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AMPHIBIANS AND REPTILES OF THE SESSÉ & MOCIÑO EXPEDITION: A LOST CHAPTER IN MEXICAN HERPETOLOGY

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ABSTRACT

The botanical and zoological illustrations prepared during the Royal Botanical Expedition to New Spain (the Sessé and Mociño Expedition, 1788–1803) are in the collection of the Hunt Institute for Botanical Documentation, Carnegie-Mellon University. There are seven plates of amphibians and reptiles, six of them identifiable as Mexican species: *Ambystoma* sp., *Barisia imbricata*, *Phrynosoma* sp., *Phrynosoma asio*, *Ctenosaura hemilopha*, *Pseudoeurycea bellii*. Although these illustrations reached Europe before all but one of the species represented was known to science, none was described by contemporary herpetologists.

HERPETOLOGY OF THE SESSÉ & MOCIÑO EXPEDITION

The Royal Botanical Expedition to New Spain (better known as the Sessé & Mociño Expedition) was authorized by King Carlos III in 1786,

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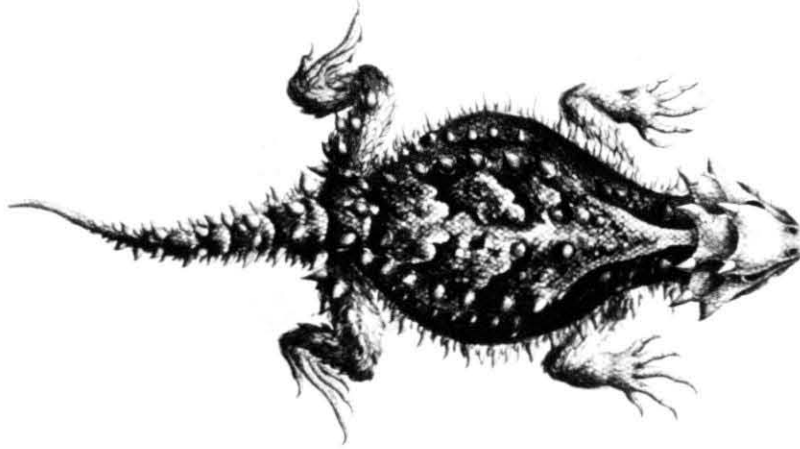


Fig. 1.—*Phrynosoma asio* (catalogue number 1258).

and began work in México in 1788. Credit for conceiving the idea of a botanical exploration of New Spain is usually given to Martín de Sessé y Lacasta (1751–1808), a Spaniard who served as administrative head of the Expedition throughout its 16 years of exploration in the New World. The principal botanist of the Expedition was José Mariano Mociño (1757–1820), who ultimately was the most productive scientist connected with the Expedition. Most of the zoological work of the Expedition was done by José Longinos Martínez (1750–1802), who made several independent trips to the Pacific Coast and Baja California. The zoological collections made by Longinos Martínez eventually formed the nucleus for the National Museum of Natural History of Mexico (Beltrán, 1982:66). Between 1788 and 1803, when surviving members of the Expedition returned to Spain, explorations and collections were made in the Caribbean, northern Central America, California, and as far north as Vancouver Island, although the great bulk of the collections and illustrations were made in México.

Throughout the Expedition skilled illustrators accompanied the collectors in the field, and made sketches from freshly-collected material. These sketches were subsequently rendered into the minutely detailed and exacting finished illustrations. After the termination of the Expedition and his return to Spain, Mociño worked for several years on the collections and illustrations. But the major results of the Expedition—

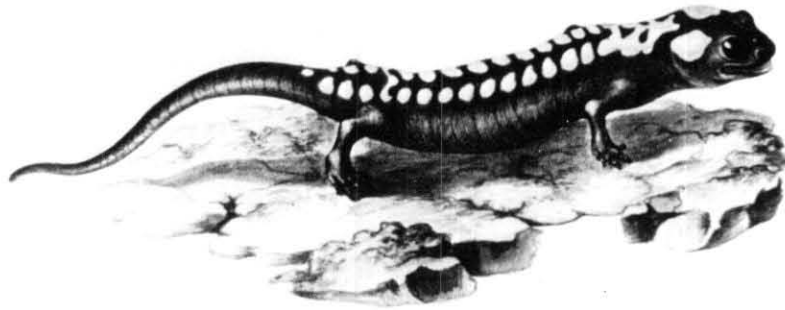


Fig. 2.—*Pseudoeurycea bellii* (catalogue number 1260).

