MYRIOPHYLLUM IN OKLAHOMA

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A taxonomic imbroglio exists in the genus *Myriophyllum,* particularly with respect to the taxa *Myriophyllum spicatum* L., *Myriophyllum exalbescens* Fern., and *Myriophyllum verticillatum* L. *Myriophyllum spicatum* and *M. verticillatum* were first described by Linnaeus in the 1700's (1). In 1919, Fernald (2) described a new species for North America, *Myriophyllum exalbescens.*

Jepson (3), Hulten (4), Patten (5, 6), Nichols (7), Brooks and Hauser (8), and Orchard (9) found the differences between *M. spicatum* and *M. exalbescens* too insignificant to warrant separation. Hulten and Patten submered *exalbescens* within the older taxon as a subspecies, whereas Jepson, Nichols, Brooks and Hauser, and Orchard preferred the varietal level. Fernald (10) steadfastly opposed considering *M. spicatum* and *M. exalbescens* as one species.

Love (11), Reed (12), Aiken (13), Aiken and Walz (14), Aiken *et al.* (15), and Aiken (16) agreed with Fernald. They concluded that *M. spicatum* and the native American species, *M. exalbescens* and *M. verticillatum,* should be separate taxa based on differences in morphology, physiology, and phenology. Reed (12), Aiken and Walz (14), and Aiken (16) noted that *M. exalbescens* and *M. verticillatum* are distributed only north of the 0 C January isotherm required for vernalization and successful turion formation in these taxa (13, 17, 18, 19). In contrast, *M. spicatum* occurs farther south. Except for unusually cold winters and perhaps for the high elevations of northwest Cimarron County, Oklahoma is not cold enough for the persistence of *M. exalbescens* and *M. verticillatum.* Nevertheless, numerous specimens deposited in Oklahoma herbaria were identified as these two species. This discovery led us to study the genus *Myriophyllum.*

Field studies were conducted throughout Oklahoma during the summers of 1979-1981. Plants were collected and specimens on deposit in State herbaria were examined. The *Myriophyllum* sheets were examined carefully and compared with reference specimens and monographic descriptions (13, 20, 21). This study revealed that all specimens identified as *M. exalbescens* or *M. verticillatum* were *M. spicatum* or *M. heterophyllum.*

Only four species of the genus *Myriophyllum* exist in Oklahoma. There are two native species: *M. pinnatum* (Watt.) BSP. and *M. heterophyllum* Michx., and two introduced species: *M. aquaticum* (Vellozo) Verdcourt and *M. spicatum* L.

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