Wisconsin's First Great Scientist: A Historical Account of Increase A. Lapham and Herpetology

Born on March 7th, 1811 in Palmyra, New York, Increase Allen Lapham was a prominent historical figure, not only in Wisconsin, but also throughout the United States for his numerous works in biology and botany, meteorology, antiquities and effigy mounds, and geology, and other areas of natural study. Widely known as "Wisconsin's First Great Scientist" and naturalist, I.A. Lapham and his family had a lengthy biography, having lived and moved from, and between New York, Pennsylvania, Ohio, and Louisville, Kentucky from 1827 to 1830. In his early life, I.A. Lapham had strong talent for scientific observations and documentation, and worked early on in Ohio and Kentucky in engineering, design, and development of railroads, as well as of dams and their locks, while also producing drawings and diagrams thereof.

In July, 1836, Lapham then moved to Kilbourntown, which is now Milwaukee, Wisconsin, and continued his work with his colleagues to produce numerous works in botany, geology, archaeology, and other flora and fauna catalogues of the Milwaukee, Wisconsin area, as well as elsewhere throughout the state of Wisconsin and the Midwest. In 1848, he also founded the Wisconsin Natural History Association, a predecessor of the Wisconsin Academy of Sciences, Arts, and Letters, of which he was also a charter member. After a long history of honors, awards, and recognitions, Lapham died on September 14th, 1875, from what is most widely believed to have been from a heart attack.

Since his passing, numerous landmarks and place names have been named after him, some of which include "Lapham Peak", the highest point in Waukesha County, Wisconsin, as well as several streets and buildings of the University of Wisconsin-Milwaukee, as well as the Tenney-Lapham neighborhood and Elementary school in Madison, Wisconsin. But what about his works and expertise more specifically in the field of herpetology, or the scientific study of reptiles and amphibians?

As it turns out, while herpetology was not a prominent field of study in Lapham's works, he did still publish several works and writings which either included them in at least some of his flora and fauna surveys and catalogues, or had several other unique and interesting accounts of these animals among his diaries, notes, and letters throughout his years. According to the "Natural History of Amphibians and Reptiles of Wisconsin" by Richard Carl Vogt (1981), Increase A. Lapham listed a total of 17 reptiles and amphibians in his book of flora and fauna of Wisconsin, which was the first published checklist of Wisconsin's herpetofauna. In order to better examine some of these unique accounts and perspectives, which have likely yet to be specifically written about when it pertains to his works and herpetology, we have included a few of his most prominent works, at least as far as we have been able to locate and become aware of, which feature, or include the wonderful world of reptiles and amphibians as "Wisconsin's First Great Scientist and Naturalist"!

Typewritten Letters, 1811-1828; 1857-1859; 1852-1856. And Diaries 1811-1832.

Various mentions, catalogues, and interesting accounts of reptiles and amphibians are mentioned in many of I.A. Lapham's written letters, journals, and diaries. In 1828, he describes several "water

puppies" which were brought into his captivity, and mentions that "We were told that in summer they made a noise somewhat like that mate by a puppy whence the name of water puppy is given to it." These animals must have likely been what we now know today as "Mudpuppies" (*Necturus spp*.). During the same time, he also acquired two specimens of "soft-shelled tortoise" (*Apalone ferox*), which is now known as the Florida Softshell Turtle. It is unknown as to whether Lapham maintained any other reptiles or amphibians as pets or in captivity, although he may have for short-term research and distribution to other colleagues.

Increase A. Lapham was also known to possess and trade living and/or preserved parts of reptile and amphibian specimens with colleagues, which may be found mentioned in his journals as well. One such example is a correspondence on April 16th, 1853 with P.R. Hoy, one of his colleagues, comments that there "must have been more than six at Racine" with regards to a corrected list of plants and animals for Wisconsin. Another colleague, Professor Louis Agassiz, consulted Lapham for his work on "the distribution of turtles on this continent", February 4th, 1856, which included two living turtles (species unknown) forwarded to him.

On April 30th, 1828, Mr. Thos. H. Taylor in Ohio provided a lizard, which was described in detail the following. It was most likely an Eastern Fence Lizard (*Sceloporus undulatus*):

"Color various and beautiful, red, green, black, white, and yellow; two rows of long tranverse spots extend along the sides of the back; they are black and white: beneath yellowish; beneath each cheeck a spot of green; sides of a lighter color than the back, spotted with black; feet formed for climbing, five tows; toes long, slender, and tipped with sharp claws turned downwards; hind legs large; tail long, cylindric, tapering nearly to a point; scaly; scales with a ridge running through the middle and projecting backwards like a spine, giving the animal the appearance of being lined; more conspicuous on the tail; scales on the head without the ridge; mouth wide, set with minute teeth; tongue fleshy; nostrils small, oval and opening backwards; breadth of body at widest place 9/10 inch; length of tail 4 inches; length of body 2 inches; length of head 1 inch, total 7 inches. We preserved the animal in whiskey. (It was later deposited in the Western Museum, Cincinnati, O.)"

In Shippingsport, Kentucky, June 13th, 1829, another lizard was briefly described, likely a juvenile Five-Lined Skink (*Plestiodon fasciatus*): "Saw a lizard on a tree with claws like birds, & a lead blue tail".