Plantae Novae Hispaniae (Sessé and Mociño, 1887–1891), and *Flora Mexicana* (Sessé and Mociño, 1891–1897)—were not published until almost a century after the Expedition ended. After the death of Mociño in 1820 the original set of illustrations was dispersed with his property, and lost. The history of the Expedition and its personnel, the routes travelled and collecting localities, have been reviewed by Rickett (1947), Beltrán (1967), and McVaugh (1977).

Students of the flora and fauna of tropical America, and those interested in the history of exploration of the New World, now have a rich new resource available with rediscovery of the original illustrations. The lost Mociño collection of illustrations was acquired by the Torner family of Barcelona in the 1880's and preserved in their private library, but was not recognized as the missing illustrations from the Sessé & Mociño Expedition. The collection now resides in the Hunt Institute for Botanical Documentation, Carnegie-Mellon University, where it is known as the "Torner Collection of Sessé and Mociño Biological Illustrations." The history of the collection and the story of its rediscovery were related by McVaugh (1982).

Most of the illustrations in the collection, in keeping with the primary mission of the Expedition, are of plants. But approximately 200 of the plates represent animals of various taxonomic groups, including seven of amphibians and reptiles. Of these seven, six are identifiable as Mexican species, as follows (numbers refer to the catalogue of the collection in the Hunt Institute for Botanical Documentation):

Ambystoma sp. (1253).—This is a watercolor illustration of a large, neotenic larva, the famous "axolotl," in dorsal view. The ground color

is gray to black, with fine black stippling, suggesting that the species depicted is *A. mexicanum*, or a closely related form.

Barisia imbricata (1254).—A large adult male with swollen temporal regions is posed on a branch in this watercolor illustration. The body, shown in lateral view, is greenish with the characteristic whitish flecks. The color shades to warm brown on the regenerated tail.

Phrynosoma sp. (1257).—This color illustration, showing both dorsal and ventral views on one plate, cannot be identified to species with certainty. The combination of characters depicted suggests that this drawing is either a composite taken from several different species, or an illustration drawn from memory.

Phrynosoma asio (1258).—This ink drawing of an adult specimen of *P. asio* shown in dorsal view (Fig. 1) is one of the most finely detailed and technically accurate in the collection.

Ctenosaura hemilopha (1259).—This excellent illustration of a sub-adult *C. hemilopha*, accurate in scale characters, color, and pattern, has been published (Anon., 1981).

Pseudoeurycea bellii (1260).—This watercolor illustration of a widespread Mexican species (Fig. 2) is accurate in color and morphological detail, but the awkward pose suggests that the artist did not see the living animal. From the geographically variable characters illustrated, the specimen probably originated from a population on the southern part of the Mexican Plateau, perhaps from Michoacán (D. B. Wake, personal communication).

DISCUSSION

The botanical illustrations in the rediscovered Torner Collection are expected to have a significant effect on botanical nomenclature and typification. Hundreds of new species of plants described by A. P. de Candolle and others were based on the illustrations as type-specimens (McVaugh, 1982). The zoological illustrations, in contrast, seem not to have reached the hands of scientists. The illustrations of amphibians and reptiles, which were vastly superior to the usual biological illustrations of the day, certainly depict their subjects in diagnostic detail. But even though the illustrations reached Europe at the beginning of the great era of descriptive biology, and before all but one of the illustrated species (*Ambystoma mexicanum*) were known to science, the amphibians and reptiles from the Sessé & Mociño Expedition were then, and remain today a lost chapter in Mexican herpetology.

RESUMEN

Con el reciente descubrimiento de las ilustraciones hechas durante la Real Expedición Botánica a la Nueva España (Expedición de Sessé y Mociño), se abren nuevas oportunidades para los interesados en el estudio de las ciencias naturales en el Nuevo Mundo.

La colección de casi 2000 dibujos, ahora conocida como Colección Torner, esta depositada en el "Hunt Institute" para la documentación botánica. Se hace una breve reseña de la Expedición y sus integrantes. Se determinan 6 de las 7 ilustraciones de anfibios y reptiles como especies pertenecientes a la fauna de México, las cuales fueron conocidas por estos investigadores antes de llegar a los grandes museos Europeos.

ACKNOWLEDGMENTS

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