ICHNEWS

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EDITORS' NOTES

Ichnews is finially back again. It was my original intention to provide a newsletter for braconid research only. However responses to our questionaire overwelmingly supported the inclusion of ichneumonid research news. It is too late to include reports on Ichneumonidae research in this issue but we will begin to incorporate them next year. I was going to call the newsletter Braconologist's Bulletin, but since we will be including ichneumonid research in the future I decided to stick with the title Ichnews. It should be noted that 'Ich' is an abbreviation for Ichneumonoidea not Ichneumonidae as it was before. The last issue of Ichnews was published by M. Fitton and I. Gauld in 1980 as number 6. We continue therefore beginning with number 7.

Paul Marsh and I have decided to edit this publication together. We will alternate years. This year I have taken care of the newsletter and next year Paul will.

This issue of Ichnews is very late; from now on we hope to send out a questionaire in early fall and to have a finished product in the mail by the early spring.

There were a few minor problems with this year's responses to the questionaire. Most people did not give important details about the scope of

their revisionary work. One should include the geographic regions included in the revision and calls for material should be clearly stated. Many respondees did not give a complete citation of their 1984 publications. Therefore I'm sure that there will be some omissions and these will be incorporated into next year's newsletter. We will change the format of the quesionaire somewhat to avoid these problems in the future. By the way, please let us know of any omissions that you note in our 1984 list of braconid literature.

In the next issue we will try to have a few themes that we will ask you to comment on. One of these will be the question of whether or not the Aphidiinae (Aphidiidae) belong in the Braconidae. Several of the researchers in this group responded to my questionaire with queries as to why they should be included in a newsletter dealing with braconid research. If any of you have topics that you would like to have put to the readership for general comment send them along to Paul or myself and we will include them in the next questionaire.

I would like to encourage all of our readers to contribute articles to this newsletter. Detailed reports on collecting trips are welcome as are reports on the ichneumonoid holdings of various museums including your own.

One final note. We have a rather limited budget and therefore we must limit this newsletter to those people who respond to the questionaire. Several who did not respond to the questionaire will receive this issue of Ichnews but next year only those who respond will receive it.

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Of Aphelinids and Elasmus

by Mike Schauff

from Chalcid Forum 4:20.

Over the course of the five or six years that I have spent studying Chalcids, I have been struck by how many times colleagues working on various groups of chalcids and on other Hymenoptera have remarked about the sorry state of the current system of classification of chalcidoid higher taxa. Many of you, I am sure, have been assailed by stories of how this or that group cannot be defined or cannot be reliably keyed out. I would like to comment briefly on one particular group that seems to illustrate a problem with our classification and what I believe needs to be done so that we may arrive at a more stable and less arbitrary system.

I recently spent some time immersed in a batch of identifications of various aphelinid genera now referred to as the Eriaporinae (Myiocnema, Euryischia and related genera). I had seen these genera previously, but only in passing, and I had not really looked them over carefully. Having done numerous identifications of species of Elasmus, I was naturally struck by the similarities between these groups and decided to do some investigating into prior thoughts on their relationships.

The various authors who have looked at these groups have diverged considerably in their opinions (emphasis on opinion) about their relationships. Some have allied Elasmus closely with Euryischia and the other genera. Others have laid the similarities between the two to convergence. Recently, the genera except for Elasmus have been most often referred to the aphelinids (or elevated to some higher rank, e.g. Euryischidae). Elasmus is then placed in its own family or as part of the eulophids and so on. Unfortunately, the papers that

have dealt with their classification have said very little about the various characters that they possess and what impact they have had on deciding who gets grouped with who. The primary factor influencing prior authors seems to be the continued reliance on certain characters, (especially numbers of tarsi in this case) which have historically carried great weight in deciding groupings. In this case, I believe that what this does is obscure the evolutionary relationships of the groups by leading us to believe that Euryischia and the rest evolved from Coccophagous-like aphelinids while Elasmus evolved from some unstated and unrelated eulophid ancestor and that the numerous characters which seem to arise in a rather straightforward progession among the aphelinid-like genera must have been evolved again independently by the first Elasmus. I believe that all of these groups evolved from a common ancestor and should be grouped together.

The pitfall here is that once again, like those before me, I have just expressed another opinion about the matter. The failure to adequately discuss what characters were used to make the taxonomic decision has led to one more in an unending stream of such opinions. All of which have failed to arrive at a conclusion that we can all agree upon and use as a basis for further work.

