The Rhododendrons of Ceylon, South India and Manipur

BY
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WITH PLATE CCLIII.

After they had lain forgotten in a herbarium for more than half a century, specimens of a little-known Rhododendron from Manipur in North-east India were recently brought to light. The discovery, in itself a matter of interest, has proved unexpectedly to have a direct bearing upon certain well-known garden plants, and is thus of more than passing interest to horticulture as well as to botany.

It was in the private herbarium of the late Sir George Watt that the specimens were found, the original types of his *Rh. Kingianum*. Attached to the sheets (Watt, No. 6535) there is a description and a coloured drawing made by Watt himself in 1882, with a note of the name *Rh. Kingianum* Watt, proposed by him in honour of Sir George King, then Superintendent of the Royal Botanic Garden, Calcutta.

At once it was apparent that this unknown Manipur plant by no means resembles the one which we are accustomed to call *Rh. Kingianum*, a species well known in gardens. The discrepancy called for some explanation.

What is *Rh. Kingianum* of gardens which is certainly not *Rh. Kingianum* of Watt ? On looking into literature we find the first published reference to the name *Rh. Kingianum* in the Gardeners' Chronicle for 1899, where the writer comments upon a plant growing at Kew, which he states was raised from seed of Watt's Manipur plant. In 1900 the same plant was formally described for the first time by Sir Joseph Hooker, who gave it the name *Rh. arboreum* Sm. var. *Kingianum* Hook. f. (Bot. Mag. t. 7696). Now, Hooker gives an excellent description and figure—but of a plant altogether different from Sir George Watt's Manipur plant. Although Hooker states that the plant he describes was raised from seed of Watt's Manipur plant, obviously some mistake has been made. Knowing that *Rh. Kingianum* of gardens (Hooker's *Rh. arboreum* var. *Kingianum*) is not Watt's plant, and therefore quite likely not from Manipur, I examined it again and came to the conclusion that there is really no essential difference between it and plants which are grown under the name *Rh. zeylanicum*. But then, *Rh. zeylanicum* is a name which has been attached to cultivated plants, never to a wild plant. May we presume that *Rh. zeylani-*

cum of gardens originated in Ceylon and that Sir George Watt might have sent home seed ? We come, therefore, to the questions—Is *Rh. zeylanicum* of gardens the wild plant of Ceylon ? and, What is the correct name of the wild Ceylon Rhododendron, which in local floras is known as *Rh. arboreum* ?

To answer these questions requires further research—not without general interest, for it concerns Rhododendrons which have been in gardens for a long period. As soon as we begin to examine old records and to study the Ceylon plant in detail, we find that the Ceylon and South Indian Rhododendrons have been much confused, and in the course of time they have acquired an extremely complex and utterly entangled nomenclature. Is there one or more than one species native to these regions ? Botanists have held different opinions.

In order to reach some conclusion about the wild plants, before considering those in gardens, I wrote to Peradeniya for specimens of the Ceylon Rhododendron, in order to supplement the rather scanty material available in herbaria. Further, in the gardens of the late Mrs. Campbell of Arduaine, of Mr. T. North Christie of Blackhills, and of the Earl of Stair, I had the privilege of examining authentic Ceylon plants, which they personally had introduced from Ceylon. The Ceylon Rhododendrons now at Arduaine are nearly thirty years old and flower freely. So far I was obviously dealing with a single species.

As to plants from South India, I received material from Kew and Calcutta, as well as specimens and seed from the Conservator of Forests, Madras. At the Royal Botanic Garden, Edinburgh, there are young plants raised from seed sent from Madras in 1927 by Mr. Latham, formerly of the Indian Forest Service, to Mr. C. E. C. Fischer of Kew. Again, all the Madras plants I examined obviously belonged to one species. And further, it was apparent that the Ceylon and the Madras Rhododendrons, although similar, are by no means identical.

