

Vegetative Multiplication of *Strelitzia reginae* and its Allies

by

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ABSTRACT

In the past it has been assumed that individual plants of *Strelitzia reginae* Ait. and its allies increase in size by suckering from the base. This proves to be incorrect and it is seen to be by the dichotomous branching of the rudimentary stem axis.

The ideal study of *Strelