

Hylocomium brevirostre new to JamaicaDana Griffin, III¹ & Walter S. Judd²

On a botanical excursion to Jamaica in 1987, the junior author gathered a small collection of bryophytes in the elfin cloud forests of Blue Mountain Peak. Common trees and shrubs of this forest include: *Brunellia comocladifolia* Humb. & Bonpl., *Clethera alexandri* Griseb., *Dendropanax nutans* (Sw.) Decne. & Planch., *Eugenia alpina* (Sw.) Willd., *Garrya fadyenii* Hook., *Ilex macfadyenii* (Walp.) Rehder, *Ilex obcordata* Sw., *Lobelia martagon* (Grieseb.) Hetchc., *Mecranium purpurascens* (DC.) Triana, *Miconia rigida* (Sw.) Triana, *Myrica cerifera* L., *Myrsine coriacea* (Sw.) R. Br. ex Roem. & Schult., *Podocarpus urbanii* Pilger, *Vaccinium meridionale* Sw., *Viburnum villosum* Sw., *Wallenia crassifolia* Mez and *Weinmannia pinnata* L.

Among the bryophytes collected is *Hylocomium brevirostre* (Brid.) BSG, a record for the island which represents the first Hylocomiaceae discovered in Jamaica. The plants were found on the ground, growing intermixed in a robust tuft of *Campylopus shawii* Wilson.

Hylocomium belongs to a cool temperate-boreal floristic element that occurs to a limited degree in both the Old and New World tropics, typically at high elevations. In Jamaica this floristic element is represented additionally by such species as *Calliergonella cuspidata* (Brid.) Loeske and *Drepanocladus sendtneri* (Schimp.) Warnst. (Crum & Bartram, 1958).

Reconstructing the migrational history for cool temperate-boreal taxa that resulted in their penetration into tropical latitudes is far from simple. It cannot be presumed *a priori* that they represent Pleistocene "refugees." Crum & Steere (1958), referring to the occurrence of Appalachian taxa in the moss flora of Haiti, mentioned that . . . "the continental element (*in the Antilles*) is undoubtedly an extremely ancient one which must be considered in connection with the history of Tertiary plant migrations on the mainland." The paucity of bryophyte fossils from Northern Latin America inhibits a detailed discussion of when any particular suite of high latitude species might have arrived in the tropical zone (nor can one be confident in the exact route by which these species came), but three indirect pieces of evidence may serve to sustain interest in the subject. First, several of the vascular associates of *Hylocomium*, including *Abies*, *Picea* and *Fagus*, were in Northern Latin America as early as the Miocene (Graham, 1973). Second, the island of Jamaica, as a consequence of plate movements, has migrated eastward from an earlier position much closer to Central

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America (Ross & Scotese, 1988). Lastly, *Hylocomium brevirostre* persists today in the highlands of Guatemala (Bartram, 1949) and has also been found in Costa Rica. Although the Costa Rican records have apparently not been published, duplicates of one collection (Boza 2012) were distributed to various herbaria as part of Fascicle III of the Bryophyta Neotropica Exsiccata (S. Rob Gradstein, ed.).

Against this background, it is possible to speculate that *Hylocomium* may have migrated to Jamaica, not from the north, but from the mainland of Mesoamerica. Newer techniques for analyzing chloroplast DNA might clarify whether *Hylocomium* populations in Jamaica show closer affinity with Central American plants or with those occurring in the main body of the range further north.

Specimen examined. JAMAICA. St. Thomas & Portland Parish boundary. Blue Mountains. Blue Mountain Peak (Middle Peak & East Peak), ca. 2200-2180 m. alt. Elfin cloud forest, clay soil with rocky outcrops. Terrestrial. Judd 5409a (FLAS).

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