

FIRST REPORT OF *Ricciocarpus natans* (L.) CORDA (MARCHANTIALES: RICCIACEAE) FROM A STRIP MINE IMPOUNDMENT

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ABSTRACT

The first record of *Ricciocarpus natans* (L.) Corda from a coal strip mine impoundment is reported.

INTRODUCTION

The Purple-fringed Riccia, *Ricciocarpus natans* (L.) Corda (Marchantiales: Ricciaceae), is an amphibious hepatophyte occasionally pleustonic in eutrophic ponds and backwaters (Hutchinson 1975). Although this species is distributed throughout the United States (Underwood 1884), to the best of my knowledge, it has never been reported from a coal strip mine impoundment. On 3 March 1983, *R. natans*, in association with *Lemna minor* L., was collected from a spoil-depression pond (type A strip mine impoundment of Arata (1959)) located on the old Peabody Coal Company's Little John Mine No. 5 in Knox County (T12N-R3E-Sec. 35), Illinois.

The most important factor influencing the distribution of aquatic plants is water chemistry (Hutchinson 1975, Moyle 1945). Water quality in this particular pond (Table 1) was characteristic of other strip mine waters in Illinois (cf. Gibb and Evans 1978, Konik 1980, Lewis and Peters 1954). As distribution records rarely include ancillary chemical data, little can be discerned about the environmental tolerances of *R. natans*. However, observed conductivity, TDS, and SO_4 (Table 1) were the highest levels reported for any locality supporting this organism.

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Table 1. Major water chemistry parameters for spoil-depression pond, Little John Mine No. 5, Knox County, Illinois, October 1982.*

pH	6.1
Conductivity	1,000.0 μ mhos cm^{-1}
TDS	1,564.0 ppm
Alkalinity	176.0 ppm CaCO_3
Acidity	128.0 ppm CaCO_3
SO_4	1,056.0 ppm
Ca	115.4 ppm
K	8.0 ppm
Mg	148.0 ppm
Na	29.2 ppm
P	0.4 ppm
Si	1.2 ppm

*All other elemental concentrations 0.25 ppm.

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