

AMERICAN ARACHNOLOGY

Issue No. 5

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IT HAS BEEN nearly a year since the last newsletter came out. We feel that in order for American Arachnology to be an effective means of communication it must be issued more frequently than once a year. However, there has not been enough material to produce more than 2 numbers a year, so far. Perhaps it might be easier for all concerned, contributors and editor, if we were to establish a schedule. We would like to set a CUT-OFF DATE for contributions as September 30, 1971, and issue AA No. 6 by the end of October. Then the next cut-off date would be March 31, 1972 and AA No. 7 issued during April. From then on the cut-off dates would be Sept. 30 and March 31, with AA being issued in October and April, unless the volume of material increases sufficiently to produce 3 or 4 numbers a year. We would like comments on this suggestion particularly if anyone finds this schedule awkward.

We think the newsletter should continue to carry news about research and activities, but would like to see it expand in scope to include more notes like that of Dondale, Redner and Semple in this number.

Please remember that the Editor lives in a remote corner of the globe, and is at present a bit isolated from the academic world. In other words, the bush telegraph is not always functioning, so send information by U.S. mail. [Even if you think we have probably heard of it.] We are especially concerned about notices of meetings.

This issue turned out to be a full one after all, despite several sparse months. In addition to news about people, it includes notices of meetings, requests for specimens, more listings of university courses, a book review, a note about a species problem, information about spider films and additional names of arachnologists.

In one of the next two numbers, AA No. 6 or 7, we would like to include a complete list of names and addresses of arachnologists to date, and perhaps a review of university courses. If any arachnologists or courses have not been listed in the first 5 numbers, please send us the information by Sept.30.

Meetings

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FIFTH INTERNATIONAL CONGRESS ON ARACHNOLOGY in Brno, Czechoslovakia, August 30 to September 4, 1971. Fee of \$30 for C.I.D.A. members and participants of the Congress and \$5 for family members and students. Fee includes the program, Congress Badge, evening party in wine cellars and refreshments and the Proceedings of the Congress. Persons wishing to attend should write to Dr. V. Silhavy, CSc, Secretary of CIDA, Starec u Trebice, Czechoslovakia. The deadline for papers was 31 August 1970. [This is a prime example of a notice being recieved too late for the deadline.]

In AA No. 4 we asked arachnologists to consider the possibility of a SPIDER SYMPOSIUM at the annual meeting of the Entomology Society of America in Los Angeles, November 30-December 4, 1971. We have had several favorable responses, but only Ronald SCHMOLLER suggesting topics:

- (1) Spider-insect interactions - predator-prey relationships
- (2) Spider zoogeography
- (3) Life histories of arachnids.

James CARICO thinks a meeting is a good idea, but proposes Texas instead of Los Angeles, as the latter is too far from Virginia. We have not heard anything from the Southwestern Arachnologists about the L.A. meeting. If they are not interested in organizing it, perhaps we could arrange an independent meeting somewhere more centrally located. What are the advantages of a joint meeting with ESA?

Spring meetings of the Arachnologists of the Southwest: March 20 and May 15, Saturday, 10:00 A.M., Whittier Narrows Nature Center, 1000 N. Durfee Rd. S., El Monte, Calif., 91733. Phone 444-1872.

CIDA

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Centre International de Documentation Arachnologique is revising its Annual List of Arachnologists of the World, so anyone who was not included in the 1968 list should send name, address and special arachnological interest to: CIDA, 61, rue Buffon, PARIS 5e, France, before March 31, 1971.

Requests for Specimens or Information
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Mark STOWE would like to hear from anyone who has experience catching bolas spiders. He would like to know where to look for them, e.g., what kinds of shrubs or trees. All we could advise is that the 2 we caught were sitting on leaves over our heads. [Mark Stowe, 161 Grand View Ave., Hamden, Conn.06514]

Robert THOMPSON, 1211 21st Ave E., Seattle, Wash. 98102, is extending an appeal for correspondence. He is planning a year's trip to the South Pacific, Australia, New Guinea and the Aru Islands. Thompson would like to hear from anyone who has any suggestions about collecting, e.g., exact locations that would be profitable. He would like to maximize his effectiveness and would appreciate any advice about his trip, especially from persons who have visited the region. He will be sailing late in June.