Box 17, Folder 6: Lake Superior Trip, 1858:

During one of Lapham's surveys and expeditions, to Keweenaw Point in the Upper Peninsula of Michigan, and Lake Superior, 1858, a small combined list of reptiles and amphibians observed is included in that survey. It included: "Reptiles: Striped snakes, Frogs, Toads, tree-toads, small Hop-toad, Green frogs (no salamanders), Snapping Turtles." The "striped snakes" undoubtedly must have been Eastern garter snakes (*Thamnophis sirtalis sirtalis*), while the "tree-toads" probably Eastern Gray Treefrogs (*Hyla/Dryophytes versicolor*). A list as small as this could probably be expected given its northern location, although other species, particularly salamanders, are also likely to occur there, but went undetected.

Box 25, Birds and Reptiles I:

From the Wisconsin Historical Society, "*This folder contains descriptions of various annulata, birds, and reptiles composed and compiled by Increase Allen Lapham. He focuses here on those species known only by their tracks or footprints, and includes some illustrations based on fossil records. Included is a list of books he references throughout the folder*."

Subsequent volumes II and beyond do not seem to be immediately available.

Box 22, Folder 4: Systematic Catalogue of Flora and Fauna, 1851/1852; Flora and Fauna of Wisconsin:

One of Lapham's most prominent works, was that of his "*Systematic Catalogue of Flora and Fauna, 1852*." From the Wisconsin Historical Society,: "This folder contains "A Systematic Catalogue of the Animals of Wisconsin" written by Increase Allen Lapham at the request of the University of Wisconsin in Madison. This folder also contains notes on animals found in Wisconsin as well as a letter to John H. Lathrop (then Chancellor of the University of Wisconsin) suggesting the university make a topographical survey of the state of Wisconsin. In this letter, Lapham urges Lathrop to begin a program monitoring the climate of Wisconsin. Subject: animals; birds; data & lists; fish; publications (Lapham's):

"REPTILES.

ORDER TESTUNINATA.

CHELONURA, Fleming.

**serpentina, Say. Snapping Turtle.*

EMYS, Brongniart.

**picta, Gmelin. Painted Tortoise. Milwaukee.*

CISTUDA, Fleming.

Blandingii, Holbrook. Blanding's Tortoise. Prairies of Wisconsin (Holbrook.)

ORDER OPHIDIA.

CROTALUS, Linn.

**durissus, Linn. Banded Rattle Snake. Grant Co.*

CROTALOPHORUS, Gray.

tergeminus, Holb. Massasauga. Racine.

EUTAINIA, Baird & Girard.

**sirtalis, B. & G. (coluber sirtalis, Linn. Tropidonotus taenia, De Kay.)*

Striped Snake. Milwaukee.

radix, B. & G. Racine.

NERODIA, Baird & Girard.

**sipedon, B. & G. Watersnake. Milwaukee.*

SCOTOOHIS, Baird & Girard.

vulpinus, B. & G. Racine

OPHIBOLUS, Baird & Girard.

eximius, B. & G. (Coluber eximis, De Kay.) Milk Snake. Milwaukee.

BASCANION, Baird & Girard.

**constrictor, B. & G. Black snake. Milwaukee.*

CHLOROSOMA, Wagl.

**vernalis, B. & G. (Coluber vernalis, De Kay.) Green Snake. Racine.*

DIADOPHIS, Baird & Girard.

puctatus, B. & G. (Coluber punctatus, Linn.) Ring-necked Snake. Milwaukee.

STORERIA, Baird & Girard.

Dekayi, B. & G. (Tropidonotus Dekayi, Holb.) Racine.

occipito-maculata, B. & G. Racine.

ORDER AMPHIBIA.

RANA, Linneus.

**palustris, Le Conte. Marsh Frog. Milwaukee.*

**sylvatica, Le Conte. Wood Frog. Milwaukee.*

halcinda, Kalm. Shad Frog. Milwaukee.

SALAMANDRA, Brongniart.

**subviolacea, Barton, Violet Salamander.*

MENOBRANCHUS, Harlan.

**lateralis, Say. Banded Proteus. Milwaukee River."*

From Wisconsin Animals, 1851:

"Reptiles

Order Testudinata

Emys picta, Gmelin. Painted Tortoise. Milwaukee.

Cistuda Blandingii, Holbrook. Blanding's Tortoise. Prairies of Wisconsin. (Holbrook.)

Order Sauri

Coluber eximis, De Key. Milk Snake. Milwaukee.

punctatus, Linn. Ring Snake. Milwaukee.

Tropidonotus taenia, Schaepff. Striped Snake. Milwaukee.

Order Amphibia.

Rana palustris, Le Conte. Marsh Frog. Milwaukee.

Menobranchus lateralis, Say. Banded Proteus. Milwaukee River."

In summary, it can be well imagined that Increase A. Lapham was quite perhaps the most prominent Wisconsin naturalist, zoologist, and scientist in Wisconsin's history. While much of the scientific nomenclature and latin, or scientific names were quite a bit older than what they are for the same species today, he nonetheless laid the groundwork for many further and subsequent studies and research in all of these scientific and natural history fields. When it comes to his writings in herpetology, the above may be all but a sampling of how, and to what extent he was involved in this specific branch of zoology, and there may very well undoubtedly be more. For the reptile enthusiast, or even scientist or aspiring naturalist in general with also a bit of a history interest, reading and becoming familiar with Lapham's numerous works should become a highly recommended course of study, whether personally or professionally.