

TYPIFICATION OF *CLIMACIUM AMERICANUM* BRID.

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Summary

Auf Grund der Nennung von Richard's Namen in Bridel's Originalbeschreibung von *Climacium americanum* Brid. wird ein Lectotyp für diese Art in Richard's Herbarium (PC) ausgewählt, zumal Bridel's Herbarium (B) ein zur Typifizierung von *C. americanum* geeignetes Exemplar nicht enthält. Die Nennung von Richard's Namen durch Bridel im Zusammenhang mit der *Flora Boreali-americana* unterstützt die Ansicht, daß Richard auch als Autor zumindest des Bryophyten-Teiles dieses Werkes in Frage kommt.

When we published our treatment of the genus *Climacium* in North America (Horton and Vitt, 1975) we did not attempt typification of *C. americanum* Brid. However, Bridel's (1812) protologue cited both Carolina and Pennsylvania as collection localities. This has prompted us to typify *C. americanum*, since both *C. dendroides* (Hedw.) Web. & Mohr and *C. americanum* presently occur in Pennsylvania.

Climacium americanum was first described by Bridel (1812) and in his protologue, he cited "In America Boreali habitat, in Pennsylvaniae et Carolinae humidis lecta" as well as "Rich. fl. Am. Bor. Mich. v.II. p. 309". The latter citation is in reference to Michaux (1803) in which Richard described *Leskea dendroides* L.? (originally validated by Hedwig in 1801) citing "in sylvis Carolinae." Sayre (1976) suggested that there is much evidence to indicate that Richard actually wrote at least the bryophyte portion, if not all, of Michaux's flora. Such a view is certainly given credence by Bridel's (1812) citation of Richard in connection with the *Flora Boreali-americana*. Also, Bridel attributed his discussion of the peristome of *C. americanum* to Richard ("Rich. loc. cit.").

In Bridel's herbarium there are nine specimens of *C. dendroides*. Eight of these were collected in Europe between 1796 and 1818, and one is a La Pylaie collection from Newfoundland with the date of 1825. According to South (1980) and G. R. Brassard *in litt.* there is no record of La Pylaie having been in Newfoundland after 1820, so the 1825 date on the label could be the date Bridel received the specimen from La Pylaie. *Climacium americanum* is represented by one specimen with the label "No. 31. D. Torrey Noveboraco ad Am. Sept. 1820 misit". The locality Noveboraco is the ablative of Noveboracum, that is, New York (D. H. Nicolson *in litt.*), while D. Torrey is almost certainly short for Dr. Torrey (we know of no D. Torrey to collect in New York at this time) and the "2" in 1820 is not perfectly legible. Since John Torrey was born in 1797 (Ewan, 1969), there is little possibility that the Torrey specimen was collected before 1812; therefore, even though there exists the possibility that Bridel considered Pennsylvania to be a part of "Noveboraco", the date indicates that the "Pennsylvania" citation in the protologue could not have been based on this Torrey specimen. In 1827, Bridel cited the Torrey specimen ("D. Torrey nobis pulcherrima specimina Noveboraco misit.") and also referred to Dillenius as "Dillenio notum qui de praecedente verba faciens e Pennsylvaniae hujusce patriae se accepisse refert." Thus, it is probable that Bridel's (1812) citation of Pennsylvania originated from Dillenius' (1741) treatment in which Dillenius cited "Habui etiam e Pennsylvania", almost certainly based on a specimen sent to him by John Bartram. It seems then that the "Carolinae" location cited by Bridel (1812) must originate from Richard's habitat description (1803), and thus there is no specimen in Bridel's herbarium which could serve as an

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appropriate type. However, Bridel's citation of Richard's description of *Leskea dendroides* on p. 309 of Michaux's *Flora Boreali-americana* is a direct reference to a previously published name and the "Carolinae" specimen cited by Richard would be a suitable type.

In the Richard herbarium (PC) there is one specimen labeled "*Climacium americanum* Schw. II. 143. — Carolinae. — herbár Richard". Since the specimen is labeled *Climacium americanum*, not *Leskea dendroides* L.? as Richard characterized it, the information was presumably written after 1812, but Richard's observations (in Michaux, 1803) suggest that this may have been the actual specimen described—his description of an exerted columella, but the lack of a description of the operculum fits the condition of the specimen which has no opercula present. In conclusion, the lack of appropriate specimens in Bridel's herbarium and the citation of Richard's (1803) description and specimen locality makes the Richard specimen the most appropriate one with which to typify *C. americanum*.

The lectotypification presented here is:

***Climacium americanum* Brid., Spec. Musc. 2: 45. 1812.**

Type: Carolinae, herbarium Richard (PC!), *Lectotypus novus*.

The lectotype of *C. americanum* is characterized by the upper cells of the branch leaves with a length-width ratio of 4.8 (s.d. = 1.09, n = 6) and capsule length of 3.0–3.5 mm. The auricles are well developed and the capsules symmetric and erect. These features fit well with those of populations of *C. americanum* from the Carolinas and the name as defined by Horton and Vitt (1975) is correctly used.

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