Mr. BROWNING c/o The Arachnid Section, British Museum(Natural History), Cromwell Rd., London SW7, England, would like a reprint of every arachnid paper published in North America for inclusion in Zoological Record.

Jack BROOKHART would like solpugid specimens, especially of the magnus group. [see under New Addresses]

James CARICO has finished his revision of Dolomedes. He would now like to borrow specimens from North and South America of Pisaurina, Dapanus, Thanatidius, Pelopatis, Thaumasia, Tinus and Trechela. He would like information about collections of any other pisaurid genera in this hemisphere.

Fred COYLE is still working on the antrodiaetid genus Aliatypus and would welcome any specimens and natural history data that anyone might have on that genus. He badly needs a ♂ of the type species Aliatypus californicus, which is found in the vicinity of Palo Alto, California.

Robin LEECH is beginning a revision of Neartic Micaria. He is interested in borrowing specimens of this genus. He estimates there are about 50-60 species in the genus with about half undescribed. [see also New Addresses]

Herb LEVI is beginning revisions of the genus Singa and would like to borrow specimens.

Bill SHEAR, Concord College, West Virginia, writes that he finished his degree at Harverd in August. (Thesis in millipedes) He has in press (Psyche) a paper on the stridulation of a whip-scorpion Acanthophrynus coronatus. Shear is now turning his attention to Opilionids, beginning with the genus Caddo. This will lead to a revision of the North American Dyspnoi, a tribe of the sub-order Palpatores [in Roewer] or Plagiosthethi [in Comstock]. Shear would like to borrow specimens of this opilionid tribe. He would also like to examine millipede specimens and is willing to provide determinations.

Ruth EASON, in Missouri, is starting a mini-zoo, consisting only of insects and spiders with plans to include other arachnids as live specimens become available. Such a zoo is long overdue, and will probably do much to increase

the general awareness and appreciation of " Bugs". Eason would be very much interested in donations of live specimens. Interested persons should contact her for instructions about shipping them so they will arrive alive.

Other Arachnological Organizations

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Arachnologists of the Southwest is an association of arachnologists devoted to the study of spiders and arachnids of the southwestern U.S. and northern Mexico. Membership is open to all persons interested in arachnology. Annual membership is \$1, due in January. A quarterly publication " Notes" is issued to members. M.E. Thompson, 1759 N. Altadena Drive, Pasadena, Calif. 91107.

The British Arachnological Society welcomes membership from North American arachnologists. A Bulletin, free to members, is published quarterly, and back numbers are still available. Dues are \$2.60 a year. Since British banks now charge 25% for cashing foreign checks, cash is preferred. Inquiries should be addressed to J. R. Parker, Secretary, Peare Tree House, The Green, Blennerhasset, Carlisle, CA 5 3RE, England.

The National Arachnid Society is for students and teachers interested in exchanging information about spiders, and other persons interested in spiders. Annual dues are 6 properly preserved specimens with data. There is a Newsletter. Ann Moreton, Route 2, Box 211, Powhatan, Virginia 23139.

Information and Services

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SPIDER FILMS. A series of 12 16mm films on Biology of Spiders, prepared at Oxford, with J.A.L.Cooke as Scientific Advisor. They are each a single reel, 400', about 10 minutes running time, except film 1, which is 3 reels. They are in color with commentary. Inquiries and orders should be sent to Dr. J.A.L. Cooke, Department of Entomology, American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024.

