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New Records for the Distribution of an Unusual Liverwort, *Petalophyllum ralfsii* (Fossombroniaceae)

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Petalophyllum ralfsii (Wils.) Nees & Gottsche is considered a rare plant, known in North America only from Texas, Louisiana, and Arkansas (Schuster, The Hepaticae and Anthoceratae of North America, vol. 5, pp. 423-430, 1992). In Arkansas it was previously known only in Union County. We report it from eleven additional Arkansas counties and add it to the list of small plants found in rural cemeteries and churchyards. This study was partly funded by a faculty research grant from Henderson State University for the study of Arkansas bryophytes.

In March 1994 while searching for pteridophytes, Marsh found an unfamiliar liverwort in the Marks Historical Cemetery in Cleveland County north of New Edinburg but failed to collect any specimens of it. Later notice of an illustration (Conard and Redfearn, How to know the mosses and liverworts, 2nd ed., Wm. C. Brown Co. p. 276, 1979) suggested the plant might be *P. ralfsii*. When Marsh became more interested in the Fossombroniaceae in 1996, study of a detailed account of *Petalophyllum* (Schuster, ibid.) convinced that he had indeed seen *P. ralfsii*. Early in 1997 he proposed a search for the species to several students and associates.

On January 19, 1997, Marsh and Golden made a search of the Marks Cemetery and Golden found a small population (Golden 74). On the same day a second Cleveland County population was found in Mosley Cemetery east of New Edinburg (Marsh 8962). Vouchers were sent to Southern Illinois University at Carbondale for confirmation of identification.


Although *P. ralfsii* has been considered a Gulf Coastal Plain species, the Hot Spring Co. site is in the edge of the Interior Highlands. Two of our Coastal Plain sites are in the Southwestern Arkansas Cretaceous area. The soils of all the sites range from fine sandy loam to gravelly loam and are mostly well drained. Grass cover ranges from sparse to dense, often obscuring the small *Petalophyllum* plants which are usually less than a centimeter long. The populations ranged in size from only a few plants to more than one hundred individuals. In all stands *P. ralfsii* was less abundant than the characteristic associated species. Among the associates in the populations we studied, *Asterella tenella* was almost always present and was the best indicator of spots most likely to also have *P. ralfsii*. *Leprolepitalon spathulatum*, "Little People," was usually immediately associated or nearby. There was usually one or more species of *Fossombronia*, *F. foveolata*, *F. brasiliensis*, and perhaps a third entity, which is being evaluated by Ray Stotler and Barbara Crandall-Stotler (Southern Illinois University at Carbondale) who visited the Colombia Co. and Nevada Co. sites in March. Other common associates of *P. ralfsii* were *Ophioglossum crotolophoroides*, *O. nudicaule*, *Botrychium lunarioides*, and a number of moss species.

The three areas of known occurrence (southwestern Arkansas, central Louisiana, central Texas) of *P. ralfsii* in North America are rather widely separated. Are these truly disjunct areas or are they connected by a series of presently unknown populations? If they are disjunctive, do they represent three different geographical races with different ecological requirements? Rural cemeteries and church yards are a newly-known habitat for this species, but the number of populations we have found in a short period of time suggests that this may be its most common habitat.