But meantime, while the above enquiry was in progress, the late Dr. Stapf published an account of the South Indian and Ceylon Rhododendrons in an article entitled " *Rh. nilagiricum* " (Bot. Mag. t. 9323, 1933). He directed attention to the great confusion there had been in literature, not only between these two Rhododendrons, but also between them and the Himalayan species *Rh. arboreum*. He did much towards clearing up the complexity in nomenclature, by sorting out the various species under their different names, and in listing synonymous names, but regarded *Rh. nilagiricum* and *Rh. zeylanicum* as conspecific. While I agree with Dr. Stapf's view that the South Indian and Ceylon plants are distinct from the Himalayan *Rh. arboreum*, I am less inclined to follow him in uniting them under one name. As I have mentioned, they are not identical, although differing less markedly from each other than from *Rh. arboreum*. It will make for clarity and, in my opinion, be more accurate to regard them as distinct. Besides, it should be noted that Dr. Stapf's account

is incomplete, because he did not realise that *Rh. Kingianum* must also be brought into the story, although it adds still further to the complexity of nomenclature and synonymy. Before answering the questions which have been put, several points require further consideration. Four distinct plants demand our attention: the Himalayan plant, the Madras plant, the Ceylon plant, and the Manipur plant.

The Himalayan Plant.

The Himalayan plant, *Rh. arboreum* Sm., is distributed along the whole Himalayan chain. It is common in the west on the Murree Hills near Rawalpindi and throughout Nepal, occurring in the Punjab, near Simla, at the comparatively low elevation of 4,000 feet. In the Darjeeling district of Northern Bengal and in adjoining Sikkim, where it is the predominating species over many square miles of mountain forest, I have found it only at elevations above 9,400 feet. Common, too, in the higher parts of Bhutan, it spreads to the Kashia and Naga Hills in Assam, and there are several records of particular interest of its occurrence in Burma. *Rh. Delavayi* Franch., but a variation of the Indian plant, extends far into Yunnan. Even if we use the name *Rh. arboreum*, as some would, to include *Rh. Delavayi*, this species is quite distinct from South Indian and Ceylon plants.

Rh. arboreum Sm. concerns us here only in that it is necessary to point out that certain authors have used the name to include the Nilgiri or the Ceylon species or both. Thus de Candolle in 1832, under the name *Rh. arboreum* var. *roseum*, included both a Nepal and a Nilgiri plant (DC. Prod. vii, p. 72). He was followed by Sweet, Brit. Fl. Garden, ser. 2, t. 339 (1838), and by Lindley, Bot. Reg. t. 1240 (1829). There is an excellent figure of the South Indian Rhododendron under the name *Rh. arboreum* var. *roseum* in Wight's Icones, t. 1201, and in his Spic. Neilgh. ii, t. 131.

On the contrary it must be observed that the name *Rh. nilagiricum* has been wrongly applied to the Himalayan plant. The most important instance is where the Botanical Magazine, t. 4381 (1848), under the name *Rh. nilagiricum*, represents not the Nilgiri plant, but a form of the Himalayan *Rh. arboreum*. Other writers have again copied this error by giving the Nilgiris as the locality while describing the Himalayan plant. Descriptions under the name *Rh. arboreum* Sm. var. *nilagiricum* are also often at fault, and refer, at least in part, to the Himalayan plant, as in Loudon, Encycl. Pl. Supp. 2 (1855), 1364; Nicholson, Ill. Dict. Gard. iii (1884–88), 296; Tagg in Species of Rhod. (1930), 15, and Bailey, Stand. Cycl. Amer. Hort. v (1916), 2939.

It must also be noted that the often-repeated statement, that *Rh. nilagiricum* was introduced to cultivation in 1840, refers not to *Rh. nilagiricum*, but to a form of *Rh. arboreum*, the seed having been gathered in Kumaon, North-west India. Finally, the name *Rh. arboreum* is, as we have noted, applied to the Ceylon plant in local floras.

The Madras Rhododendron.

