington, D.C.

In October 1898, before completion of his shortened high school education, Barber obtained a temporary position for three months as preparator/laborer at the United States National Museum (USNM). Following this brief period of employment, he returned to high school in January 1899 to complete his last term. In the fall of that year he was again hired at the USNM, this time on a contract basis. When funds to continue the contract expired, coleopterist E. A. Schwarz arranged for him to work on the huge E. A. Schwarz and H. G. Hubbard collection of Coleoptera that had been donated to the National Museum. Thus began Herbert’s close association with Schwarz that lasted until the latter’s death in 1928. Snyder (1950) defined their relationship as being an “almost father and son” one. He further stated that Schwarz was Barber’s mentor, guide and friend; to this should be added collecting companion. Schwarz with his classical education and stature as one of the world’s leading coleopterists was the perfect teacher for the young Barber, introducing him to all aspects of the taxonomy and biology of beetles, from the intricacies of nomenclature to collection methods. During his long employment in the USNM and USDA, Barber was also fortunate to be associated with other prominent entomologists, for example, Leland O. Howard, Nathan Banks, and August Busck, all of whom contributed in no small way to his informal education and on-the-job training as a coleopterist. Demonstrating a deep devotion and expression of gratitude to his elderly and ailing friend, Barber took Schwarz into his own home for what must have been a trying situation and cared for him during the last years of the old man’s life.

Herbert Barber was first employed by the USDA in 1901, immediately following an extended collecting trip with Schwarz to Arizona and New Mexico. He served in the USDA until the summer of 1904 when he was transferred to the USNM. In 1908, he joined the USDA for the second time and served in the Division of Insect Identification, Bureau of Entomology and Plant Quarantine, until his death in 1950. Between the USNM and the USDA, Barber was employed in entomology for about 50 years. He died at his home in Washington, D.C., on June 1, 1950, studying beetles to the last and leaving much unpublished work in note and manuscript form.

Barber’s contributions to entomology were many and highly varied. He was first of all a coleopterist with an interest in all aspects of the taxonomy and biology of beetles. As did Schwarz, he had an abiding interest in small and elusive species, espe-

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## Herbert S. Barber (continued)

cially those demonstrating unusual development and behavior. For example, his two papers (Barber 1913a & 1913b) on *Micromalthus debilis* LeConte - with its complicated life cycle involving hypermetamorphosis, paedogenesis and parthenogenesis - are classics in beetle biology. It took a while for some entomologists to accept the fact that Barber's observations on this remarkable species were correct. Termitophiles and myrmecophiles as well as luminescent species such as *Phengodes* and lampyrids also held great appeal for him. His work on phytophagous species in Chrysomelidae and Curculionidae stems mostly from taxonomic problems encountered in his USDA work and generally involved species of at least some economic importance. The need for names and identification aids in his capacity as an insect identifier in the USDA generally dictated the direction of his study on these groups. The true breadth of Barber's interest and contributions to the knowledge of Coleoptera may be best appreciated by perusal of his bibliography (Blackwelder 1950).

According to Anderson *et al.* (1950), Barber's publications are characterized by "merit, not bulk." Many of the 90 articles he published consist of short notes. Perhaps his publication of so many brief papers was influenced to some degree by the habit of Schwarz who often presented his observations in this manner. In Barber's defense, it should be noted that his job responsibility in the USDA was insect identification rather than research. Along with providing what must have been thousands of identifications, he was often called upon to give time-consuming advice on nomenclatural and biological matters as well as to serve in a curatorial capacity. This service work significantly reduced the time he had available for research and publishing, thus encouraging the production of short papers as an outlet for his many, and often remarkable, observations on insects.

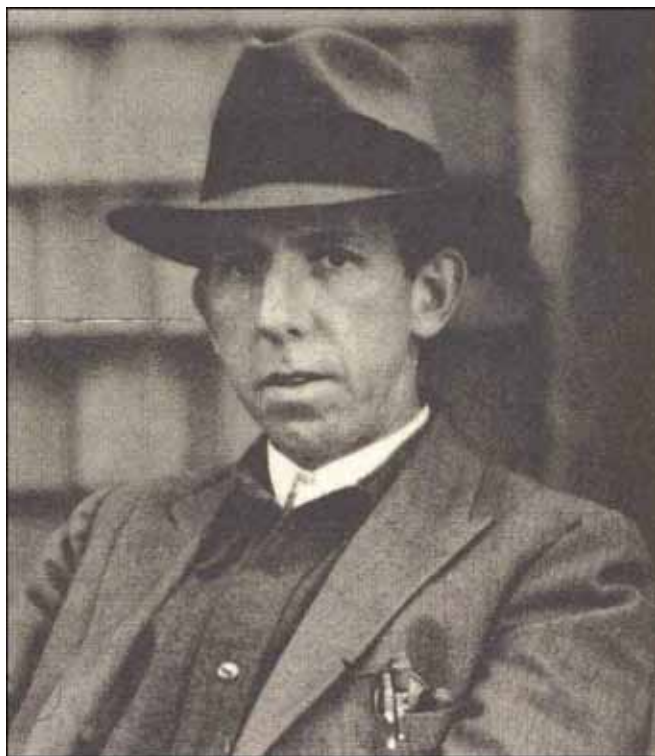
The extensive insect collecting that Barber did throughout his career deserves special mention. His first major collecting expedition was with E. A. Schwarz to New Mexico and Arizona in 1901. Schwarz wrote several interesting letters, edited and published by Sherman (1929), to L. O. Howard describing their experiences on this trip. Always quick to criticize collectors who did not live up to his high standards, Schwarz claimed that Barber's collecting suffered from lack of experience. He even wrote to Howard that "Herbert shows but little circumspection and never collects anything of value if I am not with him." However, the two managed to accumulate a large amount of excellent material even though their first month's collection was destroyed in a hotel fire, Schwarz was ill with a respiratory problem for a time, and at first Barber was badly bothered by the heat and lack of water. Barber obviously overcame both the "circumspection" problem and the lack of experience to be-

come a superb collector, perhaps even living up to the high expectations of Schwarz. Many opportunities soon came for Barber to expand the geographic coverage of his insect collecting. Trips were made to California in 1903 and to Texas in 1904. His first tropical experience came in 1906 when he accompanied Schwarz and botanist O. F. Cook on an expedition to Guatemala to study enemies of the boll weevil. Schwarz wrote several letters to various correspondents describing some aspects of the trip (Sherman 1929). Barber's interest in tropical beetles was considerably heightened by the Guatemalan trip. Over the years he also collected in Mexico and throughout a large part of the United States. In 1910, Schwarz and Barber spent three weeks in southern Florida, mainly at Paradise Key, where they collected "well above 500" species of beetles. A brief account of this trip is included in Barber (1920). Another collecting trip to the Cape Sable area of Florida undertaken in 1919 with termite specialist Thomas E. Snyder and ornithologist Alexander Wetmore also resulted in important collections being made. When not on the road to distant localities in search of their beloved beetles, Schwarz and Barber concentrated on collecting along the banks of the Potomac River and in other places in close proximity to Washington, D.C. One of their favorite collecting localities in the area was on Plummer's Island, a rocky shrubby island about 12 acres in size in the Potomac River a few miles from the city. A long term project was established to survey the insects of the island. Barber and Schwarz collected extensively together there for many years and Barber continued after Schwarz's death and up to within a few days of his own death in 1950. The two would often leave their offices after work and spend time collecting and studying the beetles on the island before nightfall or they would even occasionally spend the night there to return to their jobs early the next day. Of the approximately 600 species of beetles now known to occur on the island, Barber and Schwarz surely collected a very large percentage. It is also worthy of note that they not only collected adult beetles but reared or otherwise associated the immature stages of many species with adults in order to expedite identification. Much biological information was obtained during this process. Barber is credited with collecting many interesting and rare insects, sometimes including "firsts" for the country. He occasionally entertained prominent foreign entomologists by taking them on local collecting trips in the Washington, D.C. area as well as sometimes treating them to shooting white water rapids in a canoe.

