<u>Barbula leptodontoides</u> n. sp. Planta parvae, rigidae, obscurate brunneo-virides vel flavo-virentes, caespitosae. Caulis brunneo-ruber, erectus tenuis et flexuosus, simplex. Folia 1-1.5 mm longa, sicca erecta, apicibus incurvata, madida erecto-patentia vel late patentia e basi breviter oblonga et convoluta, supra sensim attenuata, apiculata, marginibus mediis foliorum plus minus late revolute; costa breviter excurrens; cellulae superae parvae, obscurae, dense papillosae, basilares pallidae, laeves, oblongae. Dioica. Folia perichaetiales 2 mm longa, acuminibus erectis, lineari-lanceolatis. Caetera ignota.

Plants small, rigid, in dull, brownish or yellowish-green tufts. Stems brownish-red, erect, slender and flexuose, simple. Leaves 1.0-1.5 mm long, erect with incurved points when dry, erect-spreading or widely spreading from a short, oblong, concave, sheathing base when moist, gradually tapered from the shoulders to a slender, blunt point; margins rather widely revolute at the shoulder, plane above; costa prominent and rounded at back, short-excurrent as a small, pellucid mucro, in section showing 2 stereid bands; upper cells small, obscure and densely papillose, lower cells pale, smooth and oblong. Dioicous; perichaetial leaves 2 mm long, with erect, linear-lanceolate points, Sporophyte unknown. (Figs. 20-38.)

Beaumont to Morne Geffrard, 2000-2600 ft. alt., Arrondissement de Jérémie (north of divide on road from Les, Roseaux to Les Cayes), southern peninsula, *H. H. Bartlett* 17651, 17655 (type), May 13, 1947 (University of Michigan).

The gametophytes are quite characteristic in appearance because of the leaf points which are erect and incurved above a clasping base when dry, but usually widely spreading when moist. The rather widely revolute margins at the shoulders and the spreading tips of the leaves are reminiscent of some of the small species of *Leptodontium* but the small, obscure, densely papillose cells and the minute, hyaline apiculus formed by the slightly excurrent costa leaves little question as to a true relationship to the *Barbula cruegeri* complex. *Barbula leptodontoides* is similar in many ways to *B. purpuripes* C. M. of Jamaica, especially in the gradually and slenderly tapered leaf points and their erect-incurved position on the stem when dry, as well as the minute apiculus and the rather well differentiated perichaetial leaves; in *B. purpuripes*, however, the leaves are plane at the margins rather than revolute as in *B. leptodontoides*. *Barbula lurida* Hornsch. Roadside between Furcy and Kenskoff, *Mackaness* 136, July 18 - 20, 1944. Originally described from a Brazilian collection, *B. lurida* is also known from Trinidad, Cuba and Mexico and probably occurs throughout the lowlands of tropical America where it has been much confused with *B. subulifolia* Sull. Indeed the two species are close allies, and the differences between them may be subject to considerable variation; *B. lurida* can be distinguished, at least in the extreme, by broad leaf apices and clearly reflexed margins.

*Barbula microglottis* C. M. Müller (1898) cited the type collection, presumably Haitian, as "St. Domingo, prope Cap Haytien ad habitationem Picard." --- Endemic.

Barbula subteretiuscula Card. Limestone crest of mountain ridge southward from Kenskoff (24 km south of Port-au-Prince), 5600-6000 ft., Bartlett 17704, 17713, May 18, 1941. Southward from Kenskoff (alt. 4300 ft., 24 km south of Port-au-Prince) to the crest of the mountain ridge (alt. 5600 ft.), on limestone or red residual soil overlying limestone, Bartlett 17688, 17695, May 18, 1941. On bank in pinelands, Morne des Commissaires, Mackaness 264, March 1944. This species is reported here with some reservation. Quite a large number of species have been described in the difficult complex of B. bescherellei Jaeg. & Sauerb. and B. acuta (Brid.) Brid., most of them based on characters no more tangible or consistent than relative size, deepness and looseness of tuft, degree of marginal revolution and relative length of the fleshy subula formed by the excurrent costa. The problem is particularly acute in Mexico because of Cardot's many additions to the register of names in this group. These local collections, are a fairly good match for *B. subteretiuscula*, but it is questionable whether it might not be more realistic, as well as much simpler, to allow B. bescherellei greater latitude in variation to include such



Figs, 20-38.- *Barbula leptodontoides.* 20. Habit, x4. 21-33. –Leaves, x25. 34 -Crosssection below leaf shoulder, x200. 35 –Cross-section of upper portion of leaf x200. 36.-Basal leaf cells. x217. 37.—Upper leaf cells, x217. 38—Apex of leaf, x217. Figs. 39-54.-*Barbula subteretiuscula.* 39.--Habit of fertile plant, x3. 40.—Habit of sterile plant, x4. 41.-- Portion of sterile plant, x20. 42-47.--Leaves, x25. 48.—Cross-section of upper portion of leaf, x200. 49.—Apex of leaf, x200. 50.—Lower leaf cells, x200. 51.—Upper leaf cells, x220. 52.—Cross-section of basal portion of leaf, x200. 53.—Capsule, x8. 54.—Peristome, x50.