The Madras Rhododendron, *Rh. nilagiricum* Zenk., was first described by Zenker in 1836 from material sent him from the Nilgiris by the Rev. Schmidt. *Rh. nilagiricum*, being the oldest name, should be retained for the Nilgiri plant. In writing of this species, under whatever name they have happened to use, most writers have made it quite clear that they are describing or drawing the Nilgiri plant, and figures, descriptions, herbarium specimens, and plants in cultivation are consistent with regard to the criteria by which this species is distinguished. Whenever it can be definitely established that a plant or specimen is of South Indian origin, the leaves are shorter and more bullate than those of *Rh. arboreum*, narrower than those of the Ceylon plant, and eglandular ; the flower stalks are densely hairy and so is the calyx, which is a mere rim ; the colour of the flowers may vary from an intense scarlet to shades of pink or crimson. Mr. Latham informs me of an interesting point, that he believes the flowers are always scarlet except on shoots which are attacked by a fungus causing witches' brooms.

I have mentioned that Dr. Stapf in his recent article on *Rh. nilagiricum* has united with it the Ceylon plants ; fortunately he figures the species from the Nilgiri Hills. But on the other hand, as I have already stated, certain figures under the name *Rh. nilagiricum* are not of the Madras plant—thus Bot. Mag. No. 4381 is *Rh. arboreum*.

The Madras species has from time to time borne the various names noted in the following table of synonyms :—

Rhododendron nilagiricum Zenker, Pl. Ind. ii (1836), 15. Ann. Sci. Nat. sér. 2, vi, p. 150 ; Planchon, Fl. de Serres, v (1849), 477–480 k-l ; Loudon, Encyl. Pl. Suppl. 2 (1855), 1364 ; Nicholson, Ill. Dict. Gard. iii (1884–88), 296 ; Garden, xxxvi (1889), 54 ; Gamble, Fl. Presid. Madras (1921), 743 ; Millais, Rhododendrons, ser. 2 (1924), 85, 194 ; Tagg, Species of Rhododendron (1930), 15 ; Rhodo. Assoc. Year Book (1936), 138 ; Stapf in Bot. Mag. clvi (1933), t. 9323, pro parte.

Rhododendron nobile Wall. Cat. No. 1521 (1828), pro parte.

Rhododendron arboreum Royle, Ill. Bot. Himal. Mts. (1833), 30 pro parte ; Wight, Ill. Ind. Bot. ii, 122, t. 141, fig. A, sed non t. 140 (1850) ; Wight, Icones, iv (1850), 6 ; Beddome, Fl. Sylvat. t. 228 (1872) ; Fyson, Fl. Nilgiri and Pulney Hilltops, i, 261, ii, t. 179 (1915) ; C. E. C. Fischer, Records Bot. Surv. India, ix, 1 (1921), 106, non Smith.

Rhododendron arboreum var. *nilagiricum* C. B. Clarke in Fl. Brit. Ind., iii (1882), 466 ; Bailey, Cycl. Amer. Hort. iv (1902), 1522, pro parte ; Stand. Cycl. Hort. v (1916), 2939 ; Millais, Rhododendrons (1917), 117 ; Bean, Trees and Shrubs Hardy Brit. ii (1921), 342 ; Rhodo. Soc. Notes, iii (1928), 210.

Rhododendron arboreum var. *roseum* DC. Prodr. vii (1838), 720; Wight, Icones, iv (1850), t. 1201; Wight, Spic. Neilgh. ii (1851), 26, t. 131.

The Ceylon Rhododendron.

The Ceylon plants, with no less consistency than is shown by the South Indian species, have a well-marked calyx with distinct lobes, and both these and the pedicels are glandular. The leaves are very bullate, the lamina is much recurved and the midrib of the under side of the leaf is glandular, so that the young leaves are quite sticky to the touch, whereas glands appear to be absent or rare in *Rh. nilagiricum*.

