one sharp line in S. Africa—which is that of the Roodesand, Hex river, and Zwarteberg mountains, running eastward as far as Uitenhage, which cuts off the peculiar Cape flora (Ericaceæ, Proteaceæ, Rutaceæ, Restiaceæ) from the interior; and I believe that there exist few botanical boundaries as rigid where the black line runs as this; only at the extremities does it run into the other provinces. Grisebach unites the Karroo flora with the Cape province. Yet I doubt whether it does not differ more from this than from the Kalahari. At least it may prove better to establish another province, where the differences are so marked and striking.

The Roggeveld (and, indeed, the whole Karroo), by its predominance of shrubby Compositæ, surely inclines more to the desert type of plants than to the richer Cape flora.

Observations on some Indian Species of *Garcinia*.

By J. D. HOOKER, M.D., C.B., Pres. R.S.

[Read June 18, 1874.]

THE *Garcinias* of India were described, along with the other *Gut. tiferæ* of that country, by the late Dr. Thos. Anderson, Fellow of this Society, for the 'Flora of British India.' The manuscript was left with me previous to his death in 1870, and has been published in the second part of that work, together with a considerable number of supplementary notes and observations contributed by myself and enclosed within brackets.

Since the printing of that part, some very important contributions to our knowledge of the Indian species have been sent to me, and especially specimens of the little-known *G. indica*, Chois., the Brindall of the Portuguese, a plant quite unknown to modern botanists. Yet it was first brought to light by Garcias in 1574, and has been described both by Bauhin and Ray; and it is a native of the immediate neighbourhood of Bombay, is cultivated in gardens there and in the Mauritius, and both its fruit and seeds are in great use over a wide extent of western India.

G. INDICA, Chois.; *Flor. Brit. Ind.* i. 261.

Excellent specimens of leaves and fruits of this rare plant have been sent to me by Mr. Woodrow, Superintendent of the Dapoorie Botanic Gardens. I have also received the flowers and fruits from

Lt.-Col. Beddome, by whom they were collected in North Canara. From these materials, and from a good drawing recently published by Beddome in his 'Icones,' t. 276, it appears that the fruit is not mamillar at the apex. Either, therefore, this species must be removed from the group in which it is placed in Dr. Anderson's arrangement, and which is in part characterized by the mamillar fruits, or the latter character must be struck out of the diagnosis of the group. The latter is for the present the best course, the fruit being unknown in two other species, viz. *G. malaccensis*, Hook. f., and *G. bancana*, Miq.

Mr. Woodrow states that the tree is called "Amsool" by the Marattas, and the fruit known as "Kocum"—also that it flowers from November to December, and fruits from February to April.

G. MORELLA, Desrouss.; *Fl. Brit. Ind.* i. 264.

Under this species, as a variety, Mr. Hanbury has included the true Gamboge-plant of Siam, of which he has published an admirable figure and description in our 'Transactions,' from specimens cultivated at Singapore. Dr. Anderson does not admit this variety, and quotes Mr. Hanbury's paper under *G. Morella* itself, of which he describes no varieties.

Under *G. Griffithii* (*Flor. Brit. Ind.* i. 266) I alluded to a plant of Dr. Maingay's as being similar to it, but differing in the circumsciss anthers, and which was cultivated at Singapore as the true Gamboge of Siam. Not having examined the *Garcinias* myself, and misled by Anderson's suppression of var. *pedicellata*, I did not recognize this to be Mr. Hanbury's plant, which it assuredly is. It is so different in the habit of the male inflorescence from all the forms of *G. Morella* with which I have compared it, that I cannot but regard it as specifically distinct, and would suggest that it should bear the name of *G. Hanburyi*, after our eminent pharmacist. Its leaves differ from those of all varieties of *G. Morella* in their more ovate form and larger size, sometimes 7 by $4\frac{1}{2}$ inches; the fruit also is larger than that of *G. Morella*, as large as that of *G. Griffithii*, from which, however, this species differs wholly in the dehiscence of the anthers. The pedicel of the male flower is $\frac{1}{4}$ – $\frac{3}{8}$ inch long.

G. MERGUENSIS, Wight; *Fl. Brit. Ind.* i. 267.

Mr. Kurz informs me that he regards the Malacca specimen of this plant collected by Maingay (155, Kew distrib.) as not referable to Wight's *G. merguensis*, but to *G. rostrata*, Hassk. (*Discostigma*

rostratum, Hassk. Cat. Plant. Hort. Bog. 213); but in this he is assuredly incorrect. Maingay's specimens not only agree with Griffith's original ones from which Wight's drawings and descriptions were taken, but differ from specimens of *G. rostrata*, sent by Teyssman, in the much larger flower and different andræcium. There is, however, amongst Helfer's Tenasserim *Garcinias* one apparently identical with *G. rostrata*, collected in dense woods near the sea-shore; and the same occurs amongst Motley's Bornean collections, gathered at Banjarmassing.

G. EUGENIÆFOLIA, Wall.; *Fl. Brit. Ind.* i. 268.

This is apparently identical with *G. brevirostris*, Scheffer (*Obs. Phyt.* ii. 41), from Banca.

The three species *G. eugeniæfolia*, *G. merguensis*, and *G. rostrata* are very closely allied indeed; and if correctly referred, their known habitats are:—

G. eugeniæfolia, Singapore, Malacca, Banca.

G. merguensis, Tenasserim, Malacca.

G. rostrata, Tenasserim, Java, Borneo.

G. OVALIFOLIA, Hook. f., *Fl. Brit. Ind.* i. 269.

This name must give place to the previously published *G. ovalifolia* of Oliver (*Flor. Trop. Africa*, i. 166), and should be replaced by that of *G. spicata*, the species including as a form *Xanthochymus spicatus*, W. & A.

[*Note*.—*G. acuminata*, Wall. Cat. 4871, has not been taken up in the 'Flora of British India.' The specimens representing it in the Wallichian herbarium are a *mélange* of various widely different plants. Those corresponding to "A. Penang and Singapur, Wall. 1822," consist of *Ternstroemia penangiana*, Choisy, with leaves and fruits of probably two other plants; "B. Hb. Finlays." is represented by an indeterminate Anonacea.—W. T. THISELTON DYER.]