Barber's first paper on weevils was published in 1912 on an avocado weevil (*Heilipus lauri* Boheman). This began a long-time interest in weevils attacking tropical fruits. His interest was expanded to cover orchid pests. Barber's weevil publications resulted from his job responsibilities in the USDA and most of the papers he wrote dealt with economically important we-

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## Herbert S. Barber (continued)



Herbert S. Barber in November, 1930 (source: Anderson *et al.* 1950)

vils. His papers mixed descriptive material with sometimes extensive notes on life histories and damage to plants and show evidence of careful study and special knowledge of nomenclatural matters and bibliographical sources. With the exception of the paper on *Trichobaris* LeConte discussed below, his weevil publications were relatively brief and not revisional in nature. He described 14 species as new of which 11 are presently considered valid. No genus-level taxa were described by Barber.

Jens Prena contributed the following comments on Barber's work on the Baridinae: "Barber 'touched' the baridine weevils in three papers. His 1935 study on *Trichobaris* was one of the first reviews of a genus in this subfamily at all, and is written in a surprisingly modern style. *Trichobaris* contains very similar species which are not easy to identify, and Barber mastered this challenge by studying many (ca. 1500) specimens from a wide range of locations and by including character states of the male genitalia. The genus has not been studied again in this depth, and it remains to be seen if Barber's results will hold. What we can say is that his key is very helpful for species identification and that this is quite noticeable in many collections, particularly when compared to closely related genera with more distinctive species such as *Lepidobaris* Champion and *Stictobaris* Ca-

sey. Barber did not see four type specimens and pointed out a few issues he could not resolve. It is possible that a revision of *Trichobaris* would result in nomenclatural changes, but Barber's taxonomy may hold."

"The other two papers dealing with Baridinae are of a different nature. Although not all aspects would withstand time, they are quite respectable when seen in a historic context. In a paper on orchid weevils, Barber (1917) provided an overview from a plant-sanitary point of view. A major part of the paper discussed the confusing taxonomy of a genus later to be named *Orchidophilus* Buchanan, 1935. Barber briefly reviewed instances of inadvertent dispersal with traded orchids and described a new species, *Acythopeus gilvonotatus* Barber, found in greenhouses in the eastern United States. He was aware of the unsatisfying generic placement, but even this assignment gives proof of his remarkable taxonomic skill. Of course, how could he have known that this particular species had been found in a greenhouse in the United Kingdom and was already described? A more complete account about the confusions and misconceptions of *Orchidophilus* species can be found at <http://www.mapress.com/zootaxa/taxa/Coleoptera.html> (Prena, J. 2008. *Zootaxa* 1783: 18-30; see Publications section of this volume of CURCULIO)."

"The 'supposedly new baridiid weevil' (Barber 1927), *Eumycterus*? [sic] *saccharidis* Barber, is a similar case of profound confusion, where Barber acted with much common sense. In brief, several species of this previously barely known group of weevils suddenly showed up in the 1920s, possibly coinciding with changed agricultural practices. At least eight entomologists worked on this issue and came up with ten opinions. This resulted in four descriptions of new genera and assignments of species to four New World genera and to two Old World genera. To make things worse, two generic names were misspelled at some point in time; the most frequently used name, *Prosalidius* Oglobin, was never available and the valid name for this genus is an entirely different one. Barber might have gotten out of this chaos with the least damage: he left the generic assignment open by using a question mark, and his comparison with *Eumycterus* Schoenherr certainly was one of the more reasonable insights of all the suggestions. In any case, his 'supposedly new' species was a new one."

Being to a considerable degree self-taught, Barber achieved a great deal as a coleopterist. He had a keen intellect, great observational skills, and a distinct talent for devising various techniques for rearing and studying insects. He had the good fortune of having been tutored at a young age by master coleopterist, E. A. Schwarz, and this coupled with his innate abilities, self-study and hard work served him well in his study of beetles. Aside from his technical skills, he excelled at establishing and maintaining working relationships with others; his biogra-

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## Herbert S. Barber (continued)

phers frequently stressed this aspect of his nature. His acquaintances held him in high regard as a scientist with broad interests, a knowledgeable and dedicated student of insects, and a generously helpful colleague. An example of his helpful nature is expressed by Leng and Mutchler (1927): "We are under special obligations to Mr. Herbert S. Barber, of Washington, D.C., for the opportunity of comparing the notes made by Dr. E. A. Schwarz, Mr. W. S. Fisher, and himself in the U.S. National Museum. Many of the abstruse questions in nomenclature such as those affecting *Chalmys*, *Elater*, *Graphisurus*, *Otiocephalus*, have originated from these notes." Many sought his freely given advice and assistance on varied taxonomic problems on weevils as well as other Coleoptera. The number of Barber's publications on weevils does not compare favorably with those of many weevil specialists, but he was a dedicated and careful worker and the overall (often unrecognized) contributions to the knowledge of the group by this unassuming man deserve to be noted as a part of our history.