But now we come to what is perhaps the most complicated part of our investigation. The wild plant from Ceylon has never been authoritatively named and described. What should it be called? In the Ceylon Floras it passes under the name *Rh. arboreum*, from which it is distinct. The earliest formal description, supposed to be connected with the Ceylon plant, is that given under the name *Rh. Rollissonii* in the Gardeners' Chronicle in 1843. But here the author takes the trouble to point out the differences between his species and the Ceylon plant, and suggests that *Rh. Rollissonii*, which is a garden plant, may be of hybrid origin. In a later and more detailed description in Paxton's Flower Garden, i (1853), t. 7, the same plant is described under the title *Rh. Rollissonii* alias *Rh. zeylanicum* of gardens, and the Latin diagnosis shows that *Rh. Rollissonii* does not altogether agree with the plant native to Ceylon. At the present time we seem to have in cultivation, under the name *Rh. Rollissonii*, both the Ceylon plant and hybrids as well.

Undoubtedly the Ceylon plant has been in cultivation from about 1843, and apparently from its first introduction has been known as *Rh. zeylanicum*. In gardens I have seen nothing under the name *Rh. zeylanicum* that did not match the wild plant from Ceylon. But the name appears in print for the first time as the title to a short paragraph by Booth, gardener to Sir Charles Lemon, in the Gardeners' Chronicle, March 1850, and here Booth mentions a plant which he states to be identical with *Rh. Rollissonii*—but probably only with certain plants under this name. Under the name *Rh. Kingianum*, first published in the Gardeners' Chronicle in 1899, reference is made to a plant, which from subsequent description and recent investigation appears to have been raised from Ceylon seed. Sir J. D. Hooker's later description of this cultivated plant under the name *Rh. arboreum* var. *Kingianum* is, clearly, a good drawing and description of the wild Ceylon plant, although he gives the place of origin as Manipur. Hooker had not seen the Manipur plant in Sir George Watt's herbarium.

We can, therefore, leave aside the names *Rh. arboreum* and *Rh. nilagiricum*, which are already occupied, and have three possible specific names for the Ceylon plant—*Rh. Rollissonii*, *Rh. zeylanicum*, and *Rh.*

Kingianum. The oldest name, *Rh. Rollissonii*, was applied to cultivated plants of doubtful origin, suggested hybrids—and may therefore be set aside. The name *Rh. zeylanicum*, although first published without description and used only in connection with cultivated plants, seems from the earliest times to have been applied to plants which originated in Ceylon. In later publications, such as Millais' Rhododendrons and the Species of Rhododendron, the name is applied to the wild Ceylon Rhododendron. *Rh. Kingianum* was published as a name without description, although the plant was later fully described as *Rh. arboreum* var. *Kingianum*. As a specific name *Rh. Kingianum* has consequently no standing. I therefore propose to retain the name *Rh. zeylanicum* for the Ceylon Rhododendron and to supply a Latin description. The various names by which the Ceylon plant has from time to time been known are quoted in the following list of synonymy.

Rh. zeylanicum Booth nomen descript. Cowan.

Booth in Gard. Chron. (1850), 150; Millais, Rhod. (1917), 117; Millais, Rhod. ser. 2 (1924), 263 and fig. 262; Species of Rhod. (1930), 16; Rhod. Assoc. Year Book (1936), 180.

Rh. Rollissonii Loudon, Encycl. Pl. Suppl. 2 (1855), 1364; Nichols. Ill. Dict. Gard. iii (1884–88), 296; Bailey, Cycl. Amer. Hort. iv (1902), 1525 *vix* Lindl. Bot. Reg. xxix (1843), t. 25, et Gard. Chron. (1843), 375.

Rh. arboreum Thwaites, Enum. Pl. Zeyl. (1860), 170; Trimen, Handbk. Fl. Ceylon, iii (1895), 63; Parkin and Pearson, Journ. Linn. Soc. xxxv (1908), 443, 445, 453; Willis, Revised Cat. Ind. Fl. Pl. of Ceylon (1911), 50; Gleason in Torreya, xvi (1916), 40, fig. 34; C. Ingram in Gard. Chron. ser. 3, lxxx (1926), 289, fig. 134, non Sm.