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| Film 1 | Introduction to spiders and other arachnids |
| Film 2 | Courtship and mating, 7 unrelated species |
| Film 3 | Courtship and mating, <u>Xysticus lanio</u> , <u>Micrommata virescens</u> , and <u>Meta segmentata</u> |
| Film 4 | Comparative courtship in the Lycosidae |
| Film 5 | Comparative courtship in the Salticidae |
| Film 6 | Capture of prey, different kinds of webs |
| Film 7 | Capture of prey, webless species |
| Film 8 | Capture of prey, <u>Segestria florentina</u> and <u>Atypus affinis</u> |
| Film 9 | <u>Hyptiotes paradoxus</u> , capture of prey, courtship and mating, egg cocoon |
| Film 10 | <u>Theridion saxatile</u> , capture of prey, courtship and mating |
| Film 11 | <u>Pisaura mirabilis</u> , courtship and mating, egg cocoon;
<u>Dolomedes fimbriatus</u> , capture of prey |
| Film 12 | not finished. Mimicry, cryptic coloration, cryptic behavior, types of cocoon and care of young |

Undergraduate Research Participation Program of the AMNH for Summer 1971. Taxonomic and biological studies of spiders and arachnids with Vince ROTH at the Southwestern Research Station, Portal Arizona. For information or application, write Dr. E. Shaw, American Museum of Natural History, Central Park West at 79th Street, New York N.Y. 10024.

In some notes on arachnological techniques pertaining to preservation and clearing of specimens, published by J.A.L. COOKE in the Bulletin of the British Arachnological Society [Vol 1(3): 42 and Vol 1(6): 92], Cooke referred to the reagents propylene phenoxytol and dimethyl hydantoin formaldehyde. He now informs us that these may be purchased in the U.S.

Propylene Phenoxytol

Gallard-Schlesinger
58 Mineola Avenue
Carle Place, Long Island, New York, 11514

Dimethyl Hydantoin Formaldehyde Trade name "Dantoin"

Glyco Chemicals, Inc.
51 Weaver Street
Greenwich, Conn. 06830

Vince ROTH says he has a few copies left for anyone interested of the index he prepared for Lehtinen's "Classification of the Cribellate Spiders".

NEW BOOKS. R.R. Forster The Spiders of New Zealand, 1967-1970. Otago Museum Bulletins 1-3. Available from the Otago Museum, Dunedin, New Zealand, about \$17. Comprehensive faunal descriptions with exquisite illustrations
K.R. Snow The Arachnids, an Introduction, 1970. Columbia University Press. 84pp \$5.00

Book reviews of any new or unreviewed books are always welcome by the Editor.

In AA No. 4, Vince ROTH suggested that American Arachnology propose that Zoological Record split the Arachnid section into "Acarida" and "Remaining Arachnida and related groups". We had about 3 responses to this proposal. Carico agreed, Kaston and Levi disagreed. Levi states that personal symbionts such as Sarcoptes mange might be a start for a new interest in arachnology. Apparently epidemics of this mite have been reported from New York City. We have also a new arachnologist listed in this issue, Robert E. BEER, who gives as one of his interests "Interactions of Spiders and Mites".

COURTSHIP AND A SPECIES PROBLEM

IN Pardosa lapidicina Emerton

C.D.Dondale, J.H.Render, R.B.Semple

In work with spider pheromones we have had occasion to record courtship in ♂ Pardosa lapidicina for purposes of bioassay. Some 39 recorded performances convinced us that this species makes three characteristic types of movement: (1) a rapid drumming of the palpi, (2) a rapid forward-and-back motion of the whole body while the spider is raised high on his tarsi, this accompanied by a forward extension of the front legs (this movement called by us the shake) and (3) a rapid vibration of his legs on the female at the time of mounting, a less constant movement than (1) and (2). A problem arose when we read Ruth Eason's (1967) account of courtship in the same species as observed in Arkansas. She recorded none of these motions, but only an alternate raising and lowering of the palpi, coupled with a "skittering" walk that the male uses in looping and circling on the female's trail.

Two possible explanations of the discrepancy come to mind. In the first place, P. lapidicina may differ strongly in courtship in different parts of its large range. Perhaps drumming, shaking and vibrating of northern populations are lost in the south. If so, intermediated should be found between Ontario and Arkansas. This explanation, however, runs counter to current ideas about the constancy of courtship patterns within species.

