





*ANNUAL REPORT*  
OF THE DIRECTOR  
OF THE  
MUSEUM OF COMPARATIVE  
ZOOLOGY  
AT HARVARD COLLEGE  
TO THE  
PROVOST OF HARVARD UNIVERSITY  
FOR  
1949—1950

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MEMOIRS (quarto) 1864–1938. Publication was terminated with Vol. 55.

JOHNSONIA (quarto) 1942 — A publication of the Department of Mollusks.  
Vol. 2, no. 29 is current.

OCCASIONAL PAPERS OF THE DEPARTMENT OF MOLLUSKS (octavo) 1945 —  
Vol. 1, no. 15 is current.

PROCEEDINGS OF THE NEW ENGLAND ZOÖLOGICAL CLUB (octavo) 1899–1948.  
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These publications issued at irregular intervals in numbers which may  
be purchased separately. Prices and lists may be obtained on application  
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Massachusetts.

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# *Museum of Comparative Zoölogy*

TO THE PROVOST OF THE UNIVERSITY:

SIR, — Since its founding the Museum has had close relations with Cuban zoölogists, centered at the University of Habana — relations first established between Felipe Poey and Louis Agassiz, continued under Alexander Agassiz and in recent decades further strengthened by warm friendship between Dr. Barbour and Don Carlos de la Torre, dean of Cuban naturalists. It was with deep regret that we heard last spring of the death, at the age of 92, of Don Carlos de la Torre — an outstanding personality, a leader in his country's governmental and political affairs and, most especially, a great naturalist whom Harvard had been proud to honor by the bestowal of an honorary degree. We were gratified to receive from his family, by his direction, a last and very substantial manifestation of his affection for our Museum — the gift of a full half of his magnificent collection of mollusks, the other half going, of course, to the Museo Poey of the University of Habana.

## *Staff*

June, 1950, witnessed the nominal retirement of the two senior members of our staff: Dr. Henry B. Bigelow, Alexander Agassiz Professor of Zoölogy and Research Oceanographer, and Miss Elizabeth B. Bryant, Assistant Curator of Insects. Were they retiring in actuality, it would be fitting to give here a final accounting of the great services they have done the Museum over the past half-century and to express our deep gratitude to them. But there is no retirement except in name; both are continuing with us, just as before, working with unflagging interest at their customary research activities; and it would be highly inappropriate to present at this time a partial summary of research careers which are far from completed.

Dr. Theodore E. White has been for several years on leave of absence in government employ, investigating the paleontology of federal dam sites in the west. Since this project is a continuing one, he has resigned his post as Assistant Curator of Vertebrate Paleontology. A member of the Museum staff since 1932, Dr. White had made many contributions of value to our collections and to our scientific work; it is hoped

that he will retain his interest in the Museum in the position of Associate in Vertebrate Paleontology, to which he has been appointed.

Some appointments for the coming year may be noted. Dr. Harry B. Whittington, having become a permanent member of the University teaching staff, has been appointed Curator of Invertebrate Paleontology. Dr. Ernest E. Williams, Instructor in Biology, has been given the title of Research Associate in Vertebrate Paleontology.

Mr. C. O'D. Iselin, having resigned as Director of the Woods Hole Oceanographic Institution, on July 1, 1950, returns to Cambridge from leave of absence to resume his research and teaching.

Dr. Robert R. Shrock of the Massachusetts Institute of Technology has for many years done most of his research here because of our collections and library facilities. We are happy to have him as a member of our research group in name as in fact through his appointment as Associate in Invertebrate Paleontology.

### *Research*

Dr. Lyman has continued his work on the difficult problems connected with hibernation in mammals. Further work with Dr. Paul Chatfield shows that the cortex is not involved in the initial stages of the waking process and points to lower brain centers as the mediators. Cooperative studies related to hibernation are being made with Dr. A. B. Hastings on the carbon dioxide content of the blood, with Dr. H. W. Dean on adrenal and thyroid histochemistry and with Dr. E. H. Leduc on the liver and digestive tract. Still further studies concern activities before entering hibernation and the effect of hormones on tissue growth during hibernation.

