

NEW ENGLAND NOTE

A RECORD FOR *SELAGINELLA ECLIPES* (SELAGINELLACEAE)
IN MASSACHUSETTS

ARTHUR HAINES

441 Dead River Road, Bowdoin, ME 04287

e-mail: arthurhaines@gwi.net

The *Selaginella apoda* (L.) Spring in Mart. et al. complex contains subtly differentiated taxa in the eastern United States. The number of taxa recognized in this complex over the years has varied and the taxonomy has been considered controversial (Buck and Lucansky 1976). Buck (1977) described a new species from within this group—*S. eclipses* W. R. Buck—after examination of numerous specimens from various regions of the United States. Identification of this new species requires careful review of megaspore size, ornamentation, and surface characteristics and morphology of the upper leaf rank. Due to the lack of obvious and straightforward characteristics to separate *S. eclipses* from *S. apoda*, some regional floristic manuals have chosen to subsume the former in the latter species (Magee and Ahles 1999).

Skoda (1997) reduced *Selaginella eclipses* to a subspecies of *S. apoda*, under the name *S. apoda* subsp. *eclipses* (W. R. Buck) Skoda. This change in rank was based on the apparent lack of characters separating the two species. Skoda made the new combination as part of a review of the second volume of the *Flora of North America North of Mexico*. In the *Selaginella* contribution in this volume, Valdespino (1993) used only vegetative characters in the identification key that separated *S. apoda* and *S. eclipses* and did not provide descriptions of megaspores. Skoda's change in rank of *S. eclipses* did not appear to make use of specimen review or field surveys. It is, therefore, not followed here. There is little doubt that the *S. apoda* complex would benefit from further biosystematic study.

Selaginella eclipses and *S. apoda* are largely allopatric. The former is primarily distributed in the Midwest, Great Lakes, and St. Lawrence Seaway regions, while the latter is largely found in the eastern and southeastern United States. Buck reported only two small areas of sympatry: central New York and southeastern Missouri.

Valdespino discovered the first New England record of *Selaginella eclipses* in Canaan, Litchfield County, Connecticut (Mehrhoff 7546,

CONN). The plants were located on the floor of an abandoned marble quarry. The record represented a significant range expansion for *S. eclipses*—central New York was the closest location reported by Buck (1977). Since the discovery, activity in the quarry has resumed and the plants have been extirpated (Les Mehrhoff, pers. comm.).

Selaginella eclipses is a target species of the Herbarium Recovery Project. The goal of this two-year research program is to locate herbarium records of rare and/or poorly known native species in New England, verify the accuracy of the determinations, and enter the corresponding label information into a database. Specimens determined as *S. apoda* from the Gray Herbarium (GH) and New England Botanical Club Herbarium (NEBC) collected from western New England were closely examined for the possibility of locating vouchers of *S. eclipses*. A single specimen was discovered from Massachusetts.

SPECIMEN CITATION: U.S.A. Massachusetts: Berkshire Co., Wet hillside, Lee, 14 Aug 1904, *Hoffman s.n.* (NEBC).

The specimen demonstrates characteristics of *Selaginella eclipses* noted by Buck (1977). The leaves of the upper rank taper to a long-attenuate, frequently recurved apex. The megaspores are ornamented with a lax reticulum comparable to specimens annotated by Buck to *S. eclipses* from the Great Lakes regions (housed at GH). Further, the megaspores are ca. 375 μm in diameter. This measurement, though not out of range for *S. apoda*, is larger than average for that species (Somers and Buck 1975) but well within the range of *S. eclipses*.

This represents the first report of *Selaginella eclipses* from Massachusetts (Angelo and Boufford 1996; Sorrie and Somers 1999). *Selaginella eclipses* is currently not afforded protection by formal listing as rare in any state of New England. It possesses a global rank of G4 (apparently secure; Natureserve 2001).

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