

SOME NEW VASCULAR AQUATIC PLANTS FROM TENNESSEE

EDWARD W. CHESTER
Austin Peay State University
Clarksville, Tennessee 37040

ABSTRACT

Aquatic plants new to Tennessee are listed and annotated. These are *Jussiaea uruguayensis* Camb., *Hydrolea quadrivalvis* Walt., *Nelumbo nucifera* Gaertn., and *Ludwigia alternifolia* L. var. *pubescens* Palmer and Steyer.

A compilation of Tennessee vascular aquatic plants was prepared by Robinson and Shanks (1959). This report included all vascular aquatics known from the state at that time as a result of both literature and floristic studies. Since that time, other floristic studies of Tennessee plants include a preliminary checklist of dicots from the state (Sharp, et al. 1960), some first reports from the state (Sharp and Baker 1964, Rogers and Underwood 1966, 1968, Thomas and Chester 1967) and a recent checklist of cedar glade plants (Baskin, Quarterman, and Caudle 1968).

Collections from the northwestern Highland Rim in Montgomery County have disclosed vascular aquatic species not reported in the checklist of Robinson and Shanks or in the later publications noted above. In some cases significant range extensions are involved. Distributional data cited are from Small (1933), Muenscher (1944), Fernald (1950), Gleason and Cronquist (1963), and Fassett (1966). Nomenclature follows that of Fernald (1950). Voucher specimens are on deposit in the herbarium of Austin Peay State University.

Jussiaea uruguayensis Camb. Onagraceae. This species was apparently introduced into this country from South America. The known United States distribution is mostly Coastal Plain, ranging from Texas to Florida and northward in the Atlantic Coast states to southern New York. Specimens have also been reported from the lower Piedmont of North Carolina (Radford, Ahles, and Bell 1968).

A large population has been located in an open swamp near the Cumberland River in southeastern Montgomery County. The size and establishment of the population precludes recent introduction. This species seems to spread rapidly, both vegetatively and by seed, and could become a noxious weed in local drainage systems. The range extension into Tennessee is approximately 200 miles.

Hydrolea quadrivalvis Walt. Hydrophyllaceae. This species has previously been known only from the Gulf and Atlantic Coastal Plains from Louisiana to Florida and northward to Virginia. Muenscher (1944) maps the species in northern Alabama and Mississippi also. This collection extends the known range of the species

northwestward about 150 miles and well out of the Coastal Plain.

A few specimens have been found in the same area as the *Jussiaea* mentioned above.

Both of these taxa were collected in sluggish waters ranging in depth from a few inches to two feet in an area known locally as Mark's Slough. Consisting of approximately 50 acres, the swamp is fed by several permanent springs and is transversed by a man-made ditch which empties into the Cumberland River. Attempts to drain and clear portions of the swamp by landowners have proven unsuccessful. Before the advent of Barkley Dam the entire region was subjected to periodic flooding and now consists of a swampy river bottomland thinly wooded in a few areas and rich in both true aquatic and riparian species.

Nelumbo nucifera Gaertn. Nymphaeaceae. The Sacred Lotus is an Asian import frequently cultivated in the United States and sometimes escaping. This pink-flowered form has rarely been observed in cultivation in this area but has become a pest in some lakes and ponds. *Nelumbo lutea* (Willd.) Pers., the native Yellow Nelumbo, was reported from East Tennessee (Jefferson County) and West Tennessee (Obion County) by Shanks and Robinson (1959) and by Sharp, et al. (1960). It is also locally abundant in the Clarksville region.

Ludwigia alternifolia L. var. *pubescens* Palmer & Steyer., Onagraceae. The pubescent variety of *L. alternifolia* has been reported from the Ozarks to southern Indiana and southward to Louisiana and eastern Texas. On the northwestern rim this variety is probably more common than the glabrous form but often the degree and range of pubescence is great. Specimens typical of var. *pubescens* with densely pubescent leaves and calyces as well as completely glabrous specimens typical of the var. *alternifolia* and various intermediates have been noted.

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