What I am proposing, then, is not that we immediately transfer Elasmus to the aphelinids based on my opinion, but rather that the next revisers of these groups take the time to study all the characters that vary among the groups and then discuss those findings in detail so that the rest of us know what evidence they are basing their decisions on. If indeed the majority of characters argue that Elasmus evolved independently from Euryischia, then I will gladly agree to the two groups being classified separately. If on the other hand, the weight of the evidence suggests that Elasmus are nothing more than a recently evolved and differentiated group of eriaporine species then it makes no sense not to transfer them to that group. The important thing is that we all see the evidence laid out so that we can judge whether the taxonomic decision is justified and so that we can check those findings and add to them or correct the mistakes. All of our problems will not be magically cured, some groups will continue to defy us _____ this requires more work and attention to detail than cranking out large numbers of small papers. Nonetheless, the forthright and detailed discussion of characters is the only way that we will make real progress towards a stable and workable classification.

Research Reports

VAN ACHTERBERG, Cornelus (Kees). In August 1984, Kees attended the Hamburg Congress and noted that few Braconologists were present. In December 1984, he visited Brussells, Tervuren and Paris to check several types and to return identified material including some new genera - the most peculiar being a South American genus of Braconinae with a "pseudo-ovipositor". (The tail of this genus is many times longer than the body but the real ovipositor is much shorter than the metasoma). Kees is interested in knowing if anyone has any similar specimens. From October 1985 to January 1986, Kees will be collecting in Sulawesi and India. Current projects include publications on Symphyta, a generic revision of Braconidae, a large paper on the Blacinae (more than 40 new species and several new genera), a paper on the Western European spp. of

Helconini and the genus Aleiodes (= Rogas auct.) and a paper on fungicolous Alysiini. Kees is also trying to sort out the Phanerotoma spp. of Western Europe (he requires a specimen of Phanerotoma hispanica with at least one complete antenna). Finally, Kees has been trying out several new types of collecting-heads for Malaise traps as the existing heads do not last longer than 3 or 4 years.

AUSTIN, Andrew D. (Andy). Since leaving the B.M.N.H., Andy visited entomologists at Davis and Riverside while passing through California about the middle of March 1985; in March-April, he collected around Auckland and Lake Taipo, New Zealand, (he also studied the New Zealand National Collection) and also in the rainforest around Noumea, New Caledonia (screen sweeping and yellow pans were used both in New Zealand and New Caledonia); in May, he looked over the braconid collection at ANIC Canberra, Australia; from the 2nd to the 28th of June, he collected in Sulawesi; and on July 1, 1985, Andy began lecturing on systematic entomology at the Waite Agricultural Research Institute (University of Adelaide). Andy is currently working on the following projects: 1) a revision of Apanteles spp. (s. str.), parasites of Diatraea and related genera on sugarcane in Central America; 2) the Braconidae which parasitize Limacodidae associated with coconut in South-East Asia; and 3) the Microgastrinae of Australia. Finally, Dr. Austin reports that he is "Glad to be back Down Under!".

BELOKOBYLSKIJ, Sezgej

Sezgej collected in the Primorya region (the southern Far East of the USSR) from July to September, 1984. Sezgej reports that he is working on a revision of the Doryctinae and Exothecinae of the Palearctic region and is interested in material of these groups from the East Palearctic.

BERTA DE FERNANDEZ, Carolina D. Carolina has collected around the province of Tucuman. In 1982, she visited the Museum of Natural Sciences "Bernardino Rivadavia" in Buenos Aires, Argentina, and in 1984, the Faculty of Humanities and Sciences of Montevideo in Uruguay (which she found to be poor in braconid material). Carolina is in charge of the braconid collection at the Fundacion Miguel Lillo; here she makes determinations and adds to the collection. She is conducting research on the genus Cremnops (Agathadinae) of the Neotropical region. Carolina will be studying material at the National Museum of Washington.

BRAJKOVIC, Miloje (Mica). Mica has collected about 3000 specimens using a net during the spring, summer and autumn in Yugoslavia. He visited the Natural History Museum in Skopje (1975), the Systematic Entomology Laboratory in Washington, D.C. (1983), the Natural History Museum in Budapest (1983) and the Entomological Museum in Prague (1983). Mica also won a scholarship for predoctoral study at the Systematic Entomology Laboratory, Washington, D.C. Current projects include research on the Braconidae of Yugoslavia as well as on the application of leaf cutter bees (M. rotundata) for alfalfa pollination. Mica is also finishing up his Ph.D. thesis on comparative morphology of mouth parts and genital structures of Braconidae. He informs us that he has braconids to exchange.