Rh. arboreum var. *zeylanicum* Millais, Rhod. Soc. Notes, i (1916), 33; Millais, Rhod. (1917), fig. p. 24; Rhod. Soc. Notes, iii (1928), 210.

Rh. arboreum var. *nilagiricum* Pearson, Journ. Linn. Soc. London, Bot. xxxiv (1899), 304, 349; Parkin and Pearson, ibid. xxxv (1908), 436, non *Rh. nilagiricum* Zenk.

Rh. arboreum var. *Kingianum* Hook f. in Bot. Mag. (1900), t. 7696; Bailey, Cycl. Amer. Hort. iv (1902), 1522; Bailey, Stand. Cycl. Hort. v (1916), 2939; Millais, Rhod. Soc. Notes, i (1916), 33; Rhod. Soc. Notes, iii (1928). p. 210, non *Rh. Kingianum* Watt MSS.

W. Watson *Rh. Kingianum* Gard. Chron. ser. 3, xxvi (October 21, 1899), 306–7; Millais, Rhod. (1917), 199; Millais, Rhod. ser. 2 (1924), 168; Species of Rhod. (1930), 15; Rhod. Assoc. Year Book (1936), 124, non Watt MSS.

Rh. Kingii or *Rh. Kingianum* Millais, Rhod. (1917), 117, non Watt MSS.

Rh. nilagiricum Stapf in Bot. Mag. (1933), t. 9323, pro parte, non Zenk.

Rh. sp. nov. Planchon in Fl. de Serres, v (1849), 477–80 l.

Species affinis *Rh. arboreo* Sm. a quo foliis pro rata latioribus bullatis, lamina revoluta, floribus minoribus, calyce pedicellisque glandulosis differt ; a *Rh. nilagirico* Zenk. foliis infra glandulosis, calyce majore glanduloso-ciliato, pedicellis glandulosis, ovarii glandulosi indumento pilis fasciculatis pluri-radiatis pluribus longioribus composito recognoscitur.

Frutex vel arbor fere ad 20 m. alta. Rami ultimi crassi 1 cm. diam. ; hornotini glanduloso-puberuli, annotini griseo-rubescentes tomenti vestigiis obtecti deinde decorticantes. Alabastrorum perulae late ovatae vel spathulatae abrupte acuminatae circa 2·5 cm. longae, 1·5 cm. latae, utrinque nisi ad marginem dense sericeo-hirsutae. Folia coriacea, petiolo robusto 1–2 cm. longo munita, elliptica vel elliptico-oblonga, 4–12 cm. longa, 3–5 cm. lata, apice obtusa, margine multo revoluta, basi rotundata vel nunc truncata vel fere cordulata, supra atroviridia glabra bullata, costa nervisque utrinque 12–20-paribus arcuatis valde impressis, infra flavido- vel rufo-tomentosa, pilis longis fasciculatis dense appressis setis glandulosis intermixtis obtecta, costa valde elevata rugulosa glutinosa setis glanduloso-capitatis induta, nervis prominentibus plus minusve glandulosis. Inflorescentia umbellata densiflora. Pedicelli 1–1·5 cm. longi bracteolis perpaucis subulatis sericeo-pilosis glandulosis muniti. Calyx parvus inaequaliter 5-lobatus, lobis conspicuis rotundatis dorso glanduloso-pilosis vel nunc fere glabris margine dense glanduloso-ciliatis. Corolla campanulata circ. 4 cm. longa coccinea immaculata lobis emarginatis. Stamina 10 corollae tubum aequantia, filamentis glabris. Gynaeceum truncato-ovoideum pilis fasciculatis longioribus dense obtectum, stylo glabro.

Ceylon, Gardner, No. 501 (Kew). Neura Ellia, Feb. 1840, C.P. 521. Thwaites. 6–8,000 ft., No. 36 ? C.P. No. 149 (Calcutta). Walker, Ceylon (Kew, sub *Rh. Rollissonii*), Ceylon, 1836, Wight prop.