Mr. Peters finished the research necessary for the completion of volume 7 of his "Check-list of Birds of the World"; it is expected that this volume will be published during the coming winter under Museum auspices. Mr. Greenway continued work on extinct birds. Mr. Griscom, in addition to continued work on New England avian populations, has been at work on a volume on the birds of the Cape Cod region, and published as part of our Bulletin series a discussion of the Mexican avian fauna.

Mr. Loveridge has devoted most of his research time to the study of Nyasaland reptiles, but has in addition written a report on a collection of reptiles and amphibians from Tanganyika Territory. Mr. Shreve has described a new Honduran snake.

Dr. Bigelow and Mr. Schroeder have virtually completed the major



task of preparing volume 2 of the series of monographs, "Fishes of the Western North Atlantic," this including the batoid and chimaeroid fishes. In addition, a substantial start has been made on a revision of the "Gulf of Maine Fishes," originally published in 1925. Some progress was made by Mr. Schroeder on reports dealing with the offshore winter fishery of New England and the bottom fish fauna of the Atlantic slope.

In the mollusk department, Mr. Clench, Miss Turner and Dr. Champion have continued work on a variety of projects, and Miss Turner has completed a study of the Pholadidae. Dr. Bequaert has made further studies of African mollusks.

In the department of insects, Dr. Bequaert made much progress with his revision of the American Hippoboscidae. Dr. Darlington has continued work on the carabid beetles of New Guinea and the Philippines; Miss Bryant has worked on the spider fauna of Jamaica, and Curator Emeritus Banks has visited the Museum frequently in pursuit of his research interests. Since his return from the Philippines, Dr. Brues has been steadily engaged in the revision of the "Classification of Insects" by Brues and Melander, originally published by the Museum in 1932. This revised edition, which we hope will be released in the fall of 1951, will contain a new section on fossil insects by Dr. Carpenter.

Dr. Carpenter has continued his studies on paleozoic insects, mainly dealing with Permian material from Kansas and Oklahoma. In addition he has completed a revision of the Palaeodictyoptera of Commeny, France, and prepared manuscripts on recent Neuroptera and Mecoptera from the Philippines, China, Belgian Congo and Mexico. Miss Dunn has continued work on the catalog of fossil insects and has started a similar catalog of the Neuroptera and Mecoptera of the world.

Dr. Whittington has continued his studies on trilobites, particularly silicified material from Virginia, and Mr. Schevill has worked further on cephalopods.

In the field of vertebrate paleontology, Dr. Edinger visited various American museums during the winter, collecting data for her projected new work on fossil "brains." This spring a fellowship enabled her to leave for a three-months stay in Europe to study endocasts in the museums of France, England, Switzerland, Western Germany and Holland. The writer's research time was mainly devoted to the study of an interesting although fragmentary series of fossils from the

Permian and late Pennsylvanian of the Pittsburgh-West Virginia region, on loan from the Carnegie Museum. Mr. F. R. Olsen has been engaged in a statistical study of equid limb bones.

Mr. Stetson has finished the laboratory work on sedimentary materials previously collected from the Gulf of Mexico, and at Woods Hole has continued the program for investigating sediment transport in Vineyard and Nantucket Sounds.

In addition to the researches of Museum officers, our facilities and collections were utilized for the research of a large number of graduate students working under staff members.

#### *Academic and Other Activities*

Various members of the staff continued teaching duties. Dr. Carpenter conducted two courses in entomology; the writer offered courses in comparative anatomy and in evolution; Dr. Whittington taught invertebrate paleontology and stratigraphy; Mr. Stetson gave a course in sedimentation. Graduate students to the number of a score or more undertook research or advanced study under the direction of staff members. Dr. Bigelow gave, for the final time, his course in invertebrate zoölogy; it is to be regretted that future students will not have the benefit of Dr. Bigelow's extensive knowledge of this field and his brilliant presentation.