An alternative explanation is that the courtship attributed to P. lapidicina by Eason belongs to another species. On pages 6 and 7 of her thesis she describes beautifully the courtship of P. mercurialis Montgomery, of which the main features are a drumming of the palpi and an occasional, vigorous shake of the body with the spider rising to his full height. The male's walk is described as "jerky" rather than "skittering". P. lapidicina and P. mercurialis are difficult to separate in localities where both occur, according to Barnes (1959), the most recent reviser. Moreover, the picture is complicated by a third species P. steva Lowrie and Gertsch, which is even more similar to P. mercurialis than is P. lapidicina, and which is said to replace P. lapidicina in the western half of the United States.

A study of type specimens of P. lapidicina in the Museum of Comparative Zoology makes it quite certain that Ontario material is conspecific with Emerton's from Connecticut. A study of sexual behavior at selected localities would probably show whether P. lapidicina is a unity throughout its range and how lapidicina, mercurialis and steva stand as taxonomic entities.

References

- Barnes, R. D. 1959. The lapidicina group of the wolf spider genus Pardosa (Araneae, Lycosidae). Amer. Mus. Novit. 1960: 1-20.
- Eason, Ruth R. 1967. Life history and behavior of Pardosa lapidicina Emerton (Araneida: Lycosidae). M.Sc. Thesis, University of Arkansas.

Book Review

A Spiders Web. Problems in Regulatory Biology, by P.N.Witt, Ch. F. Reed and D.B.Peakall. Springer-Verlag, New York (published in Germany) 1968. Library of Congress Catalogue Card Number 68-54832. viii + 107 pp., 12 tables and 47 figures. Bound \$9.00 (U.S.)

[Review first printed in the Canadian Entomologist, April 1970 , Vol. 102(4): 511-512. Reprinted here because not all of us regularly read Canad. Ent.]

This book is divided into six sections, with one or two of the authors contributing to each section.

The first section, by Witt, is a short, historical introduction of how and why spiders were accidentally discovered and selected for the study of the effects of drugs on animals. In 1948, Dr. Hans M. Peters of Tübingen, Germany, administered D-amphetamine to spiders in an effort to shift the web-building time from around 4 o'clock in the morning to a later, more tolerable, hour. Instead, he found that the spiders built badly distorted webs at the usual time. At this point, the zoologists lost interest, but the psychopharmacologists gained interest.

The second section, by Peakall, is on the silk glands themselves, including the structure and functions of silk glands, and regulation of protein synthesis in silk glands. The third section by Witt, is on the specificity of the webs, and discusses the differences of webs between members of the same and different species of spiders. There is also a short discussion on spider web phylogeny. Witt concludes that there is ". . . no good reason for the assumption that any one web type should be the predecessor of any other."

The fourth section, by Witt and Reed, is on the altered web patterns. This is the largest section in the book, and covers in detail the methods of investigation, changes of webs with age, changes of web patterns with changes in body weight, dependence of web geometry on the number of legs, feeding, and the effects of drugs. A number of drugs were used, including D-amphetamine, mescaline and psilocybin, chlorpromazine, caffeine, phenobarbital (Luminal), D-lysergic acid and diethylamide (LSD 25), and atropine, as well as a few chemicals that are generally considered lethal, such as carbon monoxide and carbon dioxide. The effects caused by each drug on the spider and the web that the spider constructed while under the influence of the drug are recorded.

The fifth section, by Reed, is on construction of the web, and includes the process of construction, the course of construction, and the neurophysiological basis of web-building. The last section contains the acknowledgments and references.

The title of this book is misleading as the material included in the book places emphasis not on webs, but on the silk glands, on the regulation of protein synthesis in silk glands, and on web patterns altered by the administration of various drugs to spiders. In all seriousness, I suggest that the title should be changed to read, "Regulatory Biology concerning Drugs and Spider Webs." Abstracting services do not write the full title, thus many psychologists, psychopharmacologists and animal behaviorists would not be made aware of the book except by chance.

Witt wrote in the first section (p.4), "This book is selective," and I am in agreement with him. I believe that the authors have included the sections on silk gland structure and function, and web construction mainly for the

convenience of the readers, as there are other books that are far more detailed and comprehensive on these subjects. Also, the authors consider this book ". . . a progress report rather than a finished product." This observation is a truism, as all papers in science are but progress reports, though some papers are more definitive than others.