The Manipur Rhododendron.

Since the name *Rh. Kingianum* has been used for the Ceylon species, it cannot now be used for the Manipur plant, which must accordingly have a new name, and I propose to call it *Rh. Wattii*, basing my description upon Watt's original notes. It is distinct enough from *Rh. arboreum* and is not closely akin to the South Indian and Ceylon plants.

Rh. Wattii Cowan sp. nov.

Rh. Kingianum Watt MSS. non *Rh. arboreum* Sm. var. *Kingianum* Hook. f.

Species affinis *Rh. arboreo* Sm. sed foliis pro longitudine latioribus, nervis paucioribus, floribus roseis purpureo-maculatis, corolla 6-loba satis differt.

Arbor parva 3–7 m. alta. Ramuli juniores striati nigricantes, indumenti floccosi vestigiis praediti, seniores teretes erubescentes fere glabrescentes. Alabastrorum praelongorum perulae infimae breve acuminatae nunc cuspidatae margine breve ciliatae superiores suborbiculares obtusae puberulae ultimae lineari-oblongae glutinosae distincte pubescentes. Folia 6–16 cm. longa, 2·5–4 cm. lata; lamina coriacea oblonga vel oblongo-ovata abrupte acuta, basi cuneata, margine submembranacea flavida, supra glabra pallide viridis costa nervisque sulcatis bene reticulata, infra indumento persistente bistrato dense ferrugineo-tomentoso (costa nervisque prominentibus exceptis) praedita. Petiolus robustus rugosus paulo costatus parce puberulus, 2·5 cm. longus. Flores circa 16 ad apicem ramulorum congesti breve pedunculati, bene bracteati. Bracteae sub anthesi plus minusve persistentes pilis aureis tenuibus dense vestitae, exteriores sessiles anguste obcordatae concavae apice apiculatae 3 cm. longae, 1 cm. latae, interiores binae breviores subulatae. Calyx parvus viridis margine pallidior, lobis 5 obscuris inaequalibus parce puberulis. Corolla tubuloso-campanulata, 6-loba, rosea, inter nervos 12 pallidos eleganter purpureo-maculata, basim versus macula majore brunneo-purpurea tincta; tubus 5 cm. longus, 2 cm. latus, ad medium paulo dilatatus; lobi emarginati erosi recurvati. Stamina 10 inaequalia corollae tubo vix breviora; filamenta glabra. Ovarium ovoideum truncatum circa 5 mm. longum pilis longis albis multiramosis obsitum. Stylus viridis glaber decurvus; stigma rotundum fuscum.

Assam, Manipur, Ching Sow, 9,000 ft. April 1882. Sir George Watt, No. 6535.

The late Sir George Watt described this species in English, and I have used his notes freely.

"A tree 10–20 feet in height, with erect stem and few straggling terminal branches. Leaves 2–6 by 1–2 inches, the upper smaller often quite elliptic, margin submembranaceous yellow, upper surface pale moss green, glabrous, the midrib and veins depressed, petiole stout, glabrous, wrinkled olive green as also the midrib, 1 inch long. Leaf-buds developing after the flowers have faded, ovate-oblong with lowermost scales shortly acuminate or terminating in a longish awl, next within obtuse and perhaps $\frac{1}{4}$ inch long and broad, ultimate scales linear oblong obtuse 1 inch long, all deep olive green with pale margins coated with a thick sticky fluid. Flower-buds round, bracts three to each flower, the outer sessile linear oblong obtuse deeply concave with spreading margin and shortly mucronate completely coated with delicate golden hairs on both surfaces, inner pair persistent, lateral to peduncle, awl-shaped, about $\frac{1}{2}$ inch long. Inflorescence a rounded head of sixteen flowers, terminating lateral twigs; flowers large, 2 inches long, pink and purple, deep purple in bud, crowded, pedicles thin glabrous $\frac{1}{2}$–$\frac{3}{4}$ inch long. Calyx green with pale margin very short, a ring with fine teeth, two very much smaller than the others and convergent.