CAPEK, Miroslav (Mirek). Mirek has been involved in rearing forest insect pests and in studying the last instar larvae of braconids. Current projects include compiling a check list of the Braconidae of Czechoslovakia.

CHIRAMEL, Sister Mercy C.A. Sister Mercy has collected locally (sweep nets and parasitized larvae) on a regular basis. She has visited Iari - New Delhi. Sister Mercy has been studying the University of Calicut's collection of braconids as well as other collections from Kerala and is gathering literature from various sources.

CHOU, Liang-yih. Liang-yih has been involved in the collection of more than 70,000 specimens of Braconidae from Taiwan (1980-84). Most of these insects were collected by sweep net from mountainous areas in various seasons. Liang-yih is presently trying to sort the Taiwanese specimens of Euphorinae, Microgastrinae and Alysiinae to genera.

DANG, Xinde. Xinde collected braconid wasps in the province of Shaanxi (China). Over 100 species were collected some of which were braconid parasites of longicorn beetles. Current projects include descriptions of the species of the genera Coeloides, Rogas, Bracon, etc. of Shaanxi. A request for material concerning this project was made.

DONALDSON, John S. John recently joined the staff of the National Collection of Insects (Pretoria, South Africa) to work on braconids (and to curate Ichneumonoids). He previously conducted research on the biology of aphelinids.

FISCHER, Maximilian (Max). Max has collected regularly in Austria (with a net). During the last few years, he has visited the British Museum, Hungarian National Museum Budapest, Zoologische Staatssammlung Munich and the Haeselbarth collection (Munich). His current taxonomic work is mainly on the subfamilies Opiinae and Alysiinae. Other activities include lecturing on systematic entomology at the University of Vienna.

GARDENFORS, Ulf H. Ulf has collected (mainly aphids for Aphidiinae breeding) in various places in Sweden, Greece (mainland, June 1983), Rhodos (May 1985) and the Cascade Mountains (B.C.-Cal., June 1984). He examined the Aphidiinae types and other material at the British Museum in February of 1983. Current projects include a revision of the genera Monoctonus and Pauesia (Aphidiinae) and research (with P. Stary) on the Aphidiinae in Fauna Entomologica Scandinavia.

GRIFFITHS, Graham C.D. Graham has collected mainly from Alberta, Alaska and the Yukon. He has reared parasitoids from phytophagous Diptera. Museums at Ottawa and Washington were recently visited by him (for dipterological purposes). His Diptera projects are taking up all his time at present and he does not expect to be able to do research on braconids again for several years. Graham was recently (July 21, 1984) elected a Fellow of the Willi Hennig Society in recognition of contributions to the development of cladistics (phylogenetic systematics).

HE, Jun-hua. Current projects for Jun-hua include: research on the "Economic Insect Fauna of China, Hymenoptera: Braconidae"; a study of braconid parasites of rice pests in China; a study of a new species of Distilirella Achterberg (Xiphozelinae); and work on the taxonomy of the genus Rogas Nees in China.

LUKAS, Josef. Josef has collected during the growing season in the southern and western parts of the province of Slovakia (Czechoslovakia) using sweeping and breeding methods. He works in the city of Trencin (western Slovakia) in a

small museum which houses his 5-year old collection of braconids. Dr. Lukas tells us of his desire to work on the subfamily Alysiinae.

MAETO, Kaoru. Current Projects for Kaoru include research on Japanese Meteorini and Japanese Microgastrinae.

MARSH, Paul M. Paul is currently preparing a revision of his 1972 key to North American braconid genera (in cooperation with Scott Shaw and Bob Wharton) which will include all the latest generic names and combinations and be extensively illustrated. He is also continuing a revision of the genus Heterospilus for the New World. Some loose ends of the Doryctinae for North America will be finished up. A study of the Neotropical genera of Doryctinae will begin this year and a long term study of the Rogadinae will be started during the next year or two. Dr. Marsh has returned to full time research on the Braconidae (as of February 1, 1985) after serving as Laboratory Chief for the USDA's Systematic Entomology Laboratory.