The authors have compiled a formidable list of references. I counted 280 of them. However, only 117 of these are cited in the text, and three cited in the text are not in the list of references (e.g., Witt et al (1961), on pp. 56 and 57), and at least one reference has the authors in the wrong order (e.g. on p. 97, for Heimann and Witt, read Witt and Heimann). In several cases, the text reference is incomplete (e.g., p. 58, line 15, refers to Witt, 1956, but in the list of references, one finds Witt, 1965a, 1965b and 1965c). Some of these errors are perhaps explained by the fact that much of this text is a translation from the German.

The quality of the printing and the many photographs are excellent. There are a few typographical errors, and a few long sentences that defy understanding (e.g., p. 76, first sentence of the last paragraph reads, "Although it is a reasonable preliminary hypothesis that preset programs determine the course of web-building, even casual observation and reflection confronts the necessity to infer some mechanism for sampling concurrent conditions of the structure."

The value of this book lies in the fact that an animal model and methods for its exploration have been developed for studies of problems in regulatory biology. However, it would be hard to find a thinner book for \$9.00.

Robin Leech

Arachnology Courses

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We published a list of Universities offering courses in arachnology in AA No. 4. We have several additions to the list. We hope to publish a more complete list in future numbers. Perhaps it would be of interest to publish it regularly, say every other year.

HARVARD UNIVERSITY, Cambridge, Mass. 02138: Dr. H. W. Levi. There are 4 courses in Arachnology. An informal freshman seminar, including reading, research and lab work. No grades or exams, informal evaluation. There is a similar course for upperclassmen, but graded. "Biology of Invertebrate Animals" including insects and at least 5 lectures on non-insect arthropods, field trips, labs and the Oxford Films. The fourth course is a graduate seminar.

SOUTHERN ILLINOIS UNIVERSITY, Carbondale, Illinois 62901: Dr. Joe Beatty. This spring Beatty will be offering Seminar in Invertebrate Zoology, particularly dealing with arachnids. It will be offered every other year on a seminar basis unless there is sufficient demand to offer it yearly.

UNIVERSITY OF KANSAS, Lawrence, Kansas 66044: Dr. Robert E. Beer is offering a seminar course in arachnology this semester which compliments 2 acarology courses which have been offered for more than a decade. There will be some discussion of the ecological influence of spiders on mites.

UNIVERSITY OF TENNESSEE, Knoxville, Tenn. 37916: Dr. Ronald Schmoller offers a formal upper division course in Arachnology, including a 5 day field trip to Hunting Island State Park, S. C. He also teaches 2 courses on insect and spider ecology.

News About Arachnologists

James CARICO and Ann MORETON are currently writing a popular book on spiders as a vehicle for Moreton's pictures, and also to add their voice to the rising public plea for sanity toward environmental problems.

Bruce CUTLER is continuing as a postdoctoral student at the University of Minnesota, working with A.G. Richards. Cutler has finished a problem on the histology of chelicerate cuticle. He has sectioned representatives of about 30 spider families and is examining other arachnid orders. His current project involves sense organs of fleas, but Bruce says his interest in arachnids is maintained, though it may be shifted from spiders to scorpions. Cutler has been learning electron microscope techniques.

Charles DONDALE and crew are analysing 5 years' data from collections on Heasman Field. Spiders were taken by quick-trap and vacuum sampling. John COOKE is identifying Erigonidae and Peter van HELSDINGEN, the Linyphiidae.

Russ GABEL, of San Francisco, spent most of August trying to locate tarantula colonies in Colorado, with little success. But he hit paydirt much closer to home. Gabel is studying the natural history of tarantulas, and located several colonies in a County Park near Coalinga. He obtained permission to establish a biological study area in the Park and visits them once a month for observations. These days such a set-up is getting hard to come by. Seems to us whenever we've located a good study or collecting site lately it has turned into a shopping center of housing development within half a year. Gabel also has a colony of tarantulas in his lab so he can observe details of mating.

Larry GREEN is completing a M.S. thesis under Joe BEATTY on setal structure of spiders. Green has been using a scanning electron microscope. The study was prompted by Lehtinen's much commented study and Green hopes to expand the application of setal morphology to spider phylogeny.

