

AMERICAN ARACHNOLOGY

Issue No. 3

November 1969

Acting Editor: E. R. Vogel, Texas Memorial Museum, 24th & Trinity,
Austin, Texas 78705

News Notes

Arachnologists of the Southwest have spent most of 1969 investigating the occurrence of Loxoseclus laeta in southern California.

British Arachnological Society: Current address: Honorary Secretary

J. R. Parker, F.Z.S., Peare Tree House, The Green, Blennerhasset, Carlisle, Cumb., England. Annual dues £1. Foreign members welcome.

C.I.D.A. Centre International de Documentation Arachnologique. The annual call for bibliography has come out. All North American Arachnologists should send their 1969 bibliography to their regional correspondents as quickly as possible. They should be forwarded to Paris in early December for inclusion in the 1969 Annuaire. [Anyone who does not know who his regional correspondent is may send his bibliography to B.R. Vogel, Texas Memorial Museum, 24th & Trinity, Austin, Texas 78705, C.I.D.A. correspondent for central U.S.]

Request for Information

We would like to include in A: A. No. 4 (to come out Spring 1970), a list of all persons teaching courses in arachnology or directing research in arachnology. We have a partial list, but would like to hear from everybody engaged in these activities, even if you think we should know about it already. This would be of enormous help to students for Fall 1970. Please send information to the acting editor, B. R. Vogel.

News about Arachnologists

G. ABALOS of the University of Cordoba, Argentina, is at the MCZ for a year on a Guggenheim fellowship, studying Latrodectus with Herb Levi and John McCrone.

John ANDERSON who was an instructor in the Department of Zoology, University of Florida last year, will take John McCrone's position there.

J.A.L. COOKE of Oxford has accepted the position of Associate Curator at the American Museum of Natural History, succeeding W.J. Gertsch who retired 2 years ago. Dr. Cooke has published many papers on Dysdera including behavior, taxonomy and morphology; a revision of the family Prodidomidae; and several faunal lists, among papers known to the editor. Dr. Cooke shows promise of being able to follow the giant footsteps of Dr. Gertsch in this important position. His interest in spiders is broad, his treatment of his subjects thorough, and best of all, he seems willing to help those of us who flounder. Dr. Cooke arrived at New York in late September and we all welcome his addition to the arachnologists of the continent.

Fred COYLE received his Ph.D. from MCZ this summer. His thesis was a study of the genus Antrodiaetus. Coyle has accepted a position at Western Carolina University at Cullowhee, North Carolina, in the heart of Antrodiaetus country.

Charles DONDALE received a National Research Council fellowship to study for a year with Roland Legendre in Montpellier, France. The Dondales with their 5 children went to France in April 1969. [See An American Arachnologist in France.]

Mary Louise Robinson EASON is interested in a position in spider research. She is interested in field as well as laboratory work, and says she can handle as many as 1000 caged spiders including feeding and records. Eason got her M.S. in life history spiders in 1967, and wants to work toward a Ph.D.

Bill EBERHARD took his Ph.D. exam in June and left for the University at Cali, Colombia in July. There he will organize a zoology department,

- Larry PINTER has been appointed director of the Santa Barbara, California, Museum of Natural History.

Recent Deaths

Harro BUCHLI of Strasbourg died of lung cancer. Herb Levi writes that "he had made numerous friends in this country on his visit and he will long be remembered by his trapdoor spider research and his linguistic abilities at the Paris and Frankfurt meetings translating French, German, and English, speaking some Dutch and Italian in between."

Wilton IVIE died on August 8th as a result of injuries received in an automobile accident. Willis Gertsch writes of him: "Wilton was one of the finest spider students ever produced in this country and largely responsible for the huge work of the Chamberlin and Ivie team. . . . The Wilton Ivie I knew was a gentle man with deep knowledge of the subject of deepest interest to me, our friends, the spiders. He talked my language and we both enjoyed each other's company. Wilton and I appeared on the scene at a time when almost nothing was being done on spiders and there

was a deep rivalry between institutions, compounded by antagonisms between arachnologists. In spite of innumerable difficulties, Wilton has produced a record that will last a long time and which mark him as one of our finest spider students." Those of us who were fortunate enough to know him did indeed know him as a gentle man and one with a subtle sense of humor. Many of us will remember him as an avid collector with remarkably sharp eyes. He seemed to be able to produce spiders out of nothing. His death is a personal loss to his friends and a great loss to American arachnology.

