
INSTITUTIONS

Herpetological Review, 2002, 33(4), 253–255.
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Herpetology at the Yale Peabody Museum of Natural History

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Systematic collecting at Yale began in 1802 with the appointment of Benjamin Silliman, who acquired a large mineral collection for teaching purposes. This teaching collection became famous and helped attract many undergraduates to Yale, including Othniel Charles Marsh (Fig. 1), whose education was funded by his uncle, George Peabody. In 1866, near the end of Mr. Peabody's life, he donated funds to the University for the construction of a Natural

History Museum (Fig. 2). In the same year, Marsh was appointed as the first Professor of Paleontology in the U.S. (second in the world). The Yale Peabody Museum opened to the public in 1876. Though the original museum had no formal herpetology collection, it did have a vertebrate paleontology collection and a collection of representative vertebrate osteology specimens for comparative use. Addison Emery Verrill (Fig. 3) was named the first Curator of Zoology in 1866. Although his primary interest was invertebrate zoology, he did collect specimens and described species in almost every major group of animals. Over time, the zoology collections grew and expanded into wet collections and study skins, in addition to osteological specimens. Ultimately the Division of Zoology was divided into the divisions of Invertebrate Zoology, Entomology and Vertebrate Zoology, with subdivisions of the latter into Ichthyology, Ornithology, Mammalogy and Herpetology.

History.—The oldest cataloged reptile in the collection is a *Phrynosoma cornutum* (YPM 00625) collected in Texas during June 1860 by “A. C.” (no other data available on the collector). The oldest amphibian was collected 21 September 1861 and is a *Rana sylvatica* (YPM 03145) collected in Westville, Connecticut by Henry Shaler Williams. Williams contributed specimens to nearly every collection at the museum and was named Silliman Professor of Geology in 1894. He also was a founder of the national organization of Sigma Xi.



FIG. 1. Othniel Charles Marsh (1831–1899), the founder of the Yale Peabody Museum of Natural History. Courtesy of the Peabody Museum of Natural History, Yale University.



FIG. 2. The Peabody Museum of Natural History entrance off Whitney Avenue. Copyright © Peabody Museum of Natural History, Yale University.

The earliest specimens in the collection include those collected by Addison Emery Verrill from the island of Dominica in the late 1890's. The early part of the 20th century saw a few additions to the collection through collecting expeditions sponsored by the museum. North American collections were enhanced significantly by the work of Marshall B. Bishop and Stanley C. Ball, both of whom contributed significant collections from Florida, Connecticut, and Africa. In fact, the *Scaphiopus holbrookii* specimens collected in



FIG. 3. Addison Emery Verrill (1839–1926) collected many of the earlier Caribbean specimens and was the first Curator of Zoology at the museum. Courtesy of the Peabody Museum of Natural History, Yale University.

Connecticut by Ball during preparation of his monograph on the species represent populations that are now thought to be extirpated (Klemens 1993). In the 1950s, Willard D. Hartman collected caecilians from the Seychelles and also several important specimens from India and Papua New Guinea. However, until the 1960s herpetology held no official status in the museum.

The Division of Vertebrate Zoology was officially formed in the 1950s. Thomas Uzzell Jr. was appointed the first Assistant Curator of Herpetology in 1967. His work focused on sexuality and evolutionary biology of salamanders and lizards. Under his guidance, the herpetology collection grew during the late 1960s and 1970's. It was also under his guidance that the collection was completely re-cataloged, utilizing new tag series.

After Uzzell left in 1972, herpetological leadership was largely filled by other staff within the Vertebrate Zoology division, including Curatorial Affiliates. During the mid-1970s and 1980s some specimen collection continued, though not on any large scale.

Computerization of the collection catalogues at Yale Peabody Museum of Natural History began in 1991 under the supervision of Lawrence Gall. The collections of the Vertebrate Zoology Division were among the first to be completely entered into the computer database. In 1993 the collections became searchable via the Internet, which continues today to be a valuable resource for searching the collections.

In 1995, Jacques A. Gauthier joined the museum staff as Curator of Vertebrate Paleontology and Acting Curator of Vertebrate Zoology. The collections began to grow, especially in terms of osteological specimens. Additionally, field expeditions were again organized including trips to Kenya and China led by James D. Lazell, and recently a joint venture with University of Kansas Natural History Museum and Biodiversity Research Center to El Salvador.

In June 1999, Gregory J. Watkins-Colwell joined the staff as a Curatorial Affiliate (a five-year appointment). David Skelly was named Assistant Curator in early 2000. In June 2001, Watkins-Colwell became Museum Assistant for Vertebrate Zoology with

primary responsibilities being within herpetology and ichthyology. Currently the Curatorial Affiliates within Herpetology, in addition to Watkins-Colwell, are Theodora Pinou, James D. Lazell, and George D. Whitney.