Beatty has 2 other students (sorry, we don't have their names) who have been working on spider problems, but have apparently not yet settled on these problems. One student was working on spider activity over a 24 hour period and grappling with the problem " where do the spiders go during the time they do not turn up in samples?" We hope they find an answer, we have often wondered about that. The other student is investigating a couple of topics and will pursue whichever seems to go the best. One topic is life histories of spider parasites and egg predators, and the other is anatomy of antrodiaetids and mecicobothriids with the hope of invalidating the subordinal rank of liphistiids.

Peter van HELSDINGEN is currently on fellowship at MCZ with Herb LEVI. Helsdingen is with the Rijksmuseum van Natuurlijke Historie, Leiden, and has recently (1969) published a reclassification of Linyphia based on the functioning of the genitalia and genital morphology. We believe this is the first time that a taxon of higher or specific rank has been defined by genitalia.

B.J.KASTON has been collecting many spiders he had not previously obtained, simply by weekly emptying a backyard pitfall trap. This is a fruitful and relatively painless way to get a lot of goodies.

Robin LEECH has finished his thesis on Amaurobiidae and has accepted a postdoctoral fellowship in Ottawa.

Larry PINTER has been providing Direction for the Santa Barbara Museum of Natural History for more than a year and a half. The Museum will focus its attention on ornithological, malacological and anthropological collections, and has one of the finest exhibit programs on the West Coast. The Museum has laboratory facilities including accommodations for visiting researchers. The Museum has offered several university level courses on the premises and now Pinter is preparing a course in Arachnology to be offered at the University of Santa Barbara [we do not know if it is being offered this semester]. Larry manages to weave his own spider work in with his administrative duties. He takes frequent trips to the Channel Islands, in which the Museum has special interests and access.

Norman PLATNICK is a graduate student at Harvard, working under the direction of Herb LEVI. Platnick is planning to work on Anyphaenidae. He was at Michigan State University for 2 years before going to Harvard.

Ron SCHMOLLER has had a busy year. In addition to teaching 3 courses, he has prepared 5 articles for publication, and has begun a new field study. His papers are on ecology of tundra arthropods. His new research is on predator-prey relationships between spiders and insects in moss mats and rock outcrops. Schmolter's reason for choosing this topic was to provide favorable data for biological controls as opposed to increasingly stronger insecticides.

Chiricahua Notes

The Chiricahua Mountains of southeastern Arizona became an arachnological center during the past summer when they were visited by arachnologists from all parts of the country. In addition to having great scenic and historical interest, these mountains have long had a strong attraction for biologists intent on exploiting a rich, diverse fauna and flora with many eastern, western and Mexican elements. In few areas can one gain acquaintance with half a dozen species of rattlesnakes, and 4 species of skunks, and deal with such an abundant fauna of solpugids, whipscorpions, tarantulas and spiders of many other families.

The host was the Southwestern Research Station, one of the field stations of the American Museum of Natural History located in Cave Creek Canyon near Portal, which provides comfortable living quarters and laboratory facilities at modest fees, to its guests, some with wives and families. Vincent ROTH, the resident director of the Station, is also a student of spiders. Some of the visitors were perennials back for another stay at the Station and others were attracted by the opportunity to exchange ideas and enjoy the camaraderie of colleagues.

The lure of the Chiricahuas and the Research Station was responsible for making Willis J. GERTSCH a permanent resident. He now lives in Portal where he

is continuing his researches on spiders and scorpions after retirement two years ago from his Curatorship at the American Museum of Natural History. Although located in Arizona, he is still the correspondent for C. I. D. A. for the Eastern United States. He expects soon to send in for publication a paper, being done jointly with Michael SOLEGLAD of San Diego, on the scorpion genus Uroctonus. This genus, heretofore represented by the single taxon mordax, has been enlarged to 14 species, most of them from the Californian region. He is also continuing his studies of the trap-door spiders and notes that the 3 species from the Chiricahua Mountains are still undescribed. Dr. Gertsch has found in retirement a mixed blessing, with more time for study but also many diversionary activities to consume it.