MASON, William R.M. (Bill). Bill visited the Museum of Comparative Zoology (Harvard University) in April 1985 and reports that their Braconidae are becoming well organized and well housed. (All types have been labelled but not segregated and Bill sorted the miscellaneous Microgastrinae to genus). Bill is currently making a phyletic analysis of the Hymenoptera and new keys to superfamilies. He is also doing studies of microgastrine genera and related groups on a world basis. Dr. Mason plans to retire late in 1985 and expects to commute between Ottawa (summers) and the American Entomology Institute in Gainesville (winters). His intentions are to remain fully active in taxonomy.

PAPP, Jeno (= Eugene). Jeno has collected in the Democratic People's Republic of Korea (1971, 1975) and in Yugoslavia (1971). He has visited the Naturhistorisches Museum Wien (1965), the Zoologisches Museum Berlin (1966, 1979), the Zoological Institute Leningrad (1969, 1977, 1984), the Instytut Zoologiczny Warszawa (1980) and the Musée d'Histoire Naturelle Geneve (1980). Current projects include an elaboration of the Braconidae for the series Fauna Hungariae, a monograph of the Apantetes s.l. species of Europe and research on the Braconidae of the Balkan Peninsula, Tunisia, Israel, Mongolia and Korea. Dr. Papp is curator of the Hymenoptera collection of Termeszettudomanyi Museum in Budapest.

PENTEADO-DIAS, Angélica M. Angélica has collected Braconidae (by sweeping vegetation and using Malaise traps) in the cities of Sao Carlos, Rio Claro and Descalvado in the State of Sao Paulo, Brazil. She has visited the Museum of Zoology at the University of Sao Paulo which has a very poor collection of Braconidae. She intends, however, to visit the collections of the Federal University of Parana and that of the National Museum of Rio de Janeiro which will have more material for study. She is presently working on the taxonomy and systematics of the Neotropical Braconidae.

RIEGEL, Garland T. Gar is presently working on some new species of Chorebus and Coelinidea and notes on Oenonogastra. Although retired as of June 1st, 1978, he still maintains an office in the Zoological Dept. and tries to donate some time to the braconids.

ROSEN, David. Surveys of aphid parasites have been conducted throughout Israel (mostly by Mr. Efraim Mescheloff a graduate student under David Rosen's supervision). Dave has reared numerous species of Aphidiidae from host samples for a revision of the Aphidiidae of Israel (which is now ready for publication and which will include descriptions of several new species). Although Dave is quite active in the taxonomy of parasitic Hymenoptera (Chalcidoidea, Aphidiidae), his primary concerns lie in such areas as the biological and integrated control of arthropod pests in agriculture, the biology and ecology of natural enemies, etc. In 1980, David Rosen and Paul DeBach (University of California, Riverside) won the first prize of the Filippo Silvestri Foundation, Naples, for their monograph on the "Species of Aphytis (Hymenoptera: Aphelinidae) of the World.

SHARKEY, Michael. From late October 1984 to mid-January 1985 I travelled throughout Europe visiting major museums. It was a great pleasure to meet fellow braconologists like Drs. Gilbert Nixon, Tom Huddleston, Andy Austin, Bernard Sigwalt, Kees van Achterberg, Jeno Papp and Max Fischer. I found rich collections of agathidines everywhere. Most overwhelming of course was the material at the British Museum. It was my intention to check all non palearctic agathidine types and Agathidinae genotypes from all areas. My only disappointment in this regard was not being able to find the type of Oreba Cameron. Fortunately Kees has a good drawing of this type specimen. Many thanks to all of those who showed me such great hospitality. Current projects and papers in press include the following: A revision of Alabagrus (Agathidinae). This is a primarily Neotropical group that was formerly included under Agathis Latr. It includes about 120 species and I hope to have it ready for publication in about a year. A new species of Bassus with notes on the genera Bassus and Agathis. A cladistic analysis of world genera of the Agathidinae. (If anyone has interesting specimens I would like to see them). Notes on the genus Mesocoelus (I think the genus belongs in the Agathidinae). Notes on the genera Asiachardiochiles and Aenigmostomus. I also have some long range projects on the parasitic Hymenoptera associated with agricultural crops such as apple and sunflower. In the summer of 1984 (June 15-July 15) I collected on the southern end of Vancouver Island, British Columbia, Canada. The results were very disappointing. Dr. Lars Huggert, a Poctotrupoidologist and his mate Sylvia were with me. The weather was wet most of the time and most species caught were widespread common forms. Aphidiines were well represented. I have no plans for collecting trips in the summer of 1985 though I may collect somewhere in the Neotropics this winter. I would be happy to receive Agathidinae material from anywhere in the world on a trade, gift or loan basis.

