

Kew. ROYAL BOTANIC GARDENS, KEW.

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# BULLETIN

OF

## MISCELLANEOUS INFORMATION.

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1914.

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## ERRATA.

Page 24, line 6 from bottom, for **LXXXVI.** read **LXXVI.**

Page 24, line 5 from bottom *et seq.*, the numbers of the descriptions should read 751-760.

Page 49, **Ribes wollense**, see footnote on p. 382.

Page 205, line 6 from bottom, for **Conservatum** read **Conservatarum.**

Page 260, line 10 from top, for *Sporophore* read *Sporophorum*, for *tenum* read *tenue*, and for *adanatum* read *adnatum*.

Page 260, line 22 from top, for *Orangem* read *Orange m.*

Page 340, line 11 from top, for *Triman* read *Trimen.*

ROYAL BOTANIC GARDENS, KEW.

## BULLETIN

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No. 8]

[1914

## LI.—ECHIUMS FROM THE ATLANTIC ISLANDS : II.

T. A. SPRAGUE.

(WITH PLATES.)

The Echiiums of the Canary Islands and Madeira were arranged by Christ\* in four Series, *Simplicia*, *Virescentia*, *Gigantea*, *Stricta*, according to whether the stem was simple or branched, and to the nature of the inflorescence. De Coincy,† on the other hand, used the annulus inside the corolla and the indumentum as the basis of his classification, and placed side by side species which differ greatly in habit.

Christ's divisions seem to be more natural, and are adopted as the basis of the provisional classification given below. *E. callithyrsus* has a branched stem,‡ and is therefore transferred from the *Simplicia* to the *Virescentia*.

## Ser. I. SIMPLICIA, Christ.

Subseries A. **Latifolia.** Folia lata, ovato-lanceolata vel lanceolata: *E. simplex*, *E. Pininana*.

Subseries B. **Angustifolia.** Folia angusta, lanceolato-lineararia: *E. Auberianum*, *E. Wildpretii*, *E. Perezii*.

## Ser. II. VIRESCENTIA, Christ.

*E. virescens*, *E. nervosum*, *E. candicans*, *E. Webbii*, *E. hierrense*, *E. onosmaefolium*, *E. callithyrsus*.

## Ser. III. GIGANTEA, Christ.

Subseries A. **Sericea.** Folia plus minusve sericea: *E. giganteum*, *E. leucophaeum*, *E. Bond-Spraguei*, *E. brevirame*, *E. aculeatum*, *E. hypertropicum*.

Subseries B. **Tuberculata.** Folia valde tuberculata, haud sericea: *E. Decaisnei*, *E. gentianooides*, *E. nudum*.

\* Engl. Jahrb. vol. ix. p. 126 (1888).

† Bull. Herb. Boiss. ser. 2, vol. iii. p. 263 (1903).

‡ Bolle in Ind. Sem. Hort. Berol. 1867, App. p. 6.

Ser. IV. STRICTA, *Christ.*

*E. strictum*, *E. exasperatum*, *E. stenosphon*.

The present article deals with the species assigned to Ser. *Simplicia*, Subser. *Angustifolia*. *Echium Auberianum* was described by Webb and Berthelot in their *Phytographia Canariensis*, sect. iii. p. 42 t. 144 (1836–50), and was based on a specimen collected by P. A. Auber on the Montaña Blanca at the foot of the upper cone of the Pico de Teyde, Tenerife.

A second species, *E. Bourgaeum*, Webb, was collected by H. de la Perraudière above Guimar, Tenerife, at 2200 m., and in the Cañadas, in April and July, 1855. This was distributed in Bourgeau's *Plantae Canarienses*, 1 895 and 2 1436, but was never published by Webb, and was reduced to *E. Auberianum* by Christ in 1888.\* In 1903 it was described and carefully distinguished from *E. Auberianum* by De Coincy.†

In the previous year, however, the same species was described by Sir J. D. Hooker‡ under the name *E. Wildpretii*, H. H. W. Pearson, from a plant raised at Kew from seeds received from the late Mr. H. Wildpret. This particular plant was poorly developed, and had a thin thyse in which the lateral cymes were exceeded by their subtending bracts. Plants subsequently raised at Kew under different treatment produced a dense thyse with lateral cymes exceeding the bracts. According to information since received from Dr. G. V. Perez, the seeds of *E. Wildpretii* were gathered at El Sombrerito above Vilaflor, south of the Peak of Tenerife, at an altitude of about 8,000 ft.