One of the first visitors to appear on the scene in 1970 and stay for several weeks was John A. L. COOKE, now Curator in charge of spiders at the American Museum in New York. As an Englishman with field experience largely in Europe and Africa, he is now sampling our southwestern deserts and is finding them a fertile field for his studies. Long interested in the morphology and physiology of the genital structures and sexual biology of spiders, he found rich study material in the local tarantulas, filistatids and loxoscelids. He departed with a good assortment of living species and a photographic record of imposing size dealing with the arthropods of the Chiricahua area. He returned in the summer for nearly a month's stay accompanied by his family. The Cookes returned to New York via the great northern route through Wyoming and the Great Lakes. Then John took off again, to the Smokies to collect Hypochilus, and to visit Bill SHEAR, Fred COYLE and Jim CARICO.

Bea VOGEL arrived toward the end of June for a 3 weeks stay to continue her field studies of apparent niche sharing of Pardosa species. She was returning to a favorite area where much of her thesis work was done. While the Chiricahua Mountains are not overly rich in Pardosa species (compared with Colorado) they do have the interesting feature of having at least 3 species pairs of this fascinating genus, which are not only closely related taxonomically, but seem to be able to live together. One of the "pairs" may be 4 species ecologically similar. Bea finds most of their habitats favorably situated for spider watching and hopes to complete her studies during coming summers.

During the month of July Martin H. MUMA, of the University of Florida Citrus Experiment Station at Lake Alfred, divided his time between Cave Creek Canyon and Silver City, New Mexico. He and his family have spent many summers in the Portal area, and Martin has found the arid grassland and mountainous terrain of Arizona and New Mexico an ideal region for his studies on the systematics and ecology of the solpugids. He is looking forward to retirement in the Fall of 1971 and will live in Silver City, where he is building a house. His summer house in Portal will lie in a saddle facing westward high on Portal Peak overlooking the Cave Creek area. He leaves Florida, where only a single species of solpugid can be considered reasonably common, for an area rich in genera and species of his favorite research animal. From his western station, he expects to exploit the fauna of Mexico as well as that of the American southwest.

B.J.KASTON and his wife Barbara, who usually visit the Station at least once a year, arrived during August for the express purpose of meeting John Cooke for the first time. Not one to waste even a moment, B. J. brought with him the manuscript of his book How to Know The Spiders, which is being revised and enlarged. One of the highlights of the summer was his lecture on the

natural history and ecology of various spiders, given as part of a course to the summer entomology class. This was followed by lively discussions on spider habits and curiosities. One of these latter was the statement by Dr. Gertsch that he had seen many giant communal webs in Mexico, made by spiders of the genus Metepeira and containing spiders in all stages of development. One such web ran for miles along the wires and poles of the electric lines in the area of Fortin de las Flores, a continuous, giant web stretched from wires to ground vegetation with bridges over connecting roads. His guess that it was fifty miles long was not a jest.

Allen BRADY, former student of Herb LEVI at Harvard, and now at Hope College in Holland, Michigan, made the Station a base while doing field work in Mexico. This trip brought him back to familiar territory where he had spent considerable time in the company of Joe BEATTY, then a graduate student at the University of Arizona. His excursions into Mexico to collect spiders of the family Oxyopidae were reasonably successful, and he was able to supplement them by material from southern Arizona.

Shorter visits were made by various students attracted by the presence of so many arachnologists. Lawrence PINTER, now Director of the Santa Barbara Museum in California, dropped in on two occasions during collecting trips for Phidippus. On the second trip he was accompanied by Franklin ENNIK of the California Department of Public Health in Berkeley, who has been studying the biology of Loxosceles and preparing a paper on the California species. David RICHMAN, now accepted as a graduate student at the University of Arizona where he is working for the Master's Degree and eventually the Doctorate, was present on two occasions for conferences on his thesis project. Joseph BIGELOW, a graduate student at Arizona State University working on the distribution and bionomics of the scorpions of Arizona under the direction of Mont CAZIER, conferred with Dr. Gertsch about details of his project. His intensive survey of the many habitats of Arizona has already demonstrated the presence of an unusually rich, varied fauna in the state.