### References

- Anderson, W. H., G. B. Vogt, and A. B. Gurney. 1950. Herbert Spencer Barber 1882-1950. Proceedings of the Entomological Society of Washington 52: 259-269.
- Barber, H. S. 1913a. The remarkable life history of a new family (Micromalthidae) of beetles. Proceedings of the Biological Society of Washington 26: 185-90.
- Barber, H. S. 1913b. Observations on the life history of *Micromalthus debilis* LeC. Proceedings of the Entomological Society of Washington 15: 31-38.
- Blackwelder, R. E. 1950. Bibliography of Herbert S. Barber. Coleopterists Bulletin 4: 55-59.
- Hall, D. G. 1950. Herbert Spencer Barber, (1882-1950). Annals of the Entomological Society of America 43: 612.
- Leng, C. W., and A. J. Mutchler. 1927. Supplement 1919 to 1924 (inclusive) to Catalogue of the Coleoptera of America, North of Mexico. John D. Sherman, Jr. 78 p.
- Mallis, A. 1971. American Entomologists. Rutgers University Press, New Brunswick, New Jersey. xvii + 549 p. [Herbert Spencer Barber (1882-1950), pp. 281-283]
- O'Brien, C. W., and G. J. Wibmer. 1982. Annotated checklist of weevils (Curculionidae *sensu lato*) of North America and the West Indies (Coleoptera: Curculionidae). Memoirs of the American Entomological Institute 34: ix + 1-382.
- Sherman, J. D., Jr. (editor). 1929. Letters of E. A. Schwarz. Proceedings of the New York Entomological Society 37: 181-393.
- Snyder, T. E. 1950. Herbert Spencer Barber 1882-1950. Coleopterists Bulletin 4: 51-54.
- Barber, H. S. 1912. Note on the avocado weevil (*Heilipus lauri* Boheman). Proceedings of the Entomological Society of Washington 14: 181-183 + illus. [Description of damage to avocado plants based on rearings in a greenhouse in Washington, D.C.; brief taxonomic notes; photographs of adult and pupa. In untitled discussion following Barber's paper (p. 183) E. A. Schwarz summarized knowledge of hosts of *Heilipus*.]
- Barber, H. S. 1916. A new species of weevil injuring orchids. Proceedings of the Entomological Society of America 18: 177-178 + illus. [Describes *Cholus cattleyarum* (synonym of *Archarias cattleyae* Champion); photographs of adult, larva and pupa.]
- Barber, H. S. 1917. Notes and descriptions of some orchid weevils. Proceedings of the Entomological Society of Washington 19: 12-22 + illus. [Describes new species of *Acythopeus* and *Eucactophagus*; provides extensive biological and taxonomic notes on these and other species of *Cholus* and *Eucactophagus* associated with orchids; photographs of adults of new species and *Cholus forbesii* and *Cholus cattleyae*. See also: Jens Prena's comments above on Barber's concept of *Acythopeus*.]
- Barber, H. S. 1919. Avocado seed weevils. Proceedings of the Entomological Society of Washington 21: 53-60 + illus. [Reviews the biology and taxonomy of weevils and other insects attacking avocado seeds, including two species each of *Heilipus* (describes *Heilipus pittieri* as new) and *Conotrachelus* (describes *Conotrachelus perseae* as new); photographs of *Heilipus lauri* Boheman and *Heilipus pittieri*.]
- Barber, H. S. 1920. A new tropical weevil from Florida and Cuba. Proceedings of the Entomological Society of Washington 22: 150-152 + illus. [Describes *Metamasius mosieri* from Cuba and Paradise Key, Florida as new; photographs of adults; briefly describes a three-week collecting trip with E. A. Schwarz to southern Florida in 1910.]
- Barber, H. S. 1923. Two new *Conotrachelus* from tropical fruits. (Coleoptera, Curculionidae). Proceedings of the Entomological Society of Washington 25: 182-185. [Describes as new *Conotrachelus aguacatae* from Mexico and *Conotrachelus sapotae* from Cuba, both being reared from avocado fruit; male median lobe of *C. aguacatae* illustrated and compared with that of *Conotrachelus serpentinus* Boheman and *Conotrachelus perseae* Barber, probably the first time this structure has been used to distinguish species of the genus.]
- Barber, H. S. 1924. The generic names of the clover and alfalfa weevils *Hypera* and *Phytonomus*. Proceedings of

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## Herbert S. Barber (end)

the Entomological Society of Washington 26: 216. [Argues for retention of both *Hypera* and *Phytonomus* as valid genus-level names.]

Barber, H. S. 1926. A new cotton weevil from Peru. Proceedings of the Entomological Society of Washington 28: 53-62. [Describes as new and illustrates adult of *Eulechriops gossypii*.]

Barber, H. S. 1927. A supposedly new baridiid weevil from Peruvian sugarcane. Proceedings of the Entomological Society of Washington 29: 149-150 + illus. [See Jens Prena's comments on this paper above.]

Barber, H. S. 1928. Thomas Say's unrecorded journey in Mexico. Entomological News 39: 15-20. [Discusses the route Say took in Mexico in 1828 as a basis for determining where he collected the insects, including some weevils, he described. Concludes that the probable route was "along the old road between Vera Cruz, Jalapa, Mexico City and Tacuba."]

Barber, H. S. 1935. The tobacco and solanum weevils of the

genus *Trichobaris*. Miscellaneous Publication No. 226, United States Department of Agriculture, 28 pp. [Revision of the genus with key for identification, extensive biological notes, photographs, distribution map, and illustrations of male median lobes. See Jens Prena comments's above.]

Barber, H. S., and J. C. Bridwell. 1940. Dejean Catalogue names (Coleoptera). Bulletin of the Brooklyn Entomological Society 35: 1-12. [Although this article does not specifically treat weevils, the description of the bibliographical and nomenclatural importance of the catalogue is also pertinent to the determination of the status of curculionid names.]

Dietz, H. F., and H. S. Barber. 1920. A new avocado weevil from the Canal Zone. Journal of Agricultural Research 20: 111-115 + 3 plates. [Barber describes *Heilipus perseae* as new; biology described; adult, larva and damage illustrated.]

Schwarz, E. A., and H. S. Barber. 1922. The specific names of two otiorhynchid weevils of Florida. Proceedings of the Washington Entomological Society 24: 29-30. [Discusses the nomenclature and synonymy of *Pachnaeus opalus* (Olivier) and *Pachnaeus litus* (Germar).]

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## Weevil Symposium Review - ESA 2007 San Diego

By **Adriana E. Marvaldi** (CONICET, Mendoza, Argentina: marvaldi@lab.cricyct.edu.ar)

Weevils had "their" first Symposium at the Annual Meeting of the Entomological Society of America (ESA), in San Diego on December 10, 2007. As reported in previous issues of CURCULIO, the initiative was suggested during the informal weevil meeting in 2006, and was successfully proposed and organized by Nico Franz and Robert Hamilton. In accord with the "Making Connections" theme of the ESA 2007 Meeting, the Weevil Symposium title was "New Minds for Weevil Systematics - Building Bridges Between Generations and Regions." It was intended to make connections among predominantly younger weevil systematists with more established workers, spanning a variety of weevil themes, as well as geographic connections from North-, Central-, and South America, and the South Pacific. The two speakers from South America were invited thanks to a Program Enhancement Fund (PEF) for the Annual Meeting. The Symposium occupied the Monday afternoon session (1:30-5:30 p.m.). The introductory remarks by Nico Franz were succeeded by eleven presentations that made connections from "sea level to mountain peaks", from population to family levels, from "larvae to nucleotides", and so on. A synopsis of the topics of each presentation is provided here.

**1. Biodiversity of Costa Rican leaf litter weevils from sea level to mountain peak.** Robert S. Anderson (Canada: rander@mus-nature.ca) reported results of project LLAMA (leaf litter arthropods of Mesoamerica), with many weevils sampled in Costa Rica in both lowland and highland areas. The leaf litter of the forest floor shows an amazing diversity of weevils, a great proportion of them new to science, whereas the highland areas show high levels of endemism and are important to set conservation priorities.

**2. Classical taxonomy and expert information systems: systematics in the modern world.** Muhammad Haseeb (USA: muhammad.haseeb@famuedu.edu, USA) and Charles O'Brien (USA: cobrien6@cox.net) provided an overview of the operation and potential offered by macromedia keys compared with classical taxonomic approaches (dichotomous keys) and their expected impacts on modern systematics. The shortage of taxonomists around the world has been recognized as a major setback to biodiversity conservation efforts. The computer based decision-support keys, offer a unique solution by capturing knowledge held by the diminishing number of taxonomists or in complex print based taxonomic keys, together with other information available in literature, in a simple, and easy to use macromedia format. These modern keys utilize high defini-

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## 2007 Symposium Review (continued)

tion images and can be deployed on the Internet allowing global access.