Corolla tubulo-campanulate with long uniform tube, very slightly inflated near the middle, angled. Mouth wide, round, ending in six short obtuse emarginate, minutely-toothed, recurved lobes, with deep purple patches on either side of midrib ; corolla pink with three parallel veins and reticulations corresponding to each lobe [*sic*], white transparent, upper lobe and first lateral pair spotted with transverse hooked deep purple patches between the veins and having deep purple-brown triangular patches at the base of the tube paler in the lower lobes. Stamens 10, about as long as the corolla tube, reclining upon the lower petals, anthers dark brown, filaments white glabrous ending in rounded thickenings. Pistil with style green, stigma terminal, round brown, ovary obtuse with style rising from the lower side and clothed with long white hairs in which the filaments are embedded."

He adds the following observations :—

" This charming plant seems exceedingly scarce. It was met with on the summit of Ching Sow to the right of where the path crosses the crest to north-east. When we crossed everything was then enveloped in dense fog and this together with the fact that we were pushing on to try to approach as near as possible to the lofty Sarameti prevented a more thorough search from being made. Only some two or three trees were seen and but one flower. Although the material is thus not all that I could have desired I have no hesitation in considering this a perfectly distinct species and have named it in honour of my distinguished friend Dr. Geo. King (since Sir George), Superintendent of the Royal Botanic Gardens, Calcutta. Through Dr. King's hearty co-operation and warm support I am greatly indebted for the pleasure of being deputed to Manipur and I trust I am associating his name with a plant which will soon be rediscovered in sufficient abundance to allow of its truly lovely flowers and graceful foliage being better known. *Rh. Kingianum* is nearly allied to *Rh. argenteum* on the one hand and to *Rh. Hodgsoni* on the other. From the former it is easily separated by the densely matted, pale, ferruginous undersurface of the leaves and the pink and purple spotted flowers with bracts hairy all over—not in the middle only. From the latter by the leaves not being obtuse nor coriaceous and by the midrib and veins being green and naked, not embedded in the felt as in *Rh. Hodgsoni*. In some respects the leaf of *Rh. Kingianum* approaches in texture, in crumpled upper surface and in the colour and nature of the ferruginous tomentum more closely to *Rh. Falconeri* (although not in veination nor shape of leaf) than to any other member of this series. Its delicate pink and purple flowers with transparent parallel veins and brilliant deep purple spots make *Rh. Kingianum* a pleasing addition and in point of flower commands for it a prior position to *Rh. Hodgsoni*, its only other red-coloured associate."

From the above account it would seem improbable that Sir George Watt actually obtained seed of this species. The plant was in flower

when he collected it, and he saw only one or two trees. At a very much later date he has, however, himself added a marginal note to the above. " This is being grown in Kew from my seed and I believe it flowered, but I don't recollect if it has been described. I made a coloured plate with the live plant in my hands. This was copied in Calcutta and made into a full-sized drawing." At Edinburgh we have this plate, which is *Rh. Wattii*, not the plant figured by Hooker in the Botanical Magazine.

Did Watt actually send home seed of his Manipur plant ? This question cannot be answered ; certainly the plants raised at Kew were not raised from seed of the Manipur plant, but it is interesting to note that we have in the Edinburgh herbarium one sheet from Kew and several from Admiral Heneage-Vivian, Clyne Castle, Swansea, and from Messrs. R. Gill & Sons, Penryn, Cornwall, of cultivated specimens, the origin of which cannot be traced, and they all match very closely our herbarium specimens of *Rh. Wattii*.

Summary and Conclusions.

(1) The Rhododendron of the Himalayas (*Rh. arboreum* Sm.) and the Rhododendrons of South India, of Ceylon, and of Manipur (Watt's plant) are regarded as distinct species.

(2) The South Indian Rhododendron is *Rh. nilagiricum* Zenker.

