PELORIA IN SAINTPAULIA IONANTHA, WENDLAND.—The detection of the peloric form of *Linaria vulgaris* in 1742, near Upsal, was considered by Linnaeus so remarkable a circumstance, that he not inaptly applied the term *peloria* (signifying prodigy) to describe this phenomenon.

Since his time, however, such cases have not been infrequent, and their occurrence in widely separated groups of plants, especially under cultivation, point to a universality only really thoroughly appreciated by teratologists.

Masters, in his work on Vegetable Teratology, p. 219 (1869), distinguishes two forms of peloria, viz. regular and irregular, the former implying a non-development

FIGS. A and B. *Saintpaulia ionantha*, Wend. A. I. Normal flower, showing projecting style. II. Half profile. III. Inverted and laid open to show insertion of the stamens. B. I. Peloric form. II. Same, laid open. III. Calyx and gynaecium.

of the irregular portions, and the latter suggesting a formation of irregular parts in increased numbers so as to render the symmetry of the flower perfect. Both forms are sometimes observed on the same plant, as is exemplified in *Linaria vulgaris*, and the same remarks apply to the peloria under consideration. Since its introduction from the Usambara Mountains, Tropical Africa, *Saintpaulia ionantha*, a Gesnerad, which, owing to a superficial resemblance to the Violet, has earned for itself the popular name of African Violet, has responded to cultural treatment by producing a galaxy of colours varying from reds to blues and white, the tints not always being confined to individual plants, but often exhibiting solitary blue and red flowers on the same inflorescence. Indeed, Pynaert¹ describes and figures a plant bearing red, blue, and half red and half blue flowers, a circumstance which is paralleled by certain Azaleas, but which latter anomaly may doubtless be explained by the influence of stock upon scion. The existence of peloric flowers appears, however, not to have been observed, though the allied genera *Gesnera*, *Gloxinia*, *Streptocarpus*, and *Columnea* are recorded as exhibiting this peculiarity. The two forms alluded to

¹ Rev. Hort. Belge, xxii, 1894, p. 109.

occurred in the preceding year on the same inflorescence of a plant flowering in the Begonia House at Kew, but the disposition of the individual flowers, whether terminal or lateral, was at that time not noted, nor has the writer observed a recurrence of the phenomenon. A reference to the accompanying sketches will illustrate the chief points of distinction; it will be noticed that the addition of three stamens in the peloric form has resulted in a consequent diminution of the coralline segments, the corolla having become rotate, and its segments more or less rotundate and slightly incurved, the stamens alternating with these, and except for an increase in number, and a slight dilation at the base of the staminal filaments, identical with those of the normal form. The calyx and gynaecium are apparently the same (the style, however, not exerted), the ovoid ellipsoid pollen-grains showing no points of distinction microscopically.

Intermediate 3-4 stamened forms connecting these two extreme types were also noticed, but in the majority of cases they were extremely depauperate and could only be designated as malformations.

There appears little doubt that these peloric types represent a retrogression of zygomorphism to a primordially actinomorphic form, or what Morren was pleased to term 'epanody'. As to the cause, much conflicting evidence exists, but a fertile explanation suggested by various authors lies in the excess of food many plants are liable to receive under cultivation. The plants at Kew are generously treated from a cultural standpoint, and the prevalence of peloriae, especially in gardens, suggests that this explanation is not without truth.

CHORISIS (?) IN *ARISTEA DICHOTOMA*, Ker-Gawl.

A point of teratological interest worthy of record was noticed by the writer during the preceding year at Kew. A profuse blue-flowering specimen of *Aristea dichotoma*, a dwarf Iridaceous type, exemplified a solitary instance of a four-staminate flower instead of the characteristic three-stamened type (see Fig. C). In its other characters the particular individual conformed to the species, being, with the exception of the androecium, trimerous in its remaining whorls. A close inspection of the flower infers that the supernumerary stamen may be explained by *chorisis* or the division of a normal stamen, as is evinced by the union of the two staminal filaments towards their base. The anthers are in all cases normally dithecous, with the exception of one which exhibits an atrophied anther-cell, the pollen-grains being globular, smooth, and surrounded by a comparatively thick translucent cell-wall. In this particular Order these cases are remarkably rare, but Messrs. C. H. Wright and W. R. Dykes inform me that they have observed it in several Irises.

FIG. C. *Aristea dichotoma*, Ker-Gawl. Four-staminate flower: (a) point of union of two staminal filaments, suggesting *chorisis*; (b) atrophied anther-cell.

R. A. DÜMMER.

Kew.

Dümmer, R A . 1912. "Peloria in Saintpaulia ionantha, Wendland." *Annals of botany* 26, 946–947. <https://doi.org/10.1093/oxfordjournals.aob.a089425>.

View This Item Online: <https://www.biodiversitylibrary.org/item/236930>

DOI: <https://doi.org/10.1093/oxfordjournals.aob.a089425>

Permalink: <https://www.biodiversitylibrary.org/partpdf/319938>

Holding Institution

Smithsonian Libraries

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: Not in copyright. The BHL knows of no copyright restrictions on this item.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.