A handy reference in the Arnold Arboretum’s curatorial office is a paperback reprint of *Trees of Indiana*, originally published by the Indiana State Board of Forestry in 1912. It was written by Charles Clemon Deam (1865–1953), a drugstore owner with a lifetime passion for documenting the flora of Indiana. With the help of a young zoology student and *Gray’s Manual of Botany*, he taught himself the basic methodology employed by botanists and taxonomists. Deam mounted his first specimen on a herbarium sheet in 1896. Sixteen years and over ten thousand specimens later, his first edition of *Trees of Indiana* was printed. It was a reference book that: “scientists could use, rich in accurate technical detail, filled with Latin names and botanical terminology. At the same time, it was a useful and understandable manual for the amateur pupil, teacher, or hobbyist, with picture book drawings that mixed hard science with the warm fuzzy feel of the drugstore almanac” (Kriebel 1987). All ten thousand free copies were distributed within three years, and a one-thousand-copy reprint in 1919 was snapped up within a few days. Revised editions of *Trees of Indiana* were printed in 1921, 1931 and 1953. In subsequent years, photo reprints and digital print-on-demand copies have been produced. Deam also wrote and published *Shrubs of Indiana* (1924), *Grasses of Indiana* (1929) and *Flora of Indiana* (1940). One hundred years after its publication, *Trees of Indiana* remains his best known work.

**INDIANA’S PLANT COLLECTOR**

Deam is remembered as: “a rugged individualist who appeared brusque and gruff to those not well acquainted with him, but to those who were closest to him and knew his intellectual integrity and scientific sincerity this outward brusqueness masked a humble, modest, unassuming man who despised sham and pretense and was deadly serious about his scientific work” (Kriebel 1987). Recognized for these characteristics, in 1909 Deam was appointed the first Secretary of the State Board of Forestry and a member of the Indiana Conservation Commission. In 1917 he became the acting State Forester and in 1919 was appointed head of the Forestry Division in the newly formed Department of Conservation. A significant portion of the salaries and travel allowances he earned while serving in these positions paid for his collecting expenses.

In 1915 he purchased and outfitted a Ford Model T touring car which he called the “Weed Wagon.” “The advent of this motor car signaled an end of Charlie Deam’s first fifty years,
A 1933 Arnold Arboretum herbarium specimen of *Quercus x deamii* accession 897-28, which was grown from acorns received from Charlie Deam in 1928.
a period of growth and the laying of groundwork. Now began in earnest his tireless, distinguished journey into science . . . In the decade from 1905, when he reorganized and restarted his Indiana herbarium and numbering system, through 1914, his last full year without a car, he averaged collecting about 1,500 specimens a year. But in 1915 alone he added 3,764” (Kriebel 1987).

Deam sent his collections to the Missouri and New York Botanical gardens and to Charles S. Sargent, director of the Arnold Arboretum. He asked for assistance in identifying his specimens. The Sargent Letter Books, found in the archives of the Arnold Arboretum, contain copies of thirty letters written by Sargent to Deam during the years 1914 through 1919. They reveal that Sargent identified over 600 tree and shrub specimens mounted on Deam’s herbarium sheets. Sargent thought highly of Deam’s work, writing on two occasions in 1915: “I am very pleased indeed with your collection [Corrus and Salix] and I think you have done a capital piece of work, and certainly you are adding greatly to the knowledge and distribution of Indiana trees” and “There is nothing in your Carya collection which I should not have expected from Indiana. It is a remarkably fine collection and of very great assistance to me.”

When Sargent believed one of the trees found by Deam would enrich the Arnold Arboretum’s living collection, he requested Deam send seed for propagation. The table above lists some specimens grown from seeds sent by Deam that still survive in the Arboretum’s living collection.

**THE DEAM OAK**

In Wells County, Indiana, about three miles northwest of Bluffton, stands an oak tree which is well into its second century of growth. Specimens from this tree were first collected on October 4, 1904, by Bruce Williamson, a young zoologist, and his father. The specimens were taken to Deam who forwarded them to Professor William Trelease of the Missouri Botanical Garden for identification. Growing in proximity to this tree were many white (Quercus alba) and chinquapin (Q. muehlenbergii) oaks. Though reminiscent of Q. alba, the leaves were not as deeply lobed and its acorns were not as large as those of a white oak.
In the first edition of *Trees of Indiana*, Deam described the tree as follows: “*Quercus alba* x *Mu[e]hlenbergii*. Plate 44. Bark of a white oak type, branchlets in October gray and somewhat pubescent; winter buds ovoid, blunt, reddish-brown, more or less gray pubescent; leaves obovate in outline, 6–12 cm. (2¼ – 4¾ inches) long, wedge-shaped at base, coarsely toothed and irregularly lobed, sinuses wide or narrow, lobes and teeth ascending except the lowest pair, lobes and teeth generally triangular, sometimes oblong, dark green above, paler and densely gray pubescent beneath; petioles 1.5–3 cm. (½ – 1¼ inches) long, acorns on stalks about 0.5 cm. (1/5 inch) long; nut ovoid, about 2 cm. (¾ inch) long, rounded or flat at the base, rounded at the apex, chestnut brown, pubescent near the summit, enclosed for 1/3 or more of its length in the thin saucer-shaped cup, cup rounded at the base, pubescent within, scales blunt, thickened on the back, brown, densely gray pubescent.”

