


Gunnera manicata and G. brasiliensis

Author(s): O. Stapf
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XXVI.—GUNNERA MANICATA AND G. BRASILIENSIS.

O. Stapf.

Dr. A. K. Schindler in his monograph of the *Halorrhagaceae* (completed by Prof. C. Mez; in Engl. Pflanzenreich, iv. 1905, 225) has two "*Gunnera manicata*, Lind." One (p. 122) is "*G. manicata*, Linden in Illustr. hortic. xx. (1873) 156 nec alibi," the other (p. 124) "*G. manicata*, Linden in Belg. Hortic. (1867) 104 (nec alibi, nomen nudum)." The former is retained as a distinct species, stated to have been introduced by Linden from Colombia, without precise indication of locality and to have been seen by the author in the Herbaria of Munich and Petersburg; the latter is made the basis of a new species, *G. brasiliensis*, Schindler, including *G. manicata* of Schwacke in Engler's Bot. Jahrb. xii. (1890) Beibl. 28, p. 1, and of Petersen in Engl. & Prantl, Pflanzenfam. iii. 7 (1893), 236, fig. 107. The distribution of this species is given as follows: "Brasilien. Rio de Janeiro, an Felsen am Abhang der Serra do Oratorio (Ule n. 1229, im März fruchtend," to which the author adds that he saw the plant in the Berlin Herbarium. As *G. manicata* is one of our noblest and most decorative foliage plants for water borders and lawns it seems to be worth while to inquire into the claims of the conflicting names.

It was Joseph Libon, a Belgian collector, who discovered the plant known in British gardens as *G. manicata*. He travelled for Jean Linden in Brazil between 1859 and 1861 when he died at Rio de Janeiro. Most of his work was done in the State of Santa Catharina which he explored from Desterro (Florianopolis) to beyond the watershed of the Serra do Mar. Here on the western side of the Serra do Mar, in the open grassy highland which stretches towards Lages (987 m.)—the Campos de Lages—the Gunnera was found growing in "régions froides et glacées . . . . dans les parties marécageuses au pied des premiers contreforts de la Serra do Mar," "glacées" meaning evidently not more than that snow and frosts occur. Linden advertised the plant as *G. manicata*, Lind. in his Prix-Courrant for 1867 and in Belgique Horticole, vol. xvii. p. 104 of the same year. No description was given in this place beyond the statement that each leaf attains to a circumference of 5 m. But about the same time Delchevalerie, Chef multiplicateur au fleuriste de la ville de Paris, gave a descriptive account (in Revue Horticole, 1867, 218) of the plant, a specimen of which was then to be seen in the International Horticultural Exhibition at Paris. This specimen had flowered with Linden the year before. Linden as well as Delchevalerie attribute the discovery of the plant to Libon and give the Serra do Mar as its home, a statement which Linden insisted upon when in 1875 he introduced another new Gunnera, this time from Colombia (Linden, Prix Courrant, f. 1875, p. 5). Meanwhile E. André had published a fuller description of *Gunnera manicata*, Linden, in Illustration Horticole, xx. (1873) 156, with the remark "Voici la description de cette magnifique espèce introduite par M. J. Linden, de la

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Nouvelle-Grenade. . . . ." This reference to New Granada or Colombia was evidently a slip of the pen, as is evident from his observation that Linden had introduced it about ten years ago (about 1863) and his reference to the establishment de la Muette where we know from other evidence the South Brazilian plant had by then been in cultivation for several years. A coloured figure of a barren specimen of *Gunnera manicata* appeared in Illustration Horticole, xxx. (1884) 128, t. 531, and another description of the species by J. G. Baker in the Gardeners' Chronicle for the 3rd July 1886 (ser. iii. vol. xxvi. p. 8). So far all our knowledge was based on the plant introduced from the Campos de Lages; but in 1890 Schwacke published a paper on *G. manicata* (in Engl. Bot. Jahrb. Bot. 28, pp. 1–3), in which he amplified the earlier descriptions of the species from some fruiting material collected by Ule in the Serra do Oratorio, 700–1200 m., and from notes and drawings received from Fritz Müller in Blumenau, Santa Catharina. The Serra do Oratorio is part of the Serra do Mar, immediately south of the Serra de Trombuda which Libon must have crossed on his way from the Rio Trombuda to Lages, if indeed he did not himself pass the Serra do Oratorio on his way back from Lages to Laguna. Thus Libon's and Ule's localities are either identical or in very close proximity. Where exactly Fritz Müller made his observations on *G. manicata* is not known, but his home being at Blumenau the Serra do Mar was easily within his reach. It is therefore evident that the area of *G. manicata* as known up to the date of Schwacke's paper, that is 1890, was limited to a portion of the Serra do Mar of Santa Catharina, situated between 700 and 1200 m. This area possesses a typically mild-temperate climate with occasional snowfall and frost during the winter and an annual rainfall (1250–2000 mm.) very like that of Western Great Britain, a fact which explains the perfect development of this majestic herb in certain parts of this country.