As always, numerous scientific visitors from other institutions were welcome guests. In addition to visitors for brief periods, we may note more extended visits from Mr. Clifford Pope of the Chicago Natural History Museum and Dr. Edward H. Taylor of the University of Kansas for the study of reptiles and amphibians; Mr. C. A. Frost of Framingham and Mrs. Doris H. Blake of the U. S. National Museum for the study of Coleoptera; Dr. A. M. Chickering of Albion College for further study of the spiders of Panama.

Many outside activities, noted in earlier reports, were continued by staff members. Mr. Griscom continued as president of the Boston Society of Natural History but resigned during the year from the chairmanship of the board directing the Massachusetts Division of Fisheries and Game; the writer is currently president of the American Society of Zoölogists. Dr. Bigelow resigned as president of the Woods Hole Oceanographic Institution to become Chairman of the Board.

Dr. Tilly Edinger was doubly honored this past spring: first, by the award to her of the National Crusade Fellowship of the American Association of University Women to enable her to travel abroad in

furtherance of her work in paleoneurology; secondly, by the bestowal on her of the honorary degree of Doctor of Science by Wellesley College at the inauguration of President Clapp. This was but the second time that the college had given an honorary degree in science.

### *Library*

Despite the inadequate funds available in the library budget, Mr. Work reports progress on many projects undertaken to increase the efficiency and usefulness of the library. As a major collection of books in our field, the library is increasingly called upon for loans by other libraries; extra-mural loans increased by some 25% last year and loans to other Harvard libraries nearly doubled. Mrs. Bartlett continued as cataloguer and Mr. Cook continued as reference librarian.

Sales from the stock of the *Proceedings of the New England Zoölogical Club*, donated by Mr. Batchelder, have enabled us to fill in a considerable number of gaps in our serial holdings. The printing and circulation of a price list has been a stimulus to sales.

As has been the case for a number of years, the library has been aided by financial support from Mr. George R. Agassiz. A notable improvement during the year was the re-flooring of two of our rooms, rendered possible by a substantial gift from Mrs. George R. Agassiz. These rooms had previously been open galleries; when, some years ago, it was planned to utilize them for book stacks, it was found that the floored-over areas were too weak to carry the weight.

### *Publications*

In recent years an average of about 1000 pages of Bulletin articles has been issued annually. For the year under report we have reached a "high" of nearly 1500 pages, due to the fact that there were published, in addition to the usual shorter articles, two complete volumes of unusually comprehensive nature — Palmer's work on "Maine Birds" and Creighton's on the "Ants of North America." It is gratifying that we were able to include in our publications these substantial studies, appropriate to the interests of the Museum, despite the fact that neither author is a member of our staff.

In addition to the Bulletin the Museum has supported the publication in *Psyche* of a considerable number of entomological papers. The department of mollusks has published two numbers of *Johnsonia* and one of its *Occasional Papers*.

As for many years, Mr. George R. Agassiz has contributed generously to the support of the Bulletin.

### *Collections*

All departments report additions of value to their collections, mainly by gift or exchange. A full list of donors is given at the end of this report. In addition to herpetological specimens, Mr. Loveridge collected numerous mammals, birds and shells of value during his Nyasaland trip. The department of herpetology received a considerable collection of reptiles and amphibians of Tanganyika Territory from C. J. P. Ionidea. A large number of fishes were collected for us by Colonel John K. Howard and Mr. Frank Mather III during an expedition to the Gulf of Honduras under the auspices of the Institution of Andean Research, and various Atlantic fishes were received as the result of recent trips undertaken by Mr. Schroeder through the good offices of the Woods Hole Oceanographic Institution and the U. S. Fish and Wildlife Service.

