## The Little Snake Discovered on Bogue Banks

By Frederick Boyce

Most people who know of Edward Drinker Cope (1840-1897) are likely to be familiar with his vast contributions to our knowledge of dinosaurs, as well as his infamously bitter rivalry with fellow 19th century dinosaur hunter Othniel Marsh—an epic Wild West conflict that is commonly known as "The Bone Wars."

Cope, however, was also an accomplished anatomist, botanist, geologist and an enormously influential pioneer of North American herpetology and ichthyology, and his numerous contributions to both fields continue to be felt to this day. His knowledge of paleontology and comparative anatomy enabled him to make lasting contributions to the classification of reptiles and amphibians, and his book *Crocodilians, Lizards and Snakes of North America*, published in 1900, is still a highly valued resource for modern herpetologists.

In November, 1871 Dr. H.C. Yarrow, a close associate of the naturalist and ornithologist Elliott Coues, found a small golden-brown serpent he was unfamiliar with "on Bogue Banks, some eight miles south (*sic*) of Fort Macon, near marshy ground." Obviously, Dr. Yarrow meant to say that the direction was west of Fort Macon—a common-enough error on this south-facing barrier island. The mistake, however went uncorrected in the literature until 1967 (Palmer and Braswell: *Reptiles of North Carolina*, UNC Press). That location would put it in the vicinity of present-day Pine Knoll Shores. Yarrow sent his unnamed specimen to Professor Cope in Philadelphia, who quickly identified it as a species new to science and named it *Rhadinaea flavilata*, the Pine Woods Litter Snake (or just Pine Woods Snake).

There are a number of very small, mostly unrelated, snakes that can loosely be described as "litter snakes." They include worm snakes, earth snakes, DeKay's (or brown)





A pine woods snake hatchling (left), photographed with a penny for size comparison, and an adult specimen. Both photos were taken on Bogue Banks. —Photos by Frederick Boyce



snakes and red-bellied snakes. Most are secretive woodland species that spend most of their lives concealed in leaf litter. They feed primarily on small invertebrates such as earthworms, slugs and soft-bodied insects, including termites.

Pine woods snakes prey upon small vertebrates, primarily frogs. They will also eat other snakes, lizards and salamanders. They are indeed secretive and are most often discovered coiled under boards or cardboard, hiding under loose bark or in rotten logs. A foot-long pine woods snake is a sizeable specimen—most of the ones I have found in Carteret County are less than 10 inches in length, though I once found a rather large specimen a little over a foot long just off the Roosevelt nature trail at the aquarium.

Their color is a rich golden to reddish brown above with a pale yellow belly. Rows of very small black dots down the back sometimes give the impression of one or more longitudinal stripes, but the overall effect is of a solid golden color. The top of the head is a much darker brown than the body, as if the snake were wearing a tiny cap or toupee. There is a dark brown line that passes through the round eye to the corner of the mouth, but the lips are pale or yellowish, giving the snake its alternate common name of "yellow-lipped snake." They have mildly toxic saliva that helps immobilize their prey while it is being swallowed, but they can by no means be considered venomous in the usual sense, and are completely harmless to humans and pets. Pine woods snakes are extremely inoffensive and are so small as to be incapable of inflicting a bite on anything as large as a human.

While the pine woods snake was indeed first discovered here on Bogue Banks, it occurs in scattered populations throughout the southeastern coastal plain, and is perhaps most common in peninsular Florida, as far south as Lake Okeechobee, and extends along the Gulf Coast to Alabama and Mississippi. They are egg layers, and females lay two to four eggs in the summer. The hatchlings are miniscule in size (see photo of one next to a penny). Pine woods snakes, perhaps because of their secretive habits, are nowhere considered to be common and are always a delight for the informed field herpetologist to see. Should you happen to come across one of these coastal jewels while doing some yard work, consider yourself lucky to have seen one. They are indeed a living piece of Bogue Banks history.

References for this article include Notes on the Natural History of Fort Macon, N.C., and Vicinity (No. 4), Elliott Coues and H. C. Yarrow; and Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. 30 (1878), pp. 21-28.

Frederick Boyce is the staff herpetologist at the NC Aquarium at Pine Knoll Shores.