**3. Phylogeny of Curculionoidea: from larvae to nucleotides.** Adriana E. Marvaldi (Argentina: marvaldi@lab.cricyt.edu.ar) presented phylogenetic studies involving the weevils, spanning different taxonomic levels and based on evidence from morphology and rDNA sequences. An updated phylogenetic hypothesis for Curculionoidea, at family and subfamily levels, based on 130 morphological characters was shown. The cladogram recovers seven major lineages or families and the relationships among them, with the nodes defined by both larval and adult synapomorphies. This study sets the stage for ongoing and further exploration of subfamily relationships. Then, a cladogram at genus level for the belid subfamily Oxycoryninae was presented, and again, both larvae and adults contribute synapomorphies. Interestingly, the curculionoid phylogeny recovered from analysis of structure-aligned 18S and 28S segments, which is independent of morphological data, is in agreement with recent hypotheses based on morphological evidence, particularly with respect to families. The value of incorporating secondary DNA structure information in the process of alignment is highlighted. Results from these studies vindicate two data sets as good phylogenetic markers: larval morphology and nuclear rDNA sequences.

**4. Population subdivision of a fruit pest.** Samuel N. Crane (USA: scrane@amnh.org) investigated population subdivision within *Conotrachelus nenuphar* using a variety of diversity indices and other population genetic approaches. Twenty unique COI haplotypes span the northern and southern extremes of the species eastern limit. Diversity indices revealed that most genetic variation is found between groups. Haplotype diversity was high compared to nucleotide diversity, evidencing recent population expansion. The resulting haplotype network showed significant structuring at the level of populations and regions. The southern and northern haplotype networks were distinct, but other geographic correlates were inconclusive and underscore the need to expand the geographic and genetic sampling.

**5. Current advances in the phylogenetic reconstruction of the Anthribidae.** José R. Mermudes (Brazil: jmermudes@uol.com.br) presented the first hypothesis of phylogenetic relationships among genera of Anthribinae, together with a revision, cladistic analysis and biogeography of the tribe Ptychoderini. The cladogram shows two main groups, one Afrotropical and Oriental, and the other Neotropical.

**6. Ecological and evolutionary radiation of weevils (Curculionoidea).** Duane McKenna (USA: dmckenna@oeb.harvard.edu), Andrea Sequeira, Adriana E. Marvaldi, and Brian Farrell reported timing and patterns of weevil diversification in deep

time, reconstructed from an extensively sampled molecular phylogeny, with age constraints from the fossil record.

**7. Systematics of *Trachyphloeomimus*.** Pamela J. Horsley (Canada: pamelahorsley@mail.mcgill.ca) presented results of an ongoing systematic study on Central American *Trachyphloeomimus* (Entiminae), with a preliminary cladistic analysis. The group is very diverse, and like other leaf-litter weevils, it contains a great proportion of new species to be described.

**8. Reproductive trade-offs in a specialized cyclanth weevil pollination system (Coleoptera: Curculionidae).** Nico M. Franz (USA: franz@uprm.edu) investigated the interactions of a specialized plant/pollinator system involving a Cyclanthaceae and a derelomine flower weevil. The plant inflorescences exhibit several cantharophilous characters and the weevil pollinators use the inflorescences for feeding, mating, and oviposition. The larvae develop either in the detaching staminate flowers or in the rotting infructescences. The rate of infructescence abortion was high and caused by low levels of pollination. In the long term, the benefits of maintaining low levels of pollination may shift away from the weevils and towards the plants via an increase in the size of the pollinator population.

**9. Phylogeny of Madopterini.** Steven Ray Davis (USA: steved@ku.edu) reported the first phylogeny for the subfamily Baridinae, with an emphasis on the (paraphyletic) tribe Madopterini. A variety of informative characters in the baridines are documented and their evolution being clarified. These include prosternal horns, sclerolepidia, stridulatory and wing-locking mechanisms.

**10. Systematics of *Asyteta* and allied crowned weevil genera from the Indo-Australian region.** Gregory P. Setliff (USA: setl0003@umn.edu) presented a systematic review of the "crowned weevil genera" including the genus *Asyteta* (Cryptorhynchinae). The group is comprised of six genera occurring from the Philippines to the Solomon Islands, with numerous new species to be described from New Guinea and adjacent islands.

**11. Advances in the systematics of Xyleborina.** Jiri Hulcr (USA: jjihulcr@tamu.edu) reported recent contributions made by him and his team led by A. Cognato on the diverse and economically important Xyleborina (Scolytinae). These include emulating the Xyleborina part of the Wood & Bright (1992) Catalog into an Internet database, a key to world genera (<http://xyleborini.tamu.edu>), a morphology based cladistic analysis to genera, a robust molecular phylogeny based on five genes and showing conservative ecological and morphological features (i.e., type of mycangia), and the discovery of the mycocleptism as life strategy.

This wonderful afternoon concluded with a discussion and mixer following the Symposium. On Tuesday the "weeviling" continued at the informal weevil meeting led by Charlie O'Brien, as has been the norm over many years at ESA.

## Book Review - Weevils of Canada & Alaska: Entiminae

Donald E. Bright & Patrice Bouchard

By Robert Anderson (Canada: randerson@mus-nature.ca)

**D. E. Bright, and P. Bouchard. 2008. Weevils of Canada and Alaska, Volume 2. Coleoptera, Curculionidae, Entiminae.** NRC Press, Ottawa, Canada. xiv + 327 pp.

This is part 25 in the excellent series of Handbooks on the insect and arachnid fauna of Canada and Alaska. It is the second volume to deal with the weevils, one of the most diverse groups of beetles. The previous volume by Don Bright (= Part 21, Coleoptera, Curculionoidea, excluding Scolytidae and Curculionidae) treated the weevils in the families Anthribidae, Nemonychidae, Brentidae, Apionidae, Rhynchitidae, Attelabidae, Ithyceridae, and Platypodidae. The book is in English but French versions of all identification keys are provided.

The broadnosed weevils of the subfamily Entiminae, as they are commonly called, are one of the more diverse and economically important groups of weevils in Canada and Alaska. Many species have been introduced into Canada from Europe and many species are frequently encountered in gardens or in homes and can be considered as pests. In total, 49 genera and 123 species are treated in this publication. Not all of the included species are known to occur in Canada or Alaska, but based on their distributions, might be present, just not yet recorded. The book is arranged with a short introduction, including general biology, anatomy and classification of weevils, followed by a key to the subfamilies of the Curculionidae (a very important contribution in itself), followed by the detailed treatment of the Entiminae.

The treatment of the broadnosed weevils starts with a very good key to the genera. Then begins a systematic treatment of each genus including a detailed description, distribution and comments (mainly natural history) sections. For each genus, there is also a key to the species, or if there is only one species of that genus in Canada, a treatment of the species. Species treatments include a description, statement of distribution and comments. All distributions are mapped and habitus illustrations and wonderful, coloured habitus photographs are provided for many of the species. These photographs and illustrations facilitate use of the keys and in many instances are sufficient in themselves for accurate identifications. The book concludes with an excellent listing of references on these weevils.

The book is a comprehensive treatment of these weevils in Canada and Alaska. It certainly provides an excellent means for their identification and is an excellent resource for information about their biology and habits. As many of the included species also occur in the northern United States, the book should have international appeal as a resource for weevil identification there as well. It should be added to the excellent listing of already published titles in this series and deserves a place on the bookshelf of all entomologists, whether one studies weevils or just has a passing interest.