Pablo SAN MARTIN of Montevideo, Uruguay, died in March, 1969 of a heart attack. He had been the foremost specialist on scorpions on the Americas and liked to explore the Andes for scorpions. He visited the AMNH and MCZ in 1967 on a Guggenheim fellowship.

An American Arachnologist in France

When the National Research Council of Canada awarded me a Fellowship to work in France for a year, I wrote to Professeur Roland Legendre to ask if I might spend the time with him and his colleagues at the University of Montpellier. France stands second among the countries of Europe in number of working arachnologists, and is besides the birthplace and headquarters of the Centre International de Documentation Arachnologique. Prof. Legendre, besides being President of C.I.D.A., is a world authority on the arachnid nervous system, and lectures in animal ecology and behavior. It was a timely opportunity to extend my spider pheromone studies to the anatomical level and to familiarize myself with the European arachnofauna.

Montpellier is situated near the sea, on the Languedoc Plain. The principal natural habitats are the shore of the Mediterranean with its dunes and etangs (saline basins cut off from the sea), the garrigue (a rolling calcareous moorland characterized by scrubby, evergreen oaks, and aromatic shrubs like rosemary, thyme, and lavender), and the valleys of the Cevenne Mountains. Grapes, olives, figs, almonds, and apricots flourish here, the climate being far milder than that found in the same latitude of North America. This sunny land is called the Midi of France, a term that recurs frequently in species ranges in Simon's "Arachnides de France." A ride of an hour or less takes one to the 60 miles of sandy beaches, or to the Roman arena at Nimes (still in use -- for bullfights), or to any of several large gorges and underground caverns cut by rivers into the calcareous rock, or to a variety of ancient castles. A drive of a few hours takes one to the Riviera, the Alps, the Pyrenees, or the Rhone Valley. Paris is nine hours away,

The Mediterranean fauna presents intriguing finds. There is Butkus occitanus, the yellow scorpion that lives under stones on dry, pine-covered hillsides inland, and the little black Euscorpium flavicaudis of houses and garden walls. Neither species is very dangerous, but forceps are recommended for beginners. The winter-mature Amaurobius erberi Keyserling can be found in the garrigue. In my pitfall field a mysterious Nemesia has turned up, to the surprise of local arachnologists, with the characters of two "species" implicit in the denticles on its palpal coxae. Filistata insidiatrix (Forsk.) can be teased out of its retreat in stone walls. Oxyopes, Synema, pseudo-scorpions, Olios, and resplendent salticids fall on the beating tray from trees and shrubs. Montpellier's Jardin des Plantes yielded the original specimens of Uroctea durandi Walckenaer in Latreille, which is said to be, after Eresus, France's prettiest spider. Then there is always Philodromus rufus Walckenaer, now pursued with added vigor in the land from which it was first described. Predictably, perhaps, rufus is not a pristine unity in Europe any more than in North America. A collection from ornamental pines, taken in haste and with frequent over-the-shoulder glances for park police in the Bois de Vincennes at Paris, should when mature permit a definitive statement about the taxonomic status of this species in its home country.

On the more personal side there is the practical necessity of learning conversational French (Frenchmen, like Americans, believe everybody should speak their tongue), a countryside to see that is steeped in history, scientists of diverse disciplines to interact with, and the stimulus of a great university in a great city. My wife, children, and I feel that we are participating in a grand experiment, one that will benefit us for the rest of our lives.--C. D. Dondale

Invertebrate Zoology. Vol. 2. A. Kaestner. Translated and adapted by H. W. Levi and L. R. Levi. Interscience (Wiley), New York, 1968, vii + 472 p., illus. \$22.95.

The purpose of this volume, as stated by the authors, is to fill the need for a text and reference for courses involving mainly terrestrial noninsect arthropods. The portion on the Arachnida, under consideration here, comprises 7 chapters and 209 pages. One chapter is an introduction to the class, one chapter is devoted to each of the following, the Scorpiones (18 pages), Araneae (73 pages), Opiliones (19 pages) and Acari (44 pages) and the remaining 2 chapters to the 6 other orders (41 pages).

