JUNGERMANNIA STYGIA, HOOK. F. ET TAYL.

By Wm. Hy. Pearson, M.Sc., A.L.S.,

Plate XXIII.

(Read 19th September, 1921.)

In Mr. Rodway's interesting and useful List of Tasmanian Hepatics (Proc. Royal Soc. Tasm., p. 74, 1916) reference is made to this species, and also to *Cesia erosa*, Carr. et Pears.

The following notes will clear up some misunderstanding with reference to these species.

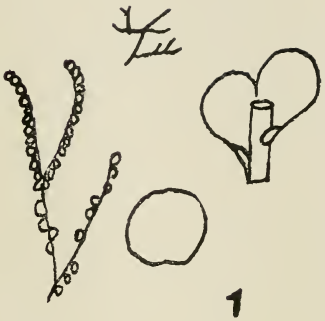
In Hooker's *Flora Antarctica*, *Jungermannia stygia* is described and figured as follows:—"Perpusilla, caule erecti, "laxe caespitoso ramoso, foliis erectis, subimbricatis, "appressis, obovatis, integris v. emarginatis, perichaetiis "rotundatis, caule duplo latioribus. (Tab. LXII., Fig. IV.)

"Hab. Campbell's Island, on rocks on the hills, growing "amongst other Hepaticæ and Mosses.

"Caules 2-3 lin. longi, crassiusculi, superne fusco v. atro-"purpurei, inferne fusco-olivacei, vage ramosi; ramis divari-"catis. Folia minima, subsecunda, alterna, vix imbricata "obovata v. oblonga, apices versus obtusos late emarginata, "segmentis obtusis, rarius integra, margine superiore inter-"dum scariosa. Perichaetia subrotunda, foliis imbricatis, "latiusculis, ad apices albidos, pleurumque scariosis.

"A very inconspicuous little species approaching *J. con-"cinnata* (Lightf.), of which it is probably the representative "in these islands; the leaves are, however, more distant, never "bifid at the apex, the stem slenderer, and the perichætia "sessile and round. Its colour is like *Gymnomitrium adustum*, "Nees, a German plant, with short and simpler stems."

In the Manchester Museum there is an original specimen of *Jung. stygia* from Campbell's Islands, and I have had the opportunity of microscopically examining the same; it is composed of two quite different species, one, which is figured by Hooker, being a round-leaved species, probably a *Jamesoniella*, and a *Gymnomitrium*, which it would be difficult to distinguish from *Gym. concinnatum* (Lightf.). Evidently the two species have been described as one, but with Hooker's



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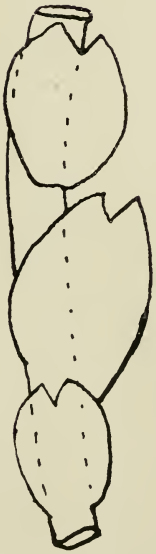

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Fig. 1. Copy of Hooker's figures from *Flora Antarctica*, Pl. LVII., fig. IV.

Fig. 2. *Gymnomitrium stygia* (H. et T.) Pears: x 50.

Fig. 3. *Jungermannia*, growing with *G. stygia;* x 50. (Campbell's Island, Hooker, original, ex herb. Manchester Museum.)

notes in English, that his *Jung. stygia* is related to *Gym. concinnatum* and *Gymn. adustum*, we may reasonably conclude that the stems of *Gymnomitrium* were his type of the species, so, as I have been unable to distinguish them from *Gymn. concinnatum*, I consider it as a synonym of that species.

Further, Mr. Rodway writes under *Gymn. concinnatum* (Lightf.), Corda (Trans. Roy. Soc. Tasm., p 74, 1916) :—"In "exposed situations on mountains the leaves more closely "appressed and entire; marginal cells elongated and irregular, "forming an erose colourless border.—*Cesia erosa*, C. et P." With this opinion I cannot agree.

The late Dr. Carrington, who was one of the most careful students of the Hepaticæ, and who spent endless time in their study, and before publishing anything as new would for weeks and months let his mind play freely round any species he was studying, had an undoubted opinion that *C. erosa* was a good and new species. I candidly admit that the specific name is misleading. One would naturally infer by the term "erosa" that the leaves were weathered, hence its name; on the contrary, although the leaf margins are irregular, they are bordered by a row of acute elongated cells, somewhat similar to those on the margin of the leaves of *Gymn. crenulatum* (G.). It certainly has no similarity to *Gymn. concinnatum* (Lightf.), to which Mr. Rodway refers it; this species is diœcious, whereas *Gym. erosa* is monœcious.

Stephani (Sp. Hep., vol. II., p. 3, 1906), under the generic name of *Acolea*, places *G. erosa*, C. et P., as a synonym of *Acolea stygia* (H. & T.) St. The above notes will show how mistaken he is.

He also refers *Gymn. vermiculare*, Schiffner (Ex. Gazelle, IV., p. 2), to *Acolea stygia*. Generally Schiffner's figures are very illustrative, but in this case it is difficult to make out what the species is; however, Schiffner is well able to defend the specific value of his species.

EXPLANATION OF PLATE XXIII.

Fig. 1. Copy of Hooker's figures from *Flora Antarctica*, Pl. LVII., fig. IV.

Fig. 2. *Gymnomitrium stygia* (H. et T.), Pears; x 50.

Fig. 3. *Jungermannia*, growing with *G. stygia*; x 50 (Campbell's Island, Hooker, original, ex herb. Manchester Museum.)