Among important additions to the insect department collections may be noted a series of fleas of western North America presented by Dr. C. A. Hubbard; a large series of ants of the group *Dacetoniini*, including his types, from Dr. W. L. Brown; numerous hippoboscids received from the Escuela Nacional de Ciencias, Mexico, through Mrs. Anita Hoffmann Sandovel; a large suite of Philippine insects collected in 1949 by Dr. Brues; the remaining portion of Lepidoptera of the late E. D. Eddy bequeathed to the Museum some years ago; and a large series of miscellaneous insects collected in 1949 by Dr. F. G. Werner and Dr. W. L. Nutting. The mollusk department received a small but exceedingly valuable collection of land shells from Dr. Allan F. Archer.

Among purchases may be noted the Finzi collection of 12,000 palaeartic ants, which goes far toward filling a major gap in our insect collections.

Most notable of additions to the collections was the de la Torre collection of Cuban mollusks mentioned above. In April Mr. Clench and Miss Turner journeyed to Habana, where, with Dr. C. G. Aguayo of the University of Habana, they undertook the major task of sorting out some 12,000 lots of shells for division between the two institutions. We are deeply indebted to Dr. and Mrs. Aguayo and Dr. and Mrs. Gerardo Canet for their hospitality to Mr. Clench and Miss Turner; to Dr. Francisco de la Carrera for his kindness in extending aid and

use of the facilities of the University; to Dr. Luis Howell Rivero for assistance in the shipment of the materials as well as in many other ways; to Nicolás Domínquez, José Castellanos and Miss Mar Juarez for writing labels and packing; to Señora de Rosales, daughter of Dr. de la Torre, for many kindnesses; and, especially, to Dr. Aguayo for his aid in facilitating the work in many ways.

Various departments in their reports note curatorial work toward the improvement of the condition of the collections. The building of a new case enabled the bird department to better care for representatives of several families; the department further made good progress in the cataloging of the collections. Mr. Shreve, as ever, rendered valuable aid in the department of herpetology in curatorial work and identification of material. Mrs. Dick has continued with the cataloging of the fish collections, now almost 80% completed. In the department of insects, there has for years been an increasingly serious crowding due to lack of cases. This has been to some degree relieved by the construction of a new case for Lepidoptera, rendered possible by gifts from Mrs. George R. Agassiz and Dr. George C. Shattuck. Dr. Champion has continued his valuable work on the collection of North American land shells and numerous advances have been made with other mollusk collections. In the department of marine invertebrates considerable curatorial work was done on the crustaceans and the alcoholic collection of echinoderms.

### *Expeditions and Travel*

The field work of the department of vertebrate paleontology was greatly aided through the gift of a field car by Mrs. George R. Agassiz. This has already seen active service in vertebrate work in Florida, Texas and the Gaspé Peninsula, and, although primarily for vertebrate work, has been available for several short field trips by other departments. In Florida Mr. Stanley Olsen did further work at Thomas Farm and neighboring localities and was joined by the writer for a trip to the phosphate region. In July, 1949, the writer, accompanied by Mr. David C. Roberts, explored various localities in the Texas redbeds. In April, 1950, Mr. and Mrs. Olsen, Miss Wright, R. H. Bruno and the writer did further work in the lowest Permian deposits there and collected material from higher redbeds in Archer and Baylor Counties. I also made a short collecting trip to the "Scaumenac" Devonian fish beds of eastern Canada in the autumn of

1949 and took part in a field conference of vertebrate paleontologists in New Mexico in June, 1950.

Miss Deichmann left in May for Europe, where she planned to study collections in various museums, and Miss Edinger, as noted, also left at that time for a study of European endocasts.

Mr. Schroeder took part in several trips during the year: in the research vessel *Caryn* of the Woods Hole Oceanographic Institution to further studies of the bottom fauna off southern New England; in the dragger *Eugene H.* to obtain data on the offshore winter fishery; and on the *Albatross III*, between Georges Bank and the Hudson Canyon, to study the spring inshore migration of certain fishes.

Brief excursions were, in addition, made by members of several departments for collecting purposes. Mr. and Mrs. L. A. Burry of Pompano Beach, Florida, deserve our thanks for their aid to Mr. Clench and Miss Turner on a collecting trip incidental to their Cuban journey.

### *Acknowledgements*

At a number of places in this report there has been noted the fact that our work has been aided in a variety of ways by Mr. George R. Agassiz or Mrs. Agassiz. I wish to express the very great debt of gratitude which the Museum owes them for their long-continued interest and support. Although not himself a student of natural history, Mr. Agassiz has throughout his life maintained a strong interest not only in the material welfare of this institution, founded and developed by his forebears, but also in the maintenance of the research standards which they set. Mrs. Agassiz as well has helped us on numerous occasions. Personally I am deeply grateful for their understanding and support of my ambition that the future of the Museum as a center of scientific work shall be no less brilliant than its past.

We are again indebted to a number of volunteers for their work in furthering the Museum's research and curatorial tasks. They include:

*Entomology:* W. L. Brown, K. A. Christiansen, F. G. Werner

*Marine Invertebrates:* E. L. Bousfield

*Mollusks:* Herbert Athearn, Arthur Soper

In addition to gifts mentioned earlier, our thanks are extended to the following for the donation of specimens to the collections:

*Birds:* O. L. Austin Jr., W. C. Forbes, R. S. Palmer

*Entomology:* Mr. and Mrs. P. H. Allen, C. H. Andrews, P. Anduze, N. Banks, M. Barro, J. deBeaumont, C. Betten, S. W. Bromley, M. Carrera, H. Cleaves, E. J.

Coher, A. C. Cole, K. Cooper, L. Croizat, D. Denning, R. P. Dow, C. Drake, R. R. Dreisbach, R. B. Eads, W. Eichler, H. E. Evans, M. Fassati, R. S. Freeman, Mrs. H. E. Frizzell, C. A. Frost, P. E. Glover, D. E. Hardy, E. W. Jameson, E. L. Kessel, J. Klapperich, G. M. Kohls, K. Kult, R. Latham, H. B. Leech, C. B. Lewis, C. H. Martin, R. Matheson, G. A. Mavromoustakis, R. Meinertzhagen, J. E. Murphy, O. Park, C. T. Parsons, C. B. Philip, W. B. Quay, J. A. Ramos, A. Reichensperger, C. L. Remington, F. H. Rindge, H. A. Scullen, G. E. Shewell, I. B. Tarshis, J. Theodorides, G. B. Thompson, J. M. Valentine, J. van der Vecht, F. van Emden, N. Weber, M. W. Wing, P. Wygodzinsky

*Fishes*: J. J. Miggins, J. L. B. Smith

*Invertebrate Fossils*: Mr. and Mrs. F. O. Thompson, A. O. Woodford

*Mammals*: O. L. Austin Jr.

*Marine Invertebrates*: Miss K. M. Anderson, Mrs. R. G. Beck, A. J. Boucot, Miss M. Currier, P. Dreyfus, W. D. Hartman, H. J. Humm, L. Hutchins, W. C. Kunch, C. B. Lewis, G. G. Lower, F. J. Madsen, W. Miggins, N. J. Plomley, H. K. Porter, L. Rossi, E. Tortonese

*Reptiles and Amphibians*: T. C. Barr, O. Barton, S. C. Bishop, S. C. Bruner, G. S. Cansdale, A. Curtis, C. J. Goin, H. B. Herrington, Miss I. Hoopes, K. N. Hovde, L. Lutz, G. Marcuzzi, R. H. McCauley Jr., R. E. Shultes, R. Stafford, F. Sweeney, F. G. Werner, C. S. Wetterer.

Respectfully submitted,

ALFRED S. ROMER, *Director*

### *Publications for the Year 1949-1950*

The following have been printed under Museum auspices during the year from July 1, 1949 to June 30, 1950.

#### *Bulletin*

##### Vol. 102

Maine Birds. By R. S. Palmer. pp. 656, 3 figs., 2 tables. July, 1949.

##### Vol. 103

No. 3. The Salticid Spiders of Jamaica. By E. B. Bryant. pp. 161-210, 3 pls. February, 1950.