**Weevils of Canada and Alaska - Volume 2** is sold on-line by NRC Press for CAN/US \$59.95. For more information on purchasing please refer to the website: <http://pubs.nrc-cnrc.gc.ca/eng/books/books/9780660194004.html>

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## The Bulletin Board

### News About Weevils

**Henry Hespenheide** (USA: hahiii@ucla.edu) points to an article entitled “**Brazilian Beetles Hold Key to Faster Computers**”, where the configuration of the metallic scales of an entimine weevil is said to hold clues for making optical computer chips; see [http://www.wired.com/science/discoveries/news/2008/05/photonic\\_beetle](http://www.wired.com/science/discoveries/news/2008/05/photonic_beetle)

**Robert Jones** (Mexico: rjones@uaq.mx) submits the following **tribute to Raúl Muñoz Vélez**. “Early this year, the Maestro Raúl Muñoz Vélez, passed away in Mexico City. He was a

well known teacher of entomology and mentor for students interested in the study of insects. For many years, he was one of the principal taxonomists of Curculionoidea in Mexico working first with the Dirección General de Defensa Agrícola and later with the Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias in Mexico City; as well as teaching for many years at the Escuela Nacional de Ciencias Biológicas. He was an excellent artist and musician and will be missed by all who knew him. The following are some of the publications

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of Maestro Muñiz and a sample of his art work.

Muñiz Vélez, R. 1959. *Copturus aguacatae* Kissinger, plaga del aguatero (*Persae gratissima* Gaertn.) en México. Acta Zoologica Mexicana 3: 1-35.

Muñiz Vélez, R. 1965. Notas sobre Zygopinae. I - *Copturus lunatus* nov. comb. Acta Zoologica Mexicana 7: 1-3.

Muñiz Vélez, R. 1970. Relación entre taxonomía y tipos de vida en Curculionidae. Anales de la Escuela Nacional de Ciencias Biológicas 17: 169-187.

Muñiz Vélez, R. 1995. Censo de los Curculiónidos recolectados en madera depositados en las colecciones entomológicas mexicanas (Coleoptera: Curculionoidea). Revista Zoológica 8: 15-23.

Muñiz Vélez, R. 1998. *Cactophagous spinolae* (Gyllenhal, 1838): Picudo del Nopal (Coleoptera: Curculionoidea: Rhynchophoridae). Dugesiana 5: 42-43.

Muñiz Vélez, R. 1998. Curculionoidea recolectados en necrotropas. Dugesiana 5: 1-9.

Muñiz Vélez, R. 2001. La subfamilia Molytinae en México: Caracterización y clave para la determinación de tribus (Coleoptera: Curculionoidea: Curculionidae). Dugesiana 8: 9-15.

**Analia Lanteri** (Argentina: alanteri@fcnym.unlp.edu.ar) responds to an article entitled “**The Colombian Potato Whitefringed Weevil**” (Curculio 55: 12-13; 2007), as follows. “I have read in Curculio volume 55 a note on the life history of the ‘Tiroteador de la Papa’ (*Naupactus* sp., Curculionidae). Based on the published photographs and those sent me by the author, Jenifer Garza, it is clear that the species does not belong to *Naupactus*, but to one species of *Amphideritus* Schoenherr 1840. This genus ranges from Colombia to northern Chile, from about 500 to 4300 meters over sea level, and due to this distribution some of its seven species are frequently associated to potatoes cultures, as are those of the related genus *Amitrus* Schoenherr 1840. The genus *Amphideritus* is currently under taxonomic revision by my graduate student, Lic. María Guadalupe del Río, as part of her Ph.D. thesis at the University of La Plata, Argentina.

Whitefringed weevils correspond to the *Naupactus leucoloma* species group, revised in 1995 by Lanteri and Marvaldi (Coleopterists Bulletin 49: 206-228). Its species occur in prairies of southern South America, and some of them have been introduced with different cultivars in North America, Australia, New Zealand and South Africa. A molecular phylogeographic study of *Naupactus leucoloma* Boheman, *N. minor* (Buchanan) and *N. peregrines* (Buchanan) in South America is currently undertaken by my graduate student Lic. Noelia Guzmán, as

of her Ph.D. thesis at the University of Buenos Aires, Argentina. It is important that specialists working on particular biological aspects of weevil species are in touch with taxonomists working on these groups, in order to provide accurate information and avoid confusion on the geographical distribution and main biological features of these taxa. My research team at the Museo de La Plata, Argentina, is willing to provide help with the taxonomic identification of Naupactini species to those colleagues that need this information.

**Charles O’Brien** (USA: cobrien6@cox.net) sends the following message to Curculio readers. “I want to thank all of you for your messages and kind thoughts for my 75<sup>th</sup> birthday in late March. I responded to a couple of these, but lost my hard drive with all messages, addresses and data files a few days later. The hard drive appears to be unrecoverable but I am still trying. I would greatly appreciate it if anyone who may be able to help me would contact me with their addresses and any files that we were working on together. My new computer is being backed up with an external hard drive, so this will not happen again.

Things continue to get done but more slowly than new projects begin. I am collecting frequently in southern Arizona and am working on several papers, at least four in their final stages: an annotated checklist of weevils from Dominica, a World revision of the subtribes of the tribe Curculionini, a new species of United States *Conotrachelus*, and a new species of *Cholus* from Martinique. A one-week trip in March to the Arizona and California sand dunes produced more than 1200 specimens of *Trigonoscuta*, including seven described species and six new species, and 200+ specimens of seven species of *Ophryastes*.

Lois and I will be off for two weeks in late July to Guatemala for collecting under the guidance of José Monzón. It will be good to get into the Neotropics once again and at the right season.

I am working actively on several other studies, including revisions of *Rhopalotria*, *Lissorhoptrus*, the New World genera of Stenopelmini, and have others in the works. Please do consider my collection for a loan when working on almost any weevil group because my collection is worldwide in scope. Some time ago I received a request for identification of a beautiful weevil taken on windowsills in Phoenix, Arizona, and to my surprise I identified it as the Palearctic Hyperinae, *Coniatus tamarisci* (Fabricius), not previously known from the United States.

**William Phillips** (USA: wildbill288@yahoo.com) has acquired some lecture papers of the following specialists: **William D. Pierce**, **B. H. Ransom**, and **F. C. Bishopp** (dated November 18 to December 16, 1918). The titles include “Proceeding of the class formed to study the entomology of disease, hygiene, and sanitations”. They are available upon request.