A third species, *E. Perezii*, Sprague, a native of Palma, was described in *Kew Bull.* 1914, p. 210. This agrees in many respects with *E. Wildpretii*, from which it may be distinguished by the broad lax inflorescence, longer style-arms and other characters. *E. Perezii* is quite different in habit from *E. Wildpretii*, as may be seen from the accompanying plates of the two species growing in Dr. Perez's garden at Villa Orotava.

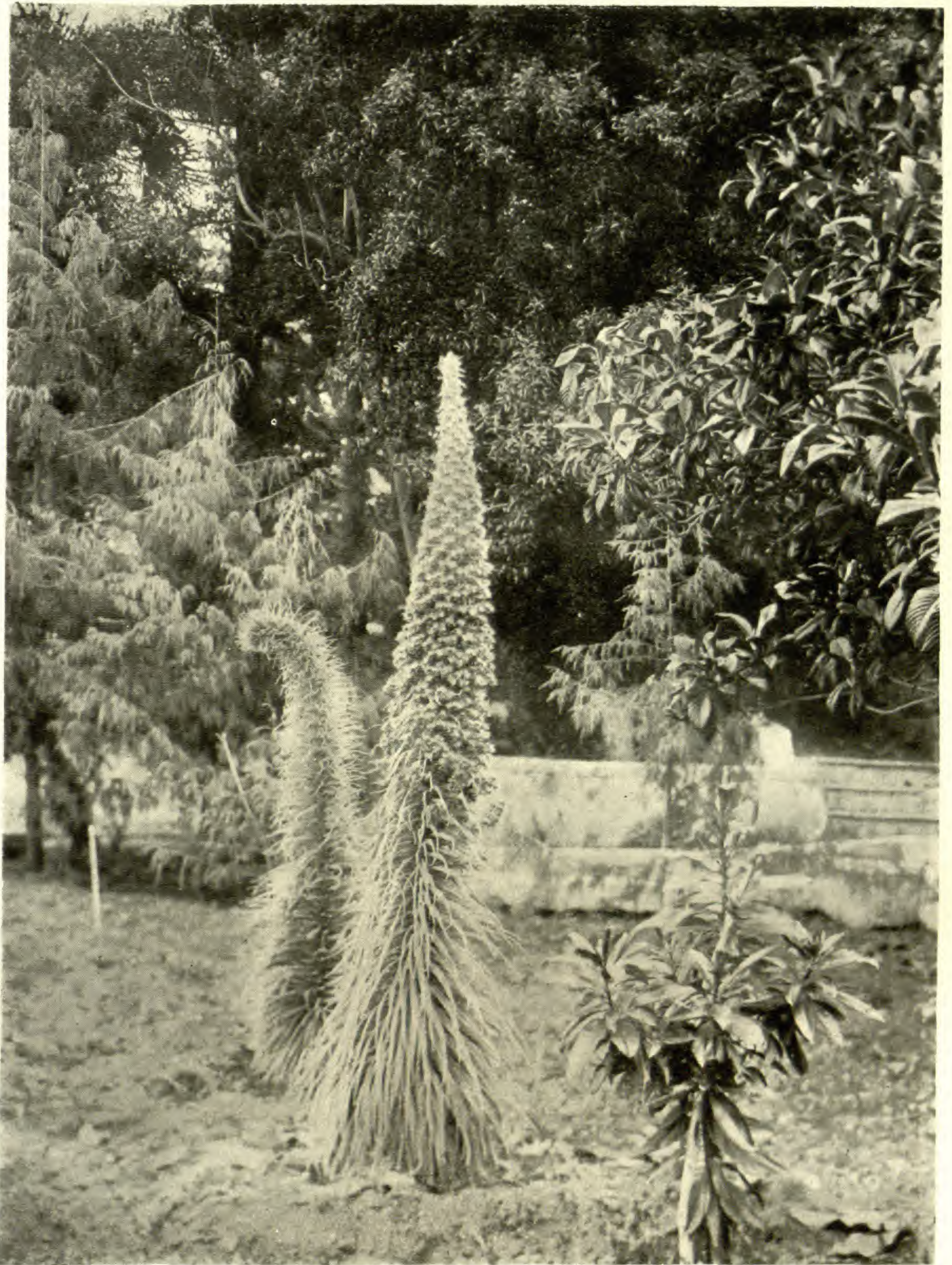
*Echium Auberianum* appears to be a very rare plant, whereas *E. Wildpretii* (*E. Bourgaeum*) is known from several localities. *E. Auberianum* was first discovered in 1778, by Masson,§ and was recognised as a new species by Solander, who made the following notes:—"Echium caule herbaceo foliisque lanceolatis strigosissimis aveniis staminibus corollae aequantibus. Habitat in Tenerife insula canariensi locis arenosis inter juga montium. Fr. Masson 1778." Masson's specimen of *E. Auberianum* is perhaps the finest extant; it is preserved in the British Museum herbarium. Through the kindness of Prof. Schröter in lending the *Echium* material preserved in the Botanical Museum of the Zürich Polytechnikum, a third specimen of the true *E. Auberianum* has come to light. This was collected at La Fortaleza, 2160 m., above Orotava, during the expedition to the Canary Islands conducted by Professors Rikli and Schröter in 1908. The

