

Excerpt: A Siren Called Truth

Early Saturday morning, I hired horses and a wagon. Each mile to Haddonfield seemed endless. Eight years had passed since my first dig there, working alongside Joseph Leidy and William Foulke to unearth from the marlstone the specimen that Leidy named, in honor of his friend, *Hadrosaurus foulkii*.

Under the bright sunlight, I drove the buckboard past dozens of the active and defunct marl pits that dotted the Camden County countryside. Trees and other flora had retaken the older, abandoned pits, while open land indicated active mining. Of importance to me, however, were the pits—old and new—in the Haddonfield area. They yielded the blue-green variety of marl, which had hardened under ancient lake deposits, safeguarding Leidy's hadrosaur for eons.

Copper and iron, zinc and manganese: New Jersey's mineral riches seemed boundless. But the composition of the blue and blue-green marls made them particularly valuable to farmers, who depended on them for conditioning the soil. Since the resurrection of Leidy's hadrosaur, the blue and green marls were equally attractive to fossil-hunters.

At a clear, shallow creek, I stepped off the wagon and let the horses have their fill. Thirsty as well, I drank from the same source. The place where I'd paused had once been a source of marlstone. With my pocketknife, I poked at the softer marl near the creek's edge and rubbed the claylike substance between my fingers.

Just as the creek had provided water for the horses and me, the blue and green marls were indicators of life-sustaining freshwater lakes of long ago. Then, as in modern times, every living thing followed the water.

Somewhere above, cicadas buzzed loudly. The horses seeming satisfied, I seated myself in the wagon and urged them onward, to the creek's opposite bank.

A mile farther, two men in the distance waved their hats, signaling me to halt. They stood at the precipice of an older pit, where the foliage had re-established itself. I returned their gesture in acknowledgment and reined the horses near the pit's edge, under the shade.

As I set foot on the ground, one of the men walked over to greet me. "Professor Cope. Glad you could come. I'm superintendent for the West Jersey Marl Company. The name's Lawrence. Follow me into the pit and mind your footing."

I let him lead me down the shallow slope, sidestepping to avoid a tumble. Below, shaded by the trees, another man picked at the marl wall with a knife. He acknowledged me with a simple "Sir."

Several wondrously large bones lay to one side. Mr. Lawrence and I squatted to examine them. The first I picked up was a complete claw, eight inches long and, in form, something between an eagle's talon and a lion's claw. Of fearsome size, the animal's teeth were flat and curved, their edges serrated. From hip to heel, the hind leg measured six feet. The remains thus far excavated were more interesting than I'd anticipated. I believed they represented a new and enormous carnivorous dinosaur, a beast that would've made a meal of Leidy's hadrosaur.

"Mr. Lawrence, have you come upon any vertebrae, or perhaps the animal's skull?"

"Not yet, Professor. Maybe you'll have better luck. Mind if we get back to our business while you dig?"

"Not at all. I'm grateful that you brought these bones to my attention."

The two men left the pit.

In a strange way, I was glad they hadn't uncovered any dorsal vertebrae or the cranium; therein lay a challenge I relished. I'd work alone but with efficiency, as my duties at Haverford would resume in a few weeks. Equipped with all the necessary tools, my hands hadn't forgotten

the rhythm and touch cultivated under Leidy's guidance: the knife's scratch, the brush's swipe, and the shovel's scrape. The marl's earthy smell, the grit of dried dirt on my skin, and the trickle of sweat down my face and back marked my commitment to fossils awaiting excavation. The sounds of my tools against the formation and of my breathing competed with the cicadas' buzz. How I'd missed all those sensations!

Within half an hour, more of an iron-darkened bone revealed itself. I released the fossil from the marl, brushed it clean, and cried out in pure elation, for I'd found a vertebra—a thing of rare beauty. After measuring and sketching it in my field book, I wrapped the bone and resumed my search. To my further amazement, the bones came faster, one vertebra after another. In that way, the hours flew; but when the sun's last rays melted into the horizon, I loaded the fossils and tools into the wagon and returned to Philadelphia.