

News and Comment

Dr. Warren Baxter Ballard, Jr. 1947–2012

Warren Ballard, wildlife researcher, editor, and professor died at his home at Lubbock, Texas, of pancreatic cancer 12 January 2012. He had a distinguished career in wildlife biology in Alaska, New Brunswick, Arizona, and most recently as Horn Professor in Texas Tech University's Department of Natural Resources. He supervised 44 MS and doctoral students and authored or co-authored over 200 research papers, as well as a dozen book chapters and monographs and over 30 proceedings and miscellaneous publications. Among other

editorial positions for several journals he was Associate Editor of *The Canadian Field-Naturalist* for mammals 1994–2001, 2007–2011, and before and during these periods contributed over 280 individual evaluation reviews of papers submitted to the journal. He was an effective proponent of involving graduate students in the review process as part of their scientific training. Warren is survived by his wife and frequent co-author, Heather A. Whitlaw. A detailed tribute is in preparation for a later issue of *The Canadian Field-Naturalist*.

On the Discovery of Eastern Leatherwood (*Dirca palustris*)

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The existing scientific literature dates the discovery of Eastern Leatherwood (*Dirca palustris* L.) to the 1730s and assigns John Clayton, a plant collector in the Virginia Colony, and Dutch botanist Jan Frederik Gronovius as the discoverers. But Michel Sarrazin, an early Canadian naturalist, was apparently the first to report on this species in 1700. Moreover, he also sent a living specimen of leatherwood to France. This case reminds us that the earliest information on some North American species predates the Linnaean binomial name.

La littérature scientifique courante attribue la découverte du bois de plomb (*Dirca palustris* L.) dans les années 1730 à John Clayton, un collectionneur de plantes dans la colonie de Virginie, et au botaniste hollandais Jan Frederik Gronovius. Cependant, le premier rapport sur cette espèce a été rédigé en 1700 par Michel Sarrazin, l'un des premiers naturalistes canadiens. En outre, il a envoyé un spécimen vivant de bois de plomb en France. Ce cas nous rappelle que les premières informations sur certaines espèces d'Amérique du Nord précèdent le nom binomial linnéen.

Key Words: botanical history, Eastern Leatherwood, *Dirca palustris*, Michel Sarrazin.

Eastern Leatherwood (*Dirca palustris* L.), also known as moosewood, wicopy, and *bois de plomb*, is an understory shrub found sporadically across most of eastern North America in rich, mesic soils. This species is well known by field-naturalists for its ephemeral spring flowers and extremely flexible stems. The genus contains three other species: Western Leatherwood (*D. occidentalis* Gray), Mexican Leatherwood (*D. mexicana* Nesom and Mayfield) and a recently identified species from the southern United States, *D. decipiens* Floden (Schrader and Graves 2004; Floden et al. 2009). But as with most North American flora, the eastern member of the genus was the first to be discovered by colonial botanists. Indeed, the botanical history of leatherwood is inherently linked to the history of colonization in North America.

In the scientific literature, a plant collector named John Clayton is credited with “discovering” this new

species in the 1730s when he sent dried specimens from the Virginia Colony to the Dutch botanist Jan Frederik Gronovius (Choquette 1925; Nevling 1968). Gronovius is then recognized as the first to report on leatherwood. In his *Flora Virginica*, he describes the plant as follows (Gronovius 1739):

“*Thymelaea* white flowers, which burst out at the beginning of spring: oblong, tapering leaves: twigs and bark very strong and flexible, hence the name Leather-wood. Grows by the banks of the Roanoke river, other rivers near hills, and in the county of Middlesex. Clayton add.” (translated from the original Latin)

Gronovius then apparently sent some of the specimens he had received from Clayton to Carl Linnaeus in Sweden. In his 1751 dissertation, a student of Linnaeus named Leonhard Johan Chenon was the first to

use the binomial *Dirca palustris* (Chenon 1751). That manuscript also included an original sketch of leatherwood which was presumably drawn by Chenon or Linnaeus himself.