Collections.—The herpetological collections at the Yale Peabody Museum of Natural History vary widely in geographic and taxonomic coverage (Table 1). In general, most of the approximately 19,000 specimens in the collection are North American in origin (46% of herpetological collection) with the majority of those being from Connecticut, Florida and Texas (15%, 14.7%, and 5% of all herpetological specimens respectively). The majority of non-United States localities are from Africa (29%). Among African sites, Egypt is the most represented with 2497 specimens collected by C. Maser, among others, in the early 1960s, including a large series numbering more than 1000 *Chalcides ocellatus*. Cameroon and Dahomey (now Benin) are also well represented by 935 (5.5% of the herpetological collection) cataloged specimens collected by Charles D. Miller in the 1970s, with roughly twice this number remaining to be cataloged. Asia accounts for 9% of the collection, with most of those specimens coming from China and Hong Kong (796 specimens collected by expeditions of J. D. Lazell, 1997–present). Caribbean specimens represent 8% of the collection, with the largest portion of them being from Haiti.

Throughout his time working with the collection, Verrill added 132 specimens; mostly from the U.S. (especially Connecticut), but also from Dominica and Venezuela. These specimens include an adult *Iguana delicatissima* collected in 1906 from Dominica. Twenty specimens in the collection were obtained by O. C. Marsh, mostly from Wyoming and Texas. Additionally, G. Baur contributed 15 specimens, mostly turtle skeletons.

The collection also includes specimens from some well-known collectors. Many of the specimens were undoubtedly received via exchange. One specimen of *Heloderma horridum* (YPM 10618; skeleton) was collected from Colima State, Mexico by J. Xantus. Raymond Ditmars collected a *Clemmys muhlenbergii* (YPM 10709; skeleton; received as a gift from Dr. R. W. Shufeldt of Washington, DC in the 1930s) from New York. A single *Alligator mississippiensis* (YPM 6528) was collected by Pope (presumably

TABLE 1. Approximate percentages of the total herpetological collection collected from each geographic region. Percentages are rounded to the next highest whole number. Total number of specimens is approximately 19,000.

Geographic Area	Approximate Percentage of Total Collection
North America	46%
Africa	29%
Asia	9%
Caribbean	8%
Europe	2%
South America	2%
Central America	2%
Australia	1%
Unknown Locality	1%

Clifford) in Miami, Florida and received by the museum in 1931. Thomas Barbour collected a *Cyclura cornuta* (YPM 10729; skeleton) which was received as a gift from him in 1934. A mounted skeleton of *Sphenodon punctatus* (YPM 723) was collected by J. Haast. Two specimens of *Chirindia rondoensis* (YPM 6916 and 6917) were collected by C. J. Ionides from Tanzania. Lorenz Müller collected some 50 specimens, mostly from Germany and Yugoslavia.

The collection includes 101 type specimens representing nine taxa. Taxa represented by type specimens are *Amphisbaena gonavensis* (YPM 3384 holotype, YPM 3386–3389 paratypes, YPM 3385 allotype), *Anolis whitemani* (YPM 3641 paratype), *Cophixalus pipilans* (YPM 5281–5283 paratypes), *Eleutherodactylus leonci* (YPM 1167 holotype; YPM 1188–1201 paratypes), *Eleutherodactylus furcyensis* (YPM 670–679 paratypes), *Eleutherodactylus heminota* (YPM 704–760 paratypes), *Nyctimystes trachydermis* (YPM 5435–5436 paratypes), *Opiputeer xestus* (YPM 6575, 6576 paratypes), and *Typhlops gonavensis* (YPM 3003 holotype; YPM 3004 paratype, exchanged to MCZ).

Recent Improvements.—On 26 October 2001 the Environmental Science Center was dedicated on the Yale campus. This three-story 100,000 square-foot building will serve as a center for museum-based research. In addition to housing research laboratories and lecture rooms for courses in biodiversity and related fields, the multi-million dollar building also houses the museum's collections in Vertebrate Zoology, Invertebrate Zoology, Invertebrate Paleontology, Paleobotany, Botany, and Entomology. Sixty percent of the building is occupied by collections, collection staff, and associated laboratories. Specimens will be maintained in state-of-the-art, environmentally controlled rooms with multiple security measures in place and anti-pest protocols established.

With the opening of new lab and collection space, the herpetology staff is again planning research projects and collecting expeditions. The Division is also working with various state agencies on long-term projects. The specimens resulting from the Maine Amphibian and Reptile Atlas Project, and cited in Hunter et al. (1999) have recently been deposited in the collection. Additionally, all specimens resulting from the 15-year Connecticut Amphibian Monitoring Project will be deposited at the Peabody Museum. Other future projects include faunal surveys of more exotic localities, and increased sampling (including genetic) of lesser-known localities within New England.

LITERATURE CITED

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