No. 4. The Spider Genus *Tmarus* (Thomisidae) in Panama. By A. M. Chickering. pp. 211-256, 4 pls. April, 1950.

No. 5. Baltic Amber Spiders in the M.C.Z. By Alexander Petrunkevitch. pp. 257-338, 27 pls. May, 1950.

No. 6. Distribution and Origin of the Birds of Mexico. By Ludlow Griscom. pp. 339-382. June, 1950.

No. 7. New and Little Known Cartilaginous Fishes from the Atlantic. By H. B. Bigelow and W. C. Schroeder. pp. 383-408, 7 pls. June, 1950.

##### Vol. 104

The Ants of North America. By W. S. Creighton. pp. 585, 57 pls. April, 1950.

*Johnsonia*

Vol. 2, no. 27. January, 1950.

The Genus *Cyclostrema* in the Western Atlantic. By R. T. Abbott. pp. 193-200, pls. 86-88.

Vol. 2, no. 28. January, 1950.

The Genera *Xancus* and *Vasum* in the Western Atlantic. By R. T. Abbott. pp. 201-220, pls. 89-95.

*Occasional Papers on Mollusks*

Vol. 1, no. 15. June, 1950.

The Western Atlantic Marine Mollusks Described by C. B. Adams. By W. J. Clench and R. D. Turner. pp. 233-404, pls. 28-29.

*Psyche*

Vol. 56, no. 2. June, 1949.

On a Small Collection of Fulgoroidea (Homoptera) from the Virgin Islands. By R. G. Fennah. pp. 51-65, 1 pl.

A New Genus and Species of Theridiidae from Eastern Texas (Araneae). By Elizabeth B. Bryant. pp. 66-69, 1 fig.

*Epicauta diversicornis* and its Allies in the Neotropical Region (Coleop., Meloidae). By F. G. Werner. pp. 74-80, 1 pl.

A New American Amblyopone, with Notes on the Genus (Hymenoptera: Formicidae). By W. L. Bown, Jr. pp. 81-88, 1 fig.

Vol. 56, no. 3. September, 1949.

Additions to *Epicauta*, with New Synonymy and a Change of Names (Coleoptera: Meloidae). By F. G. Werner. pp. 93-111, 3 figs.

A New *Gruimenopon* (Mallophaga-Menoponidae). By R. L. Edwards. pp. 116-117.

Vol. 56, no. 4. December, 1949.

New Species of Mecoptera from Northwest China. By F. Y. Cheng. pp. 139-173, 7 pls.

*Acanthepeira venusta* (Banks) (Araneae). By Elizabeth B. Bryant. pp. 175-179, 5 figs.

Further Description of *Polyplax alaskensis* Ewing (Anoplura). By W. B. Quay. pp. 180-183, 2 figs.

Some American Saldidae (Hemiptera). By C. J. Drake. pp. 187-193, 1 pl.

Vol. 57, no. 1. March, 1950.

A New Genus of Flea Beetles from the East Indies. By Doris H. Blake. pp. 10-25, 2 pls.

The Salagubong Gong, A Filipino Insect Toy. By C. T. Brues. pp. 26-28, 1 fig.

*Publications by the Museum Staff*

BENT, A. C.

Life Histories of North American Thrushes, Kinglets, and their Allies. Bull. U. S. Nat. Mus., no. 196, pp. i-viii + 454, 51 pls. July, 1949.



**BEQUAERT, J. C.**

Additional Records of Bird Ticks for the Northeastern United States. *Bull. Brooklyn Ent. Soc.*, 43, no. 5, p. 156 (1948). January, 1949.

The Vespidae of Venezuela. *Bol. Entom. Venezolana*, 7, nos. 3-4, pp. 123-240. (December, 1948). August, 1949.

New Records of North American Nemestrinidae; with description of a New *Hirmoneura* from Mexico. *Bull. Brooklyn Ent. Soc.*, 45, no. 1, pp. 1-2. February, 1950.

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