The medical side of arachnology was represented by Findlay RUSSELL, Director of the Laboratory of Neurological Research of the University of Southern California in Los Angeles, and various assistants from his laboratory. For several years Portal has been a second home for Dr. Russell and his family and during the past summer some of his time was devoted to planning and essentially completing a house facing into the deep mouth of the canyon. It will provide space for him and his students during periodical visits, and make possible the bringing together of the large numbers of scorpions, spiders and snakes needed for his studies of venoms. The arachnological flavor of the region will be further enhanced when Dr. Russell is able to make it his permanent residence.

W.J.Gertsch

New Addresses

Jack BROOKHART , 7393 S. Tamarac, Englewood, Colorado 80110

William J. GLADNEY, Entomology Research Division, U. S. Department of Agriculture, P. O. Box 232, Kerrville, Texas 78028

Robin LEECH, Entomology Research Institute, Central Experimental Farm, Ottawa 3, Ontario

Bob MESIBOV, Low Information Sciences, 261 Madison Ave, New York, N. Y. 10016

Arachnologists of the Americas: New Listings

BEER, Robert E., Professor, Departments of Entomology, and Systematics and Ecology, University of Kansas, Lawrence, Kansas 66044. Current research: (1) Systematics, ecology and behavior of phytophagous mites. (2) Interaction of spiders and mites. (3) Evolution of feeding behavior in arachnids. Teaching of 2 acarology courses (upper division undergraduate), and graduate seminar courses in arachnology and araneology. Directing thesis research in arachnid systematics, ecology and behavior. Interest in spiders is recent, but expectation is that it will continue to grow.

BENNER, Bill, 1442 Durham Rd. Pennel, Penna. 19047. Student. Current interests: Effect of colored paint on the webs of orb spiders and Agelenopsis. Hyptiotes of the region.

DRUMMOND, R. O., Entomology Research Division, U. S. Department of Agriculture, P. O. Box 232, Kerrville, Texas 78028. Has published papers with Gladney on biology of lone star ticks, and other ticks.

HALLAN, Joel, P. O. Box 2647, Texas A & I, Kingsville, Texas 78363. Student. Current interest : Salticidae

MORETON, Ann, Route 2, Box 211, Powhatan, Virginia 23139. Writer-photographer. Interests: Photographing spiders in their natural habitats, spider webs and web construction. Television appearances; lecturing to science teachers; and exhibited her photographs at the Smithsonian Institute and American Museum of Natural History. Has a slide collection of more than 600 species, with duplicates prepared for Harvard and the American Museum.

PARKER, J. R., F.Z.S., Peare Tree House, The Green, Blennerhasset, CARLISLE, Cumberland, England. Secretary and Treasurer of British Arachnology since its inauguration in 1969. Directed courses of study at University of Newcastle upon Tyne and at British Field Study Centres at Nettlecombe Court, Kindrogan and Betws-y-Coed. Taken part in Nature Conservancy

surveys on National Nature Reserves based on the Universities of Swansea, Norwich and St. Andrews. Attended World Congress of Arachnology at Frankfurt in 1965 and 1968. Studied spiders for 40 years. Published papers on Linyphiidae, genera Maro, Centromerus and Minyrioloides.

The following have asked to be placed on the mailing list, but have not sent a biographic sketch or an account of current arachnid interests:

ENDERS, Frank, North Carolina Department of Mental Health, Box 7532, Raleigh, North Carolina 27602

FOX, William K., Department of Zoology, Arizona State University, Tempe, Arizona 85281

JACKSON, Robert R., Box 31, Pittsboro, North Carolina 27312

STOWE, Mark, 161 Grand View Avenue, Hamden, Connecticut 06514

THOMSON, J. R., 1221 21st Avenue E, Seattle, Washington 98102

WALLACE, H. K., Department of Zoology, University of Florida, Gainesville, Florida 32601

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Special thanks to the numerous contributors to this Number. The current project of each arachnology student is of special interest to all the rest of us. We hope to hear from as many for AA No. 6 and remember the cut-off date September 30. It is immediately after summer.

B.R.Vogel