Although this is undoubtedly a true account of the assignment of the binomial name, it does not accurately address the discovery of leatherwood itself¹. While the British, Dutch, Spanish and others were founding colonies across much of the southeastern range of leatherwood in the 17th century, the French established themselves in northeastern North America. By 1697, a surgeon of King Louis XIV named Michel Sarrazin had set about botanising in the wilderness of New France (Vallée 1927). Sarrazin had been a student of the French botanist Joseph Pitton de Tournefort and, once in North America, he took great satisfaction in methodically surveying the unnamed flora, fauna and minerals of the New World (Rousseau 1982). Throughout his industrious career, Sarrazin documented his discoveries through regular communications with colleagues at the Royal Academy of Sciences in Paris. In 1700, he wrote the following in a letter to Tournefort (transcribed in Vaillant 1708 and reproduced in Boivin 1977, 1978):

“This shrub reaches a height of 4 to 5 feet. I do not know why we call it *bois de plomb* [lead wood] because it is very light. Its young stems are gnarled and are so arranged that they seem to be encircled by pieces of one another. The bark is very thick, soft, very strong; and separates very easily from the wood. ... Here, we use the cooked bark applied in the form of a poultice to ease the pains of haemorrhoids and of old ulcers. It is said that it was the remedy of the abbot Mr. Gendron for cancers, but I know well that it is very powerless for this. ... It prefers the shade and has been found between 47 and 40 degrees [latitude] in all sorts of soils. Its flowers are born at the ends of the branches 2 or 3 together like a small bouquet. The leaves are alternate though they are first born in groups at the ends of branches. ...” (translated from the original French)

Besides letters, Sarrazin sent living specimens of many species to France. A surviving catalogue of these shipments confirms that leatherwood was transferred to the King’s garden where it was initially misidentified as a tropical species known as princewood (Jussieu 1708). Although many of the plants that Sarrazin shipped died en route as a result of poor care and exposure to salt water (Rousseau 1982), the leatherwood specimen seems to have endured its transatlantic



FIGURE 1. “*Dirca palustris*, *Dirca des marais*”. Watercolour by Pierre-Joseph Redouté originally published in Duhamel du Monceau’s 1806 *Traité des arbres et arbustes que l’on cultive en France*.

journey and thrived in Paris. In 1755, Henri-Louis Duhamel du Monceau referred to Sarrazin’s notes in his description of a flowering leatherwood plant which had already been growing in the King’s garden for “many years” (Duhamel du Monceau 1755). While Du Monceau included his own sketch in the first edition of his treatise, the most remarkable early depiction of leatherwood is surely the watercolour by the Belgian painter Pierre-Joseph Redouté which is featured in the second edition and is reproduced here (Figure 1).

Michel Sarrazin was a father of Canadian botany and was one of the first Canadian field-naturalists. His description of leatherwood predates that of Clayton and Gronovius by nearly 40 years. Moreover, Sarrazin’s description precedes the assignment of the binomial name by 50 years. Besides reassigning the discovery to Sarrazin, this new information reminds us that many North American species were well known prior to the assignment of binomial names.

¹The use of scientific botanical names is governed by an international code which requires that any taxon can have only one correct scientific name and that it is the earliest legitimate name (article 11) with a start date of 1753 and *Species Plantarum* ed. 1 by Linnaeus (article 13.1a). Certain plant taxa were discovered before 1753 and named at the time, but these names are not valid. Recently “the code” has been revised every 6 years. The most recent version, the Melbourne Code, is awaiting publication and is entitled “*International Code of Nomenclature for algae, fungi, and plants (ICN)*.” http://en.wikipedia.org/wiki/International_Code_of_Nomenclature_for_algae,_fungi,_and_plants.

Although the early French-Canadian colonists were evidently the first Europeans to document leatherwood, it is worth emphasizing that they were truly not the first to know of it. First Nations peoples have long used leatherwood for natural cordage and naturopathic medicines. Indeed, Sarrazin even described how the colonists learned about this species (Vaillant 1708):

“We say that the abbot Mr. Gendron uses it for cancers and that he learned this use from our savages.” (translated from the original French)

While Sarrazin was most likely referring to the Huron or Algonquin peoples, it is known that many other groups across eastern North America also made use of this plant. Undoubtedly, the true “discoverers” of leatherwood were the ancestors of the First Nations peoples. Indeed, there is archaeological and anthropological evidence that aboriginal North Americans have used this remarkable plant in textiles and medicines for many centuries (Austin 2004).

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