Invertebrate Zoology suffers generally from 2 major faults. One, considering that it is intended as a reference, is the superficiality of the content. There is more information on the Arachnida than in the text by Barnes but the volume treats essentially only a portion of a single phylum so the greater amount of information is to be expected. However, it falls far short of the depth and breadth of coverage of a Libbie Hyman. The second is the generally poor exposition which affects adversely the effectiveness of communication. Many expressions, such as "book lungs are the negative of the Limulus gills", are not only distracting but confusing. A third and lesser point is the use of different terms for the same structure. Examples are: anterior median eyes/direct eyes, main eyes; chela/pincer; opisthosoma/abdomen; pectine/comb; and posterior aorta/posterior artery. These terms are usually introduced by having one follow the other parenthetically but otherwise are used interchangeably in the text. Also scientific and common names of families and suborders are used interchangeably; it seems preferable to use the scientific name as a rule in a scholarly treatise such as this.

The orders are generally treated under 7 major headings: Anatomy, Reproduction (mating, egg deposition and behavior of the young), Development (embryology, development of young, physiology of molting and longevity), Relationships, Habits (bionomics, behavior and physiology), Classification (characterization of suborders and/or families, distribution and biological data) and References. I found this organization to be somewhat confusing when trying to locate specific data. The Anatomy and physiology portion of the Habits might have been combined since structure and function are interdependent and the biological notes under Classification might have been included under Habits since the same type of information is presented for other members of the group in question (e.g. the capture of prey by Araneus diadematus discussed in some detail under Classification).

The Anatomy sections are abundantly illustrated but the illustrations often do not help clarify the text and the organs or parts under consideration are often not labelled. An example, Fig. 11-8, referred to from page 146, is supposed to show a pair of trachea associated with a pair of tracheal apophyses, but only an obscure coiled structure (not labelled) is indicated in the illustration. In many instances there is little or no discussion of an organ in the text and the figure(s) cited is supposed to provide the basic information. Such is the case; for example, for the "subchelate" condition of the chelicerae (text, p. 86, Figs. 8-3, 8-5), the structure of the spider eye (text, p. 135, Fig. 11-6) and the structure of the male palpus of spiders (text, p. 149, Fig. 11-14). These figures are not adequate to understand the structure of the organs.

Some terms are used in an unusual manner, "ectodermal" in relation to nonembryonic organs (e.g. ectodermal male copulatory structures, p. 98) and "sternite" for a general ventral area of the abdomen (p. 86, line 15; p. 133).

Some terms are unusual in American Arachnology, "cecum", an abdominal diverticulum of the mesenteron; "article", a segment of the appendages (Barnes' use of the term article in some of the groups perhaps is based upon Millot); and "chelate finger", the movable finger of the chela. The combination of terms prosoma and abdomen is often used; it is more appropriate to use the combination of prosoma and opisthosoma (or cephalothorax and abdomen).

In relation to phylogeny, the authors state that outstanding arthropod specialists sometimes have opposing views and this demonstrates that a somewhat conservative view should be taken rather than taking sides in disputes. This course of action has resulted in abbreviated and uninspiring Relationships sections and thus one of the most interesting aspects of Arachnology is virtually ignored.

I have noticed several errors but the following 3 appear to be the most important. On page 67, reference is made to Fig. 7-5 as an example of a chelicerate with an "extensive" tracheal system; the figure is that of Limulus which has a "localized" tracheal system. On page 86, reference is made to Fig. 8-2 to illustrate a "subchelate" chelicera; the figure is that of a pseudoscorpion which has a chelate chelicera. On page 140, the brain is said to consist of supraesophageal and subesophageal ganglia; the latter of course is not part of the brain.

The major strong points of this volume is the inclusion of much new work, especially in physiology and ethology, the detailed accounts of some aspects of the biology of some of the organisms and the Reference sections which contain many important recent articles (up to the year 1967).

Invertebrate Zoology, in my opinion would be of use primarily as a supplementary source of information in a course on noninsect terrestrial arthropods.

Arachnologists of the Americas

These names, addresses and research interests are a supplement to the long list published in A.A. No. 2.

BUTCHER, Mary (Mrs.), University College, Oxford England. M.S., University of Wisconsin, 1968. Current research: Spider census of an English marsh with interest in yearly variation. M.S. thesis was a similar study in a Wisconsin marsh.

EASON, Ruth Louise Robinson, Entomology student. 93 Woodstock Estates, Columbia, Missouri, 65201. M.S., University of Arkansas, 1967. Published several papers on life history studies of wolf and lynx spiders of Arkansas. Plans to work toward Ph.D. in spider behavior.

EDGAR, Arlan L. (Professor), Biology Department, Alma College, Alma, Michigan, 48801. Current research: (1) taxonomy and biology of phalangids, (2) trophic transformation in the mayfly-phalangid-wolf spider food chain, (3) effects of car exhaust and carbon monoxide on litter invertebrates. Interested in getting together with other midwestern arachnologists.