## Recent Publications on Curculionoidea

- Alziar, G. 2007.** Description de *Derelomus antonioui* n. sp. de Chypre et nouvelles données sur la faune de l'Île (Coleoptera: Curculionoidea). *Biocosme Mésogéen* 24: 107-120.
- Anderson, R. S. 2008a.** The identity of *Chaleponotus elusus* Casey 1892 (Curculionidae: Molytinae: Conotrachelini). *Coleopterists Bulletin* 62: 42-44.
- Anderson, R. S. 2008b.** A review of the genus *Cryptorhynchus* Illiger 1807 in the United States and Canada (Curculionidae: Cryptorhynchinae). *Coleopterists Bulletin* 62: 168-180.
- Anderson, R. S., and C. G. Majka. 2008.** *Ceutorhynchus oregonensis* Dietz in eastern Canada (Curculionidae: Ceutorhynchinae). *Coleopterists Bulletin* 62: 26.
- Barratt, B. I. P., C. M. Ferguson, A. S. Bixley, K. E. Crook, D. M. Barton, and P. D. Johnstone. 2007.** Field parasitism of non-target weevil species (Coleoptera: Curculionidae) by the introduced biological control agent *Microctonus aethiopoidea* Loan (Hymenoptera: Braconidae) over an altitude gradient. *Environmental Entomology* 36: 826-839.
- Bright, D. E., and P. Bouchard. 2008.** Weevils of Canada and Alaska, Volume 2. Coleoptera, Curculionidae, Entiminae. NRC Press, Ottawa, Canada. xiv + 327 pp.
- Caldara, R. 2007a.** On two species of Curculionidae (Col.) new to the Canary Islands. *Entomologist's Monthly Magazine* 143: 200.
- Caldara, R. 2007b.** Taxonomy and phylogeny of the species of the weevil genus *Miarus* Schönherr, 1826 (Coleoptera: Curculionidae, Curculioninae). *Koleopterologische Rundschau* 77: 199-248.
- Conord, C., L. Despres, A. Vallier, S. Balmand, C. Miquel, S. Zundel, G. Lemperiere, and A. Heddi. 2008.** Long-term evolutionary stability of bacterial endosymbiosis in Curculionoidea: additional evidence of symbiont replacement in the Dryophthoridae family. *Molecular Biology and Evolution* 25: 859-868.
- del Río, M. G., and A. A. Lanteri. 2007.** *Thoraconaupactus*, a new Brazilian genus of broad nosed weevils (Coleoptera: Curculionidae) associated with *Leucaena* (Fabaceae). *Entomological News* 118: 459-469.
- Downie, D. A., J. S. Donaldson, and R. G. Oberprieler. 2008.** Molecular systematics and evolution in an African cycad-weevil interaction: Amorphocerini (Coleoptera: Curculionidae: Molytinae) weevils on *Encephalartos*. *Molecular Phylogenetics and Evolution* 47: 102-116.
- Franz, N. M. 2008.** Revision, phylogeny, and natural history of *Cotithene* Voss (Coleoptera: Curculionidae). *Zootaxa* 1782: 1-33.
- Franz, N. M., R. K. Peet, and A. S. Weakley. 2008.** On the use of taxonomic concepts in support of biodiversity research and taxonomy [pp. 63-86]. In: *The New Taxonomy, Systematics Association Special Volume Series 74* (Q. D. Wheeler, editor). Taylor & Francis, Boca Raton, FL.
- Friedman, A. L. L., and A. Freidberg. 2007.** The Apionidae of Israel and the Sinai Peninsula (Coleoptera; Curculionoidea). *Israel Journal of Entomology* 37: 55-180.
- Furniss, M. M. 2007a.** Forest entomology in Yosemite National Park: Creation of the Tenaya Ghost Forest and glimpses of forest renewal, 1903-1984. *American Entomologist* 53: 202-207.
- Furniss, M. M. 2007b.** A history of forest entomology in the Intermountain and Rocky Mountain areas, 1901 to 1982. USDA Forest Service, General Technical Report RMRS-GTR-195. Fort Collins, CO. 40 pp.
- Furniss, M. M. 2008.** Beginnings of forest entomology in Alaska: a spruce beetle outbreak on Kosciusko Island sets the stage, 1946. *History Line*, USDA Forest Service.
- Germann, Ch. 2004a.** *Otiorhynchus pinastri* (Herbst 1795) - ein invasiver Xenobiont aus dem östlichen Europa in der Schweiz (Coleoptera, Curculionidae). *Mitteilungen der Entomologischen Gesellschaft Basel* 54: 110-114.
- Germann, Ch. 2004b.** *Dolychorhynchotius machadoi* sp. nov., a new weevil from Morocco (Coleoptera, Curculionidae: Otiorhynchini). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 77: 223-228.
- Germann, Ch. 2005a.** Observation sur la biologie de *Dichotrachelus venturiensis* Hustache, 1929 (Coleoptera: Curculionidae). *Biocosme Mésogéen* 22: 121-123.
- Germann, Ch. 2005b.** *Pachyrhinus lethierryi* (Desbrochers, 1875) signalé pour la première fois en Suisse (Coleoptera, Curculionidae: Polydrusini). *Bulletin Romand d'Entomologie* 23: 57-59.
- Germann, Ch. 2005c.** Beitrag zur Gattung *Microplontus* Wagner, 1944 in der Schweiz - mit der Meldung zweier weiterer Arten (Coleoptera, Curculionidae, Ceutorhynchinae). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 78: 325-332.
- Germann, Ch. 2006a.** Note sur la biologie de *Microplontus falcozi* (Hustache, 1914) (Coleoptera Curculionidae). *L'Entomologiste* 62: 27-28.
- Germann, Ch. 2006b.** *Otiorhynchus armatus* Boheman, 1843 - eine weitere Art für die Schweizer Fauna aus dem Tessin (Coleoptera, Curculionidae). *Mitteilungen der Entomologischen Gesellschaft Basel* 56: 91-94.
- Germann, Ch. 2006c.** *Otiorhynchus smreczynskii* Cmoluch, 1968 - nun auch in der Schweiz (Coleoptera, Curculioni-

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## Recent Publications (continued)