In Germany *G. manicata* is less at home; but fine specimens have been grown in the Botanic Garden of the University of Erlangen, Bavaria. These provided the material for two valuable papers on its external and internal morphology, namely Berckholtz's Beiträge zur Kenntniss der Morphologie und Anatomie von *Gunnera manicata*, Lind. (9 plat.) in Bibliotheca Botanica, v. Heft. 24 (1891), and Jonas, Über die Inflorescenz und Blüte von *Gunnera manicata*, Lind., Jnaug. Diss. Erlangen 1892. Neither seems to have been consulted by the authors of the monograph of the *Halorrhagaceæ* in the Pflanzenreich.

From the account given above it is clear that there is no basis for a Colombian *G. manicata* as distinct from a Brazilian species of the same name and consequently for the renaming and the assumption of a tropical habitat for the latter. Thus *G. brasiliensis* becomes a mere synonym of *G. manicata* which should be attributed to Linden ex Delchevalerie or Linden ex E. André. This contention might appear to be challenged by the treatment which the two supposed species experienced in the key of the species of Gunnera in Schindler-Mez's monograph. There "*G. manicata*" (i.e. the Colombian plant) is grouped with the species possessing "ramuli fructiferi gracillimi haud incrassati,"

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and *G. brasiliensis* with those having "ramuli fructiferi crassi, carnose aucti." The branches of the inflorescence of *G. manicata* as understood here are slender when in flower and shrink considerably when dried, and might be described as "graciles" or even "gracillimi." They become thickened only on attaining to maturity, when they may measure up to 8 (rarely 10) mm. in diameter, that is less than those of *G. chilensis*. As the monographer says of his *Gunnera manicata* "Fructus ignotus," it is evident that the "ramuli fructiferi" which he described as "haud incrassati" and in the key, and only there, as "gracillimi" were not mature.

It may be added that Fritz Müller in a letter to Darwin preserved in the Herbarium at Kew, received in October, 1875, writes: "Lately I had an opportunity of examining the flowers of a very stately species of *Gunnera* (the gigantic leaves not springing from the ground, but from the tips of an erect palm-like stem, about 4 met. high) . . . . " Overleaf there are drawings of the flowers of this *Gunnera* exactly like those which he sent to Schwacke (*see above*) and written up as "*Gunnera* (*manicata*?)." The formation of an aerial stem of such dimensions in *G. manicata* is very remarkable, and probably exceptional; but it may be pointed out that Nicholson in his Dictionary of Gardening, ii. 103, fig. 157, figures a specimen of *Gunnera scabra* with an ascending aerial stem which to judge from the dimensions of the leaves might have been well up to 1 m. high.

XXVII.—MISCELLANEOUS NOTES.

James William Helenus Trail.—The death of Professor J. W. H. Trail, M.D., F.R.S., on 18th September, 1919, in a nursing home at Aberdeen, has deprived Kew of a very devoted friend and valued correspondent. The son of the Rev. Dr. Samuel Trail, he was born at Birsay in Orkney, where his father was parish minister, on 4th March, 1851. After a sound preliminary education at home, Trail was sent to the Grammar School, Old Aberdeen, and having passed through the various classes there, proceeded to the University in 1866. The taste for natural history studies, already marked during his school days, became accentuated in the course of his undergraduate career, and resulted in his obtaining his master's degree in 1870, with honours in natural science. Entering the medical faculty his academic record there was equally distinguished, though this did not deter him from laying aside his professional studies in autumn, 1873, in order to take advantage of an opportunity which had offered itself to him of joining, as botanist, an expedition to Brazil, organised by the Amazon Steam Navigation Company. Returning from this journey, which extended over 16,000 miles on the river Amazon and its tributaries, in 1875, Trail resumed his medical studies and graduated as M.B., in the following year, with highest academical honours.

The value and character of the collections, both zoological and botanical, obtained by Trail during his Amazon expedition, and the ability and thoroughness with which he proceeded to work

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