In 1915, Deam discovered that this unique hybrid tree had been blazed for cutting by the landowner. When persuasion to save the tree failed, Deam negotiated the purchase of the one-fifth acre of land on which the tree was growing for seventy-five dollars, a princely sum in those days. The land was deeded to the State in order to preserve and protect the tree. The property became known as the Deam Oak Monument Forest, the smallest preserve in Indiana.

In July of 1916, Sargent, who had been assisting Deam in the identification of woody specimens found in Indiana, wrote: “Dear Mr. Deam, I have been hoping for some time to hear from you and I hope you are getting on all right. You remember, no doubt, your peculiar Oak, a supposed hybrid between *alba* and *Muehlenbergii* (14117 and 14131). I should be very glad to get some acorns of this tree to plant in the autumn, and as it grows within a few miles of Bluffton it ought not to be difficult for you to get them. Before sending acorns put them in water and send only those that sink for those that float are worm-eaten and worthless.”

Records for Arnold Arboretum accession 7786 list it under the name *Quercus deamii* Trelease and indicate that plants were grown

![The original Deam oak in Indiana on May 8, 2011 (left) and July 16, 2011 (right).](image-url)
The Arboretum’s First Deam Oak

In 1908, the Arnold Arboretum received two plants of *Quercus muehlenbergii × Q. alba* (accession 5962) from the Parks Department of Rochester, New York. It is likely that they were grown from seed distributed by Charles Deam. Accession 5962-B has grown over the past century on Peters Hill to become a stately tree 20.1 meters (66 feet) tall and 59 centimeters (23.2 inches) DBH.

This 1908 accession (5962-B) of Deam oak (center) grows on Peters Hill at the Arboretum.
from seed received on September 28, 1916, from C. C. Deam, near Bluffton, Wells County, Indiana. Accession 7786-A, now over ninety years old, stands adjacent to Oak Path and is 21 meters (69 feet) tall and 69.8 centimeters (27.5 inches) DBH. Indeed, after studying specimens taken annually for many years, Professor William Trelease determined the tree discovered in 1904 was a natural hybrid of the two species. In the 1917 Proceedings of the American Philosophical Society he named it not for the Williamsons who first found it, but for Deam who had first described the tree and saved it from destruction.

Seventy years later, in 1987, the Deam Oak Monument Forest was described in Robert C. Kriebel’s biography, Plain Ol’ Charlie Deam, Pioneer Hoosier Botanist: “Northwest of Bluffton, off Indiana 116 at County Road 250-N, the traveler encounters a chain link fence around a hundred-foot-square reservation. Inside the enclosure are three picnic tables, a rusted trash barrel, a grill, a backyard-type swing set for youngsters. And forty feet from the highway pavement, the Deam oak lives on, plain and battered as its namesake. A brown and yellow, state-maintained sign explains its significance to the stranger.”

PERPETUATING THE DEAM OAK

Today, very few inhabitants of Bluffton and Wells County recall Charlie Deam’s career as a plant collector, forester, and conservationist, or the history of the Deam oak. Among the knowledgeable few are Douglas Sundling, a resident and employee of Bluffton, and Brad Brody, the Wells County District Forester. They are both dedicated to the preservation of this notable oak. Sundling’s photographs—made in the spring and summer of 2011—show that the tree, while aging, is in good condition, and a wooden fence encloses the well maintained grounds.

Because of the Deam oak’s interesting history and connection to the Arboretum, several staff members became interested in clonally repopulating the original tree. In the spring of 2011, a request was made to Sundling and Brody for scion material. They sent a bundle of 3- to 6-inch-long stem terminals, and Arboretum propagator Jack Alexander grafted these scions onto Q. macrocarpa understock. Several of these grafted plants will be grown on for future planting in the Arboretum’s Living
Collection. The remaining plants will be returned to Sundling and Brody to be planted in Indiana’s Deam Oak Monument Forest and Wells County parks. One hundred years later, Charlie Deam’s legacy lives on.

Bibliography


George Hibben began volunteering with the nursery and greenhouse staff at the Arboretum’s Case Estates site in 1988. He also accessioned artifacts found at the Arboretum and prepared the monograph *Arnold Arboretum—Prehistoric Indian Artifact Collection* in 1991.