(3) The Ceylon Rhododendron is *Rh. zeylanicum* and is fairly common in gardens ; here it is described in Latin for the first time as a species.

(4) *Rh. Kingianum* of gardens (*Rh. arboreum* Sm. var. *Kingianum* Hook. f.) is not Watt's Manipur plant, but *Rh. zeylanicum*.

(5) Watt's Manipur Rhododendron (*Rh. Kingianum* Watt MSS.) is *Rh. Wattii* Cowan, and is here described in Latin for the first time.

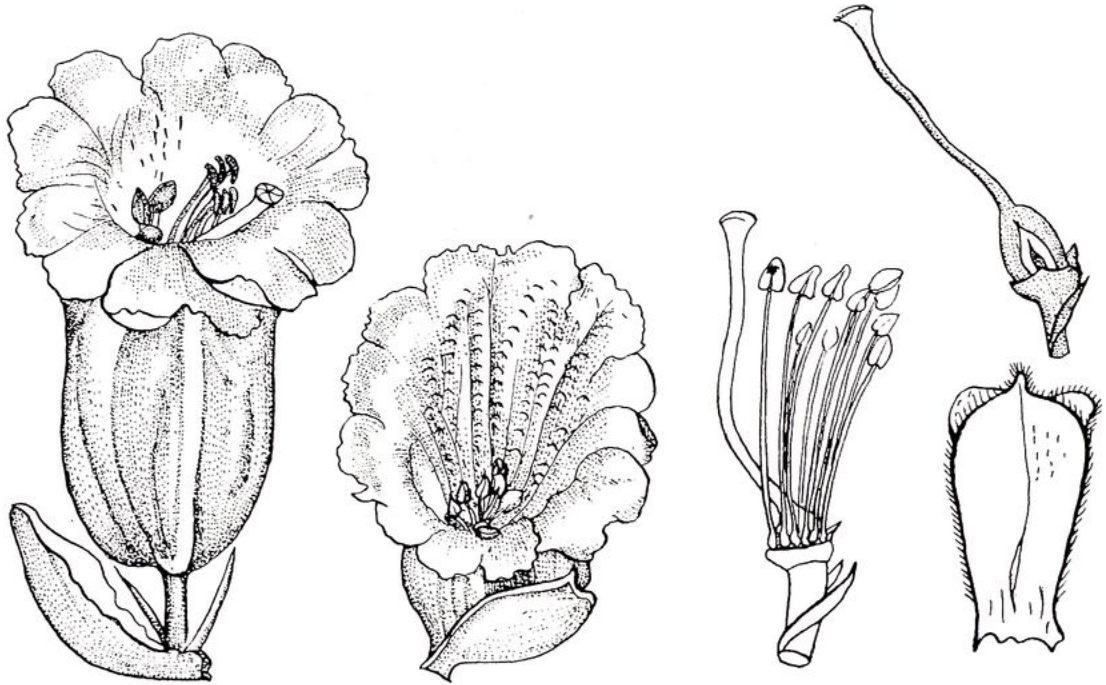
(6) Some plants in cultivation under the name *Rh. nilagiricum* are *Rh. arboreum*.

(7) Some plants in cultivation under the names *Rh. zeylanicum*, *Rh. Rollissonii*, and *Rh. arboreum* may be *Rh. nilagiricum*, the Nilgiri species.

(8) Plants in cultivation under the names *Rh. zeylanicum*, *Rh. Kingianum*, and some under the name *Rh. Rollissonii* and perhaps some under the name *Rh. arboreum* are *Rh. zeylanicum*, the Ceylon species.

(9) It is doubtful if Watt's Manipur plant, *Rh. Wattii*, is in cultivation, and, if it is represented, the plants are probably without name or locality.

(10) Some plants in cultivation under the name *Rh. Rollissonii* are hybrids.



RHODODENDRON WATTII COWAN.

Flower details copied from Sir George Watt's original drawing of *Rh. Kingianum* Watt. (Natural size)