

Remembering Frank Hirst and His Recollection of the Discovery of *Utricularia olivacea* in New Jersey

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Frank Hirst (1928–2009), well-known field botanist and master plumber, passed away on August 3, 2009, at the age of 81 (see pp. 121–122 for obituary by Ronald Wilson).

Frank was a New Jersey native and Pine Barrens botanist, but he and his wife, Jean, and two daughters moved to the Eastern Shore of Maryland on the Delmarva Peninsula in 1971. Frank was a plumber by trade and a self-taught botanist. He was a member of the Philadelphia Botanical Club for 50 years and made many significant botanical discoveries, both in New Jersey, with his brother Bob Hirst (1925–1963; Evert 1964) (e.g., Hirst and Hirst 1962), and on the Delmarva Peninsula (e.g., Hirst 1983, 1990; Boone et al. 1984).

During a conversation with Frank prior to his passing, he entertained me with a story about the discovery by him and his brother Bob of *Utricularia olivacea* Wright ex Griseb. in New Jersey back in 1958. I found his story to be very interesting and thought that this was a tale that others should know. Furthermore, what better way is there to remember Frank than to relive one of his many noteworthy botanical discoveries?

Utricularia olivacea (dwarf bladderwort, minute bladderwort) is a diminutive, aquatic bladderwort no taller than 1 cm. It is usually found in ponds and depression wetlands, and often forms mats on the surface of the water. The species is known from Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, and Virginia, and the Pine Barrens of southern New Jersey (NatureServe 2008), where it is known from a single location. In all states of occurrence but Florida the species is considered to be rare (NatureServe 2008). The species is also found in the West Indies, Central America, and South America (Taylor 1989).

The following is a paraphrasing of Frank's recollection of his discovery of *Utricularia olivacea* in New Jersey in 1958 as told to me.

Even though I am 80 years of age, I still remember most of the details about what transpired 50 years ago.

Bob and I had just recently “discovered” and botanized for the first time the now well-known Goose Ponds (consisting of Little Goose and Big Goose Ponds) near Egg Harbor City in the Atlantic County Pine Barrens (Wherry 1959). The old U.S.G.S. topographical maps that we were using around this time showed the Goose Ponds to be swamp, but new maps for the area had recently become available, and these maps showed the Goose Ponds as open bodies of water, which as you can imagine, greatly sparked our interest. We visited

the Little Goose Pond first, which was drawn-down at the time, and we were overwhelmed by the number of rare plants that we saw. One species in particular was *Rhexia aristosa* Britton, the awned meadow-beauty, not seen in New Jersey since 1898 (Stone 1911; Hirst and Hirst 1962; Snyder 1996). Other noteworthy plants seen that day included *Sagittaria teres* S. Watson and *Utricularia resupinata* B. D. Greene (Hirst and Hirst 1962).

Finding the tiny bladderwort was by chance; I believe it was our first or second visit to the ponds. We were in Little Goose Pond that day, and as I stood gawking at an intensely rose-colored meadow-beauty blossom, I happened to notice something sticking up amongst a mat of algae and peat moss. It appeared as a group of tiny stalks with pinhead-like tips. "Wow!" I said to myself, I had never seen a moss or alga or anything quite like this before. Bob came over for a look and he very carefully examined the tiny stalks. Using his hand lens, Bob replied, "They look like they have tiny flowers!" The plants were very small, about 3 or 4 mm high, and we could not make out any kind of foliage. At home later that night, after dissecting and magnifying the flowers we collected, we concluded that it could only be a species of *Utricularia*.

We talked with other botanists about it, including Bayard Long (1885–1969), and Lou Hand (1901–1988). They all wanted to visit the site to see it for themselves, which we did not long after. Mr. Long and the rest of the group were perplexed as to what this plant could be, but we all agreed that it had to be a wee species of *Utricularia*. We checked the Big Goose Pond for the plant, but never did find it; it was only in Little Goose Pond, which seemed to have the right habitat. Despite Mr. Long's failing health at the time, he kept up with us and even brought along his field press, which he carried on a strap over his shoulder. I recall that when he collected an aquatic plant, he would splash water on the newspaper sheet to keep it moist, and then pull the strap to tighten the press.

Also in the group that day was a woman who was especially amazed and interested in this tiny mystery plant. Her name was Ruth McVaugh Allen (1913–1984). Besides being a student of botany and lover of native plants, she was a gifted and extremely talented artist, illustrator, and photographer (Anderson 1985). Ruth mentioned at the time that she was working on the illustrations for a book on the slime molds by George Willard Martin and Constantine John Alexopoulos (1969). Ruth was so fascinated with this tiny bladderwort that she decided she was going to study it more closely, and perhaps describe it as a new species. Ruth did some beautiful, detailed sketches of the plant, and after hours of studying Latin in order to write a formal description, she was nearly ready to submit a manuscript to *Bartonia* and name the species *Utricularia hirstiorum* in honor of Bob and me.

Before submitting, Ruth thought that it might be wise to first ask Dr. Edgar Wherry (1885–1982) if he would review her description for accuracy. He agreed to do so and after review said, "Ruth, before you submit this, I seem to remember reading about a small bladderwort in John Kunkel Small's *Manual of the Southeastern Flora* (Small 1933); you might want to research that (Wherry 1959)." So Ruth took Dr. Wherry's advice, and to her great disappointment, found that Small had listed *Biovularia olivacea* (C. Wright) Kamiński, a synonym of *Utricularia olivacea* C. Wright ex Griseb. (in *Catalogus Plantarum Cubensis*: 161. 1866). The species Ruth had worked so hard on had already been formally described over ninety years earlier. However, Ruth did get some satisfaction from her labors by publishing a brief study of *Utricularia olivacea* in *Bartonia* (Allen 1959). Her paper included a morphological description of the plant and her meticulous illustrations.

Despite our regrets that Ruth was unable to author a species new to science, our discovery of *Utricularia olivacea* in New Jersey was still very exciting. Small cited only one record for

this species in North America at the time: “shallow water, near Sanford, Seminole County, Florida” (Small 1933; Wherry 1959). This record was just over 1,000 miles south of the Little Goose Pond population! Of course, it is now known from several other southeastern states, but at the time we were thrilled about our discovery. Still, I must admit that we were a bit disappointed that the species was not new to science and, therefore, it would not be named for us. But we just smiled and moved on to new places to explore and new rare plants to find. These explorations did lead to the discovery of a new species, *Dichantheium hirstii* (Swallen) Kartesz (*Panicum hirstii* Swallen). Swallen, who described the grass (1961), failed to honor both Bob and me by not using the plural specific epithet (*hirstiorum*). That is why I refer to the species as the Hirst brothers’ panic grass, so that Bob can get the recognition that he deserves, but the story of the discovery of this rare grass I’ll save for another time.

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