EICKSTEDT, Vera Regina Dessimoni von, Biologist-Assistant, Instituto Butantan, Caixa Postal 65, S. Paulo, Brazil. Current Research: (1) redescription of the genera Ctenus and Phoneutria (Araneida, Ctenidae), (2) study in the nervous system of Tityus serrulatus (Scorpiones, Ruthidae), (3) studies of Ctenidae. Would like to exchange spiders and scorpions from anywhere in the new world.

POWLER, D., Assistant Professor, Department of Biology, Western Michigan University, Kalamazoo, Michigan, 49001. Ph.D., Purdue, 1965.

Current research: (1) writing a book in Environmental Physiology, (2) metabolic regulation, physiology and behavior, biological clocks, environmental physiology and neurosecretion of opilionids. Co-sponsored a symposium on "Neurosecretion of Invertebrates other than Insects, AAAS, Berkeley, California, 1965. Many publications on opilionids with Goodnight.

FUNK, Richard C., Assistant Professor; Division of Life Science, Eastern Illinois University, Charleston, Illinois. Initiating an arachnology course.

GERTSCH, Willis J., Retired, Portal Arizona. Formerly, Curator, American Museum of Natural History, New York. Current research: (1) taxonomic revision of the Ctenizidae of North America, (2) new ricinuleids from Mexican caves, (3) taxonomic revision of the scorpions of North America.

LICHT, Edwin L., Associate, University of Colorado Museum, Boulder, Colorado, 80302. Current research: (1) curating the spider collection and identifying arachnids for the public, (2) determining collections made by the Colorado Tunisian Expedition, (3) interest in Colorado and Wyoming spiders.

MAC MAHON, James A., Associate Professor, Department of Biology, University of Dayton, Dayton, Ohio, 45409. Current research: (1) community periodicity of old field spiders, spiders of southwestern Ohio, activity of several

species, selection of optimum environment by old field spiders, (2) energetics and metabolism of local spiders. Would like to have graduate students interested in spider populations.

MARTIN, Eliezer F., Curator of Arthropoda, Museu de Historia Natural de la Ciudad de Mexico, Nuevo Bosque de Chapultepec, Apartado Postal 18-845, Mexico 18, D.F. Current research: (1) a new monograph of the scorpions of Mexico (doctoral thesis), (2) formation of the national collection of arthropoda. Would like to have papers on Mexican Arthropoda and exchange material with other arachnologists.

MATTHIENEN, Fabio Aranha, Assistant-doctor of Zoology, Faculdade de Filosofia, Ciencias e Letras de Rio Claro, Caixa Postal 178, Rio Claro, Estado de Sao Paulo, Brasil. Current research: anatomy and biology of scorpions and spiders. Doctor's thesis completed: Morphological and biological aspects of scorpions.

MITCHELL, Robert W., Assistant Professor, Department of Biology, Texas Tech University, Lubbock, Texas, 79409. Current research: ecology of cave faunas in southwestern U.S. and northern Mexico. Establishing a course in arachnida.

MONTELEONE, Murial. Student, Department of Entomology, University of California at Riverside, Riverside, California. Current research: (Ph.D. thesis) revision of the agelenid genus Rualena. M.S. from California State at Long Beach on the effects of drugs on the web building behavior of Uloborus diversus.

REDDELL, James. Student, Department of Biology, Texas Tech University, Lubbock, Texas 79409. Current research: (1) systematics and distribution of the order Schizomida in North America and the West Indies, (2) systematics and distribution of ricinuleids, uropygids and amblypigids, (3) biospelcology. Assisting Mitchell in initiating a course in Arachnology.

RIECHERT, Susan E., Arboretum Zoologist, Zoology Department, University of Wisconsin, Madison, Wisconsin 53706. Current research: (1) taxonomic revision of the genus Singa (Araneae, Araneidae), (2) distribution of spiders on Wisconsin prairies, (3) revision of a check list of Wisconsin spiders.

The following arachnologists are on the mailing list, but have not submitted an account of current interests.

BIASI, Persio de, Instituto Butantan, Seccao do Artropods Peconhentos, Caixa Postal, 65, Sao Paulo, SP, Brazil.

OWEN, Ann. Student, Department of Zoology, University of Wisconsin, Madison, Wisconsin 53706.

REEDER, William G., Professor, Zoology Department, University of Wisconsin, Madison, Wisconsin 53706.

TRIGG, John, Department of Biology, University of Dayton, Dayton, Ohio 45409.