- dae, Entiminae). Mitteilungen der Entomologischen Gesellschaft Basel 56: 122-126.
- Germann, Ch. 2006d.** Beitrag zur Rüsselkäfer-Fauna der Schweiz - mit der Meldung von 17 weiteren Arten (Coleoptera, Curculionoidea). Mitteilungen der Schweizerischen Entomologischen Gesellschaft 79: 299-309.
- Germann, Ch. 2007a.** *Brachyderes grisescens* Fairmaire, 1862 - espèce nouvelle pour la Faune française (Coleoptera, Curculionidae, Entiminae). L'Entomologiste 63: 225-226.
- Germann, Ch. 2007b.** Zweiter Beitrag zur Rüsselkäfer-Fauna der Schweiz - mit der Meldung von 23 weiteren Arten (Coleoptera, Curculionoidea). Mitteilungen der Schweizerischen Entomologischen Gesellschaft 80: 167-184.
- Germann, Ch., and P. Herger. 2007a.** Zur Insektenfauna vom Rüss-Spitz (Kanton Zug), 388 m, bei Maschwanden ZH. VIII. Coleoptera 3: Curculionoidea (Rüsselkäfer). Entomologische Berichte Luzern 58: 47-54.
- Germann, Ch., and P. Herger. 2007b.** Beitrag zur Rüsselkäfer-Fauna des Kantons Uri - mit der Meldung von 28 weiteren Arten (Coleoptera, Curculionoidea). Entomologische Berichte Luzern 58: 55-58.
- Germann, Ch., and B. Lüscher. 2007.** Beitrag zur Rüsselkäfer-Fauna des Schweizerischen Nationalparks mit einer aktuellen Artenliste (Coleoptera, Curculionoidea). Beiträge zur Nationalpark-Forschung 94: 149-158.
- Germann, Ch., and M. Moretti. 2005.** Erstnachweis von *Trichopterapion holosericeum* (Coleoptera, Apionidae) in einem kahlgeschlagenen Kastanien-Niederwald im Tessin (Schweiz). Mitteilungen der Entomologischen Gesellschaft Basel 55: 132-135.
- Germann, Ch., and M. Moretti 2006.** *Phrissotrichum tubiferum* (Gyllenhal 1833) (Coleoptera, Apionidae) und *Di-cladispa testacea* (Linné 1767) (Coleoptera, Chrysomelidae) neu - und gefährdet - für die Schweiz. Mitteilungen der Schweizerischen Entomologischen Gesellschaft 79: 7-13.
- Gültekin, L. 2008a.** Host plants of *Larinus latus* (Herbst 1784) in eastern Turkey (Coleoptera: Curculionidae). Weevil News 40: 1-7.
- Gültekin, L. 2008b.** Taxonomic review of the stem-inhabiting trehala-constructing *Larinus* Dejean, 1821 (Coleoptera: Curculionidae): new species, systematics and ecology. Zootaxa 1714: 1-18.
- Gültekin, L., R. Borovec, M. Cristofaro, and L. Smith. 2008.** Broad-nosed weevils feeding on *Centaurea solstitialis* L. in Turkey, with a description of the new species *Araxia cristofaroi* sp. n. (Coleoptera: Curculionidae: Entiminae). Annals of the Entomological Society of America 101: 7-12.
- Guzmán, N. V., V. V. Lía, A. A. Lanteri, and V. A. Confalonieri. 2007.** Population structure of the boll weevil in cotton fields and subtropical forests of South America: a bayesian approach. Genetica 131: 11-20.
- Hawkeswood, T. J. 2007.** Beetles (Coleoptera) of the Shell Picture Card series: Curculionidae. Calodema, Supplementary Paper 31: 1-2.
- Jones, R. W., C. W. O'Brien, L. Ruiz-Montoya, and B. Gómez-Gómez. 2008.** Insect diversity of tropical montane forests: diversity and spatial distribution of weevils (Coleoptera: Curculionidae) inhabiting leaf litter in southern Mexico. Annals of the Entomological Society of America 101: 128-139.
- Krátký, J. 2007.** Several weevil species (Coleoptera, Curculionidae) new for the fauna of the Czech Republic. Weevil News 39: 1-3.
- Lanteri, A. A., and M. G. del Río. 2008.** Caracteres genitales de la hembra en la clasificación y filogenia de la tribu Naupactini (Coleoptera: Curculionidae) [p. 159-176]. In: Contribuciones Taxonómicas en Órdenes de Insectos Hiperdiversos (J. Llorente Bousquets, and A. A. Lanteri, editors). UNAM- RIBES-CYTED.
- Legalov, A. A. 2006.** *Omius borodavchatyi* - *Omius verruca* (Steven, 1829), slonik ostrokrylyi - *Euidosomus acuminatus* (Boheman, 1839) [pp. 12-14]. In: The Red Book of Altay Territory. Species of Animals Rare and Being Under the Threat of Disappearance, Volume 2. Barnaul, "Altai". 211 pp. [in Russian]
- Legalov, A. A. 2007a.** The leaf-rolling weevils (Coleoptera: Rhynchitidae, Attelabidae) from Orenburg Province. Altay Zoological Journal 1: 35-36. [in Russian]
- Legalov, A. A. 2007b.** Studies upon of the genus *Lagenoderus* White (Coleoptera, Curculionidae) from Madagascar. Baltic Journal of Coleopterology 7: 191-198.
- Legalov, A. A., and D. A. Efimov. 2007.** The first find of *Sternuchopsis karelini* (Boh.) (Coleoptera, Curculionidae) in Siberia. Altay Zoological Journal 1: 54. [in Russian]
- Legalov, A. A., and A. L. L. Friedman. 2007.** Review of the leaf-rolling weevils of Israel (Coleoptera; Curculionoidea: Rhynchitidae and Attelabidae). Israel Journal of Entomology 37: 181-203.
- Legalov, A. A., A. A. Poiras, S. E. Legalova, and E. Yu. Shevnin. 2007.** Features of the weevil fauna (Coleoptera, Curculionoidea) associated with oak in the Southern Pre-Ural. Altay Zoological Journal 1: 37-38. [in Russian]
- Legalov, A. A., and E. Yu. Shevnin. 2007.** Materials to a fauna of the leaf-rolling weevils (Coleoptera: Rhynchitidae, Attelabidae) from the south part of Primorskii krai. Far Eastern Entomologist 177: 1-8.

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## Recent Publications (continued)

- Machado, A. 2008.** Three new endogean species of *Laparocerus* Schönherr, 1834 from the Canary Islands (Coleoptera, Curculionidae). *Journal of Natural History* 42: 1277-1288.
- Machado, A., M. López, T. Almeida, and M. Hernández. 2008.** Mitochondrial DNA phylogenetic analysis of the genus *Laparocerus* (Coleoptera, Curculionidae, Entiminae). I. The Madeiran clade. *Zoologica Scripta* 37: 415-427.
- Magnano, L. 2006.** Un nuovo genere della tribù Otiiorhynchini della Regione Himalayana (Coleoptera, Curculionidae). (LVII contributo alla conoscenza dei Curculionidae) [pp. 511-514]. In: *Biodiversität und Naturlausstattung im Himalaya II* (M. Harmann, and J. Weipert, editors). *Freunde & Förderer des Naturkundemuseums Erfurt, E. V.* 453 pp.
- Magrini, P., P. Abbazzi, L. Luigi Magnano, and C. Baviera. 2007.** Un nuovo *Otiiorhynchus* Germar, 1822 del monte Etna (Sicilia) (Coleoptera Curculionidae). *Annali del Museo Civico di Storia Naturale "G. Doria"* 98: 403-424.
- Mantillero, A. 2007.** Note synonymique dans le genre *Araiorrhinus* Senna, 1893 (Col., Brentidae). *Bulletin de la Société Entomologique de France* 112: 476.
- Mantillero, A. 2008.** Révision du genre *Parapisthius* Kleine, 1935 (Coleoptera, Brentidae). *Bulletin de la Société Entomologique de France* 113: 89-99.
- Meregalli, M., and E. Colonnelli. 2006.** The genus *Ocladius* Schönherr 1825 in the Arabian subregion, with description of six new species (Coleoptera: Curculionidae: Curculionidae). *Fauna of Arabia* 21: 251-306.
- Meregalli, M., and G. Davidian. 2007.** *Plinthus persicus* n. sp. with biogeographic considerations on the *P. illotus* species group (Coleoptera: Curculionidae: Molytinae). *Annales de la Société Entomologique de France* 43: 371-377.
- Meregalli, M., and G. Osella. 2006.** *Raymondionymus eximius* sp. n., a remarkable new species of endogean weevil (Coleoptera, Curculionidae, Raymondionymidae). *Deutsche Entomologische Zeitschrift* 53: 38-42.
- Meregalli, M., and G. Osella. 2007a.** *Dichotrachelus kahl-eni* sp. n., a new weevil species from the Carnian Alps, north-eastern Italy (Coleoptera, Curculionidae, Entiminae). *Deutsche Entomologische Zeitschrift* 54: 169-177.
- Meregalli, M., and G. Osella. 2007b.** Studies on Oriental Molytinae. IV. *Anonyxmolytes lilliput* new genus and new species from Vietnam (Coleoptera, Curculionidae). *Italian Journal of Zoology* 74: 381-388.
- Meregalli, M., G. Osella, and A. M. Zuppa. 2006.** The Raymondionymidae of the Curti collection, with description of *Raymondionymus curtii* sp. n. (Coleoptera, Curculionidae). *Revue Suisse de Zoologie* 13: 1-19.
- Mihajlova, B., and S. Pešić. 2006.** On the presence of the genus *Otiiorhynchus* (Coleoptera: Curculionidae) in Macedonia [pp. 59-64]. In: *Anniversary Proceedings - Eighty Years of Achievement by the Macedonian Museum of Natural History* (S. Petkovski, Z. Nikolov, D. Smith, and K. Smith, editors). *Macedonian Museum of Natural History, Skopje*.
- Newbold, T., M. Meregalli, E. Colonnelli, M. Barclay, S. Elbanna, N. A. Fandud, F. Flegg, R. Fouad, F. Gilbert, V. Hall, C. Hancock, M. Ismail, S. Osamy, I. Saber, F. Semida, and S. Zalat. 2007.** Redescription of a weevil *Paramecops sinaitus* (Coleoptera: Curculionidae: Molytinae) from the Sinai and an ecological study of its interaction with the Sinai milkweed *Asclepias sinaica* (Gentianales: Asclepiadaceae). *European Journal of Entomology* 104: 505-515.
- Perrin, H. 2008.** Hymnes au charançon. *Insectes, Cahiers de liaison de l'OPIE* 148: 11-13.
- Perrin, H., and M. Meregalli. 2007.** Désignation de lectotypes des espèces de Cleonini décrites par Gebler et Chevrolat, dans les collections du MNHN à Paris [Coleoptera, Curculionidae, Lixinae]. *Revue Française d'Entomologie (N.S.)* 29: 129-148.
- Pešić, S. 2006.** A review of the investigation of weevils (Coleoptera: Curculionidae) in Serbia and Montenegro. *Proceedings of the Russian Entomological Society, St. Petersburg* 77: 259-266.
- Pešić, S. 2007.** *Bagous puncticollis* Boheman, 1845 - new weevil species (Coleoptera, Curculionidae) for the fauna of Serbia. *Kragujevac Journal of Science* 29: 149-154.
- Pešić, S., and N. Ilić. 2007.** New records of the recently described geophilic weevil *Eurospalmus (Eurospalmus) zerchei* Yunakov & Nadein, 2006 (Coleoptera: Curculionidae) in Serbia. *Acta Entomologica Serbica* 12: 91-93.
- Pešić, S., and N. Ilić. 2008.** The genus *Ruteria* Roudier, 1954 (Curculionidae) in Serbia. *Archives of Biological Sciences* 60: 289-295.
- Pierotti, H. 2006.** Contributi al riordinamento sistematico dei Peritelini paleartici, VI. *Peritelus e Pseudomeira* di Tunisia (Coleoptera, Curculionidae). *Bulletin de la Société Entomologique de France* 111: 21-34.
- Prena, J. 2008.** A synopsis of the orchid weevil genus *Orchidophilus* Buchanan (Curculionidae, Baridinae), with taxonomic rectifications and description of one new species. *Zootaxa* 1783: 18-30.
- Sequeira, A. S., A. A. Lanteri, L. Roque Albelo, S. Bhattacharya, and M. Sijapati. 2008.** Colonization history, ecological shifts and diversification in the evolution of endemic Galápagos weevils. *Molecular Ecology* 17: 1089-1107.