\* Engl. Jahrb. vol. ix. p. 126.

† Bull. Herb. Boiss. ser. 2, vol. iii. p. 2.

‡ Bot. Mag. t. 7847 (Aug. 1902).

§ Vide Webb and Berth. Geogr. Bot. p. 81.



ECHIUM WILDPRETII.



ECHIUM PEREZII



material consists merely of the base of a plant, without flowers, and much eaten by goats, but the leaves exhibit the stiff hairs and strong tubercles so characteristic of *E. Auberianum*, and there can be little doubt as to the identification. It is to be hoped that the species still survives in this locality.

*Echium Wildpretii* and *E. Perezii* are characterised by a strictly actinomorphic rose-coloured corolla, and long-exserted straight filaments, which radiate regularly from its mouth.

*E. Auberianum* is unknown in a living state; Webb and Berthelot described the corolla as blue, but this was presumably from dried material. The corolla appears to be very slightly zygomorphic; the three posterior stamens are included, and the two anterior are shortly exserted.

It should be stated that the foregoing notes are the result of an investigation commenced in 1912 on the instigation of Dr. Perez, who has sent dried specimens and photographs of *E. Wildpretii* and *E. Perezii* to Kew, and afforded valuable assistance in other directions.

#### KEY TO THE SPECIES.

Leaves hispid, strongly tubercled ... 1. *E. Auberianum*.

Leaves silky:

Style-arms 0.7 mm. long ... ... 2. *E. Wildpretii*.

Style-arms 1.8 mm. long ... ... 3. *E. Perezii*.

1. ***E. Auberianum***, *Webb and Berth.* Phyt. Canar. sect. iii. p. 42, t. 144; *Christ in Engl. Jahrb.* vol. ix. p. 126 (excl. *E. Bourgaeum*, Webb); *De Coincy in Bull. Herb. Boiss.* ser. 2, vol. iii. p. 488.

TENERIFE. Montaña Blanca, *Auber* (Herb. Paris); in sandy places between mountain ridges, *Masson* (Mus. Brit.); La Fortaleza, 2160 m., *Rikli and Schröter Expedition* (Zürich Polytechn.).

2. ***E. Wildpretii***, *H. H. W. Pearson ex Hook f.* in *Bot. Mag.* t. 7847 (1902); *Gard. Chron.* 1905, vol. xxxviii. p. 5 fig 4; l.c. 1912, lii. p. 317, Suppl. Ill.; *E. Jahandiez in Rev. Hort.* 1914, p. 349, fig. 109. *E. Bourgaeum*, Webb ex *De Coincy in Bull. Herb. Boiss.* ser. 2, vol. iii. p. 275; *H. Schenck, Veg. Canar. Ins.* p. 393, fig. 69; *Bois in Bull. Soc. Acclimat.* 1912, p. 719, fig. 3; *Perez in Gard. Chron.* 1913, vol. iiii. p. 19, fig. 16. *E. Auberianum*, *Perez in Rev. Hort.* 1912, p. 440, fig. 151, non Webb et Berth.

TENERIFE. Above Guimar, at 2200 m., fl. April 4, *Perrandière*; Cañadas, fl. and fr. July 4, *Bourgeau II.* 1436; Cañadas: Los Azulejos, 2200 m., fl. June, *Burchard* 164 (Zürich Polytechn.); El Sombrerito, above Vilaflor, about 2400 m., *Wildpret's Collector*.

3. ***E. Perezii***, *Sprague in Kew Bull.* 1914, p. 210.

PALMA. Punta Llana: Barranco del Agua, *Dr. Santos's Collector*.

The photographs of *E. Wildpretii* and *E. Perezii* reproduced on the plates were taken by Mr. M. Benitez.