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STUDIES IN THE BORAGINACEAE, XI

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1. THE SPECIES OF *TOURNEFORTIA* AND *MESSERSCHMIDIA*  
IN THE OLD WORLD

THE SPECIES treated here have, in the past, all been referred to the genus *Tournefortia*. I am, however, suggesting that certain of them be segregated to form the redefined genus *Messerschmidia*. During the work on this paper I have been privileged to examine almost all the type-specimens concerned. This has permitted me to place definitely a large number of poorly understood old species that have troubled workers in the past. The work has been undertaken as part of a projected study of the Boraginaceae-Heliotropioideae. It is the first attempt to treat all the Old World species of *Tournefortia* since the presentation by DeCandolle in the ninth volume of the *Prodromus* in 1845.

**Tournefortia** Linnaeus, Sp. Pl. 140 (1753) and Gen. Pl. ed. 5, 68 (1754).

The species of *Tournefortia* found in the Old World all belong to the following:

Section **EUTOURNEFORTIA** Johnston, Contr. Gray Herb. 92: 66 (1930). — type-species, *T. hirsutissima* L. *Tournefortia* — *Pittoniae* Humboldt, Bonpland & Kunth, Nov. Gen. et Sp. 3: 80 (1818). — type-

Scouler is known to have collected about the mouth of the Columbia and at many small ports along the coast of Washington and Vancouver Island. *Plagiobothrys medius* is the common species near the coast in northwestern Washington and on Vancouver Island, and there is every reason that Scouler should have encountered it. Though the nutlets of Scouler's collection show certain peculiarities not matched in the available material of *P. medius*, I believe that they can be accommodated in that concept. The nutlets of the type of *M. Scouleri* have the rather bony pericarp common in *P. medius*, but the ridge attending the lateral scar is very closely appressed to the latter and encloses an areole (entirely filled by the scar) scarcely, if at all, broader than long. The nutlets of *P. medius* are, however, very variable and I believe the nutlet-variations of *M. Scouleri* can be admitted without destroying the naturalness of the concept.

***Plagiobothrys hirtus*** (Greene), comb. nov. *Allocarya hirta* Greene, Pittonia 1: 161 (1888). *Allocarya Scouleri* var. *hirta* (Greene) Nelson & Macbride, Bot. Gaz. 61: 36 (1916). *Plagiobothrys Scouleri* var. *hirtus* (Greene) Johnston, Contr. Arnold Arb. 3: 52 (1932). *Allocarya calycosa* Piper, Contr. U. S. Nat. Herb. 22: 101 (1920).

I have indicated above that the type of *Myosotis Scouleri* H. & A. has been misinterpreted. The earliest correct name for the plant that has been called *Krynitzkia*, *Allocarya* and *Plagiobothrys Scouleri* is *Allocarya hirta* Greene. It is, however, strictly applied only to a local plant of the Umpqua Valley, Oregon, which has evidently spreading rather than appressed pubescence. The common form of this species must bear the following name:

***Plagiobothrys hirtus* var. *figuratus*** (Piper), comb. nov. *Allocarya figurata* Piper, Contr. U. S. Nat. Herb. 22: 101 (1920).

This strigose form ranging from Oregon to Vancouver Islands is common.

***Plagiobothrys hirtus* var. *corallicarpus*** (Piper), comb. nov. *Allocarya corallicarpa* Piper, Proc. Biol. Soc. Wash. 37: 93 (1924). *Plagiobothrys Scouleri* var. *corallicarpus* (Piper) Johnston, Contr. Arnold Arb. 3: 52 (1932).

A local form of southern Oregon characterized by its deeply alveolate nutlets.

***Plagiobothrys calandrinioides*** (Phil.) Johnston, Contr. Gray Herb. 78: 91 (1927). *Allocarya alternifolia* Brand in Fedde, Repert. 26: 169 (1929).