(continued page 16)

## Recent Publications (end)

**Szypuła, J., and M. Wanat M. 2007.** Nowe stwierdzenia *Rhopalapion longirostre* (Olivier, 1807). *Polsce. Wiadomości Entomologiczne* 26: 128.

**Volovnik, S. V. 2007.** On distributions and ecology of some species of Cleonines (Coleoptera: Curculionidae): IV Genus *Lixus* F., Subgenus *Eulixus* Reitt. *Entomological Review* 87: 840-847.

**Volovnik, S. V. 2008.** On connections between lixine weevils and different plant organs (Coleoptera, Curculionidae, Lixinae). *Caucasian Entomologica Bulletin* 4: 87-91.

**Wanat, M. 2005a.** *Phyllobius fessus* Boheman, 1843 (Coleoptera: Curculionidae), a new weevil species in Poland and Lithuania. *Genus* 16: 611-617.

**Wanat, M. 2005b.** Rzadkie ciepłolubne gatunki ryjkowców (Coleoptera: Curculionoidea) z Mielnika nad Bugiem. *Polsce. Wiadomości Entomologiczne* 24: 246-247.

**Wanat, M. 2007a.** Genus *Conapium* Motschulsky (Coleoptera, Curculionoidea: Apionidae) in Indian Maharashtra. *Genus* 18: 315-322.

**Wanat, M. 2007b.** Synonymical notes on Palaearctic Apionidae (Coleoptera: Curculionoidea). *Genus* 18: 493-501.

**Wanat, M. 2007c.** Alignment and homology of male terminalia in Curculionoidea and other Coleoptera. *Invertebrate Systematics* 21: 147-171.

**Wanat, M. 2007d.** Nowe stanowiska *Protapion gracilipes* (Dietrich, 1857) (Coleoptera: Apionidae) w środkowej. *Polsce. Wiadomości Entomologiczne* 26: 294.

## Directory of Researchers - Updates

Raul María Guadalupe del Río  
División Entomología, Museo de La Plata  
Paseo del Bosque s/n 1900, LaPlata  
Argentina  
E-mail: gdelrio@fcnym.unlp.edu.ar

Noelia Guzmán  
Departamento de Ecología, Genética y  
Evolución, Facultad de Ciencias Exactas  
y Naturales, Universidad de Buenos Aires  
Pabellón II, 4º piso  
Ciudad Universitaria, Buenos Aires  
Argentina  
E-mail: noneguzman@yahoo.com.ar

Bjarte Jordal  
Natural History Museum  
University of Bergen  
Museplass 3, NO-5007 Bergen  
Norway  
E-mail: bjarte.jordal@zmb.uib.no

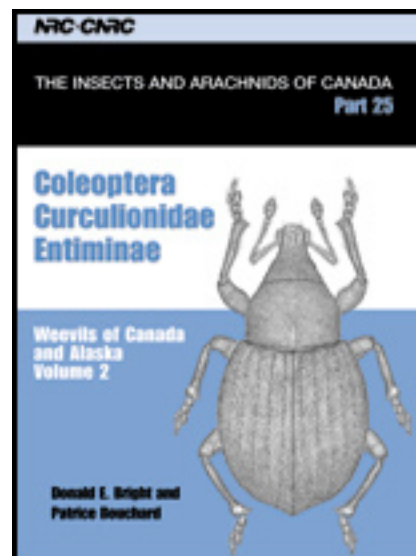
Helio N. Pierotti  
Strada di Selvana, n. 1  
I-31100 Treviso  
Italy  
E-mail: peritelus@yahoo.it

Marcela S. Rodriguero  
Departamento de Ecología, Genética y  
Evolución, Facultad de Ciencias Exactas  
y Naturales, Universidad de Buenos Aires  
Pabellón II, 4º piso  
Ciudad Universitaria, Buenos Aires  
Argentina  
E-mail: rodriguero@ege.fcen.uba.ar

George B. Marshall  
Center for Biological Control  
Perry Paige Building, Room 307 South  
1740 Martin Luther King Boulevard  
Florida A&M University  
Tallahassee, FL 32307-4100 USA  
E-mail: george.marshall@famu.edu

María V. Rosas Echeverría  
Museo de Zoología, Facultad de Ciencias  
Universidad Nacional Autónoma de México  
04510 México D.F.  
Mexico  
E-mail: maventurar@yahoo.com.mx

Sara Sheikh  
Department of Agriculture  
University of Ferdosi, Mashhad  
Iran  
E-mail: sara\_ins1983@yahoo.com



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