SHAW, Mark R. Mark's field trips have largely been confined to the U.K. He visited the British Museum of Natural History on a regular basis. Mark reported that C. Van Achterberg (and family) stayed with them for 3 weeks (May/June 1984) mainly to work on N.W. European Aleiodes. Other projects in progress include research (biology, etc.) on N.W. European Rogadinae and host association of parasitoids and parasitoid complexes of various host groups.

SHAW, Scott R. In December 1984, Scott was awarded the E.S.A. 1984 President's Prize for a paper on the phylogeny of euphorine Braconidae which he presented at the annual meeting of the Entomological Society of America in San Antonio. In April 1985, Scott visited the Waite Agricultural Institute, University of Adelaide in Australia, (the collection contained less than 1 drawer of pinned, identified Braconidae although there was some accumulated

unidentified material in alcohol) and the South Australian Museum (the collection contained about 4 drawers of pinned Braconidae, mostly unidentified). At the Waite Agricultural Institute Scott gave two seminars: role of systematics in biological control and phylogeny of euphorine Braconidae. Since August 1984, Scott has been curating the Braconidae and Ichneumonidae at the Museum of Comparative Zoology (Harvard University). He notes that the collection is strong in exotic material, especially Neotropical, and that it is good in Ethiopian, Oriental and Australian but very weak in Palearctic material. (There are many Brues types in the M.C.Z.). Scott is currently working on the revised key to North American braconid genera with P. Marsh and R. Wharton. (He would appreciate reprints of any papers that should be referenced as well as citations of relevant papers not yet published but currently in press). Scott is also describing a new genus of braconid from Trinidad (first recorded braconid parasite of webspinners, Embioptera). In an upcoming paper (1985, Entomography 3: 277-370), Scott is publishing some SEM photos of braconid venation and would appreciate any comments on this new technique of illustrating wing venation. Scott has decided to revise the Nearctic species of Meteorus, a brave project to say the least. Finally, we are saddened by the news that Scott's two year old son Robert has a very rare form of childhood cancer. We can only hope that the disease is soon cured. Our thoughts and prayers are with you Scott.

STARY, Petr. Current projects include research on the Aphidiidae of Scandinavia, Ethiopian area and Argentina. Petr is doing intensive work on population diversity (populations, biotypes, specificity, host alternation, ecosystem relations, biocontrol and has used electrophoretic techniques in these studies).

TAEGER, Andreas. Andreas has been working since 1983 on a revision of the Palaearctic species of Orgilinae. He is most interested in examining Palaearctic Orgilinae, especially reared specimens.

TAKADA, Hajimu. Hajimu is presently doing research on the Aphidiidae and Alysiinae.

TOWNES, Henry K. Dr. Townes informs us that the braconid collection and library of the American Entomological Institute now comprises 120,000 specimens and an essentially complete set of the world literature (the Shenefelt collection and library being a recent large addition). In August, the Institute will be moved to a new laboratory at 3005 SW. 56th. Ave., Gainesville, Florida, 32608. A special office will be reserved for work on the Braconidae and visitors will be welcomed. Loans will be made to responsible research workers.

TREMBLAY, Ermenegildo J. (Gildo). Gildo is currently working on the morphology and biosystematics of Aphidiinae (and requests male specimens of all genera!).

WHARTON, Robert A. (Bob). During the summer of 1985, Bob spent two months in Europe visiting museums in Portici, Firenze, Munche, Leiden, East Berlin, London, Brussels, Dublin, Stockholm and Lund. Current projects include revisions of the genus Alysia worldwide and of opiine genera, subgenera and some species.

WHITFIELD, James B. (Jim). In the summer of 1984 Jim worked at the University of Kansas (Snow Entomological Museum) as a visiting specialist. Here he sorted about 10,000 specimens of Braconidae to genus. He reports that the collection is especially strong in material from the mid-west and southern U.S.A. and from Mexico. There is also fair representation from Australia, southern Africa and Central America. Jim is currently completing a revision of Pholetesor Mason (Microgastrinae) and revising Bucculatriplex. He is also interested in revising Mirax and Adelius. In connection with his post-doc, he plans to review Nearctic genera of Braconidae that attack leaf mining Lepidoptera and compare Nearctic and Palearctic faunas of these groups. In August of this year (1985) Jim will begin a NATO postdoc with Richard R. Askew at the University of Manchester (U.K.). He will work on the braconid parasites of leafmining Lepidoptera.

Many thanks to Mike Sarazin who compiled these reports.

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