TYPIFICATION OF TIQUILIA DARWINII AND TIQUILIA FUSCA (BORAGINACEAE)

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The genus *Galapagoa* Hooker f. was published by Joseph Hooker in 1847. Hooker considered the genus to be endemic to the Galápagos Islands. In 1862, Asa Gray, recognizing their affinities with species in *Coldenia* L., transferred Hooker's two species to that genus. In 1937, John Thomas Howell, in a paper on the Galápagos coldenias, typified Hooker's names and described two new species. More recently, Richardson (1976) has recognized that *Coldenia* should be restricted to one species of southern Asia, and accordingly transferred those New World species hitherto included in *Coldenia* to *Tiquilia* Persoon. The purpose of this paper is to discuss Howell's typification of Hooker's two Galápagos species, the types of which Richardson did not see during the preparation of his monograph.

Tiquilia darwinii (Hooker f.) A. Richardson, Sida **6:** 236. 1976.

Galapagoa darwinii Hooker f., Trans. Linn. Soc. London **20:** 196. 1847.
Coldenia darwinii (Hooker f.) A. Gray, Proc. Am. Acad. Arts **5:** 341. 1862.

TYPE: "Chatham Island, *Charles Darwin, Esq.* Albemarle Island, *Mr. Macrae.*"

SPECIMENS EXAMINED: *Darwin,* Sept. 1835, Chatham Island (CGE, Mus. Henslow., here chosen as lectotype); *Macrae,* Albemarle Islds. (CGE, Herb. Lemann, syntype); *Macrae,* Albemarle Island (CGE, syntype); *Macrae,* Albemarle Isld. (K, Herb. Hook., syntype); *McRae,* Albemarle islds. (K, Herb. Hook., syntype); *Macrae,* Ins. Albemarle Gallipagorum (K, Herb. Benth., syntype).

Typification of this and the following species was misinterpreted by Howell (1937), and in turn the two species have been misinterpreted. Like many taxonomists before and since, Howell apparently thought that the first set of Darwin's Galápagos collections was at Kew and chose lectotypes accordingly. However, the first set is at Cambridge, those specimens at Kew being duplicates.

In attempting to typify this species, Howell, after examination of the Darwin and Macrae collections at Kew and Cambridge,

chose a Darwin specimen at Kew from Charles Island as the lectotype for this taxon: "For the type of the species, there should be no hesitancy in choosing Darwin's specimens in Herb. Hook. because (1.) the material is adequately covered by the original description of *G. darwinii* and is clearly included in Hooker's drawings of dissections; (2.) it is the first cited collection; (3.) the species named after Darwin should have as the type this specimen collected by him, if his plant is included in the original description. This decision is reached and held in spite of the fact that Darwin's collection in Herb. Hook. is labeled 'Charles Island,' while the island named both in the original description and in the data accompanying the specimen in Herb. Cantab. [CGE] is Chatham Island; and also in spite of the fact that the specimen from Charles Island by Darwin in Herb. Benth., which is labelled *G. darwinii*, is *C. fusca* and exactly corresponds to Edmonston's plant from Charles Island in Herb. Hook." (Howell, 1937, p. 101). The Edmonston collection is mounted on the same sheet as Howell's lectotype.

The specimens cited above under "specimens examined," being syntypes of *Galapagoa darwinii*, are the only ones available to serve as lectotypes, notwithstanding Howell's interpretation of Hooker's type description. Darwin's Chatham Island collection *does* fit Hooker's description of this taxon, as do the Macrae collections. Presumably, Howell thought the type should be at Kew, and no Chatham Island collection being there, a Charles Island collection was chosen. Today, his second and third reasons should not enter into lectotype selection (International Code of Botanical Nomenclature, "Guide for the determination of types," Note 4).

In addition, Hooker's drawings may or may not be attached to the specimens from which they were made. For example, his drawing of *Galapagoa fusca* at Kew is attached to *Andersson 175*, collected in 1852. Hooker's drawing of *G. darwinii* is attached to a Macrae collection which Howell chose as the lectotype of *Coldenia fusca!*

Tiquilia fusca (Hooker f.) A. Richardson, Sida **6:** 236. 1976.

Galapagoa fusca Hooker f., Trans. Linn. Soc. London **20:** 197. 1847.

Coldenia fusca (Hooker f.) A. Gray, Proc. Am. Acad. Arts **5:** 341. 1862.

TYPE: "Charles Island, *Charles Darwin, Esq.*"

SPECIMENS EXAMINED: *Darwin*, Sept. 1835, Charles Island

(CGE, Mus. Henslow., holotype); *Darwin,* end of Sept. 1835, Charles Island (K, Herb. Hook., isotype); *Darwin,* end of Sept. 1835, Charles Island, (K, Herb. Benth., isotype).

Misinterpretation of this species and the preceding was caused, in part, by Howell's (1937) lectotypification of *Coldenia darwinii* by the Herb. Hook. isotype of *C. fusca.* In turn, he typified *Coldenia fusca* by a syntype of *C. darwinii* [*Macrae,* Albemarle Island (K, Herb. Hook.)], all contrary to the International Code of Botanical Nomenclature. Howell chose this Macrae specimen because the Darwin collections (except for the Herb. Benth. specimen from Charles Island) already had been ascribed by him to *Coldenia darwinii.* Darwin's Herb. Benth. specimen was not indicated as a type, because Howell doubted that it had been collected on Charles Island. Whether it had been or not is beside the point; it was labeled as such by Hooker and cited as such by him in the protologue. Darwin's Charles Island specimens are the only ones that can serve for typification, and indeed they do fit Hooker's description.

This misinterpretation has led to Galápagos collections of *Tiquilia darwinii* to be determined as *T. fusca,* and vice versa, using the keys of Howell (1937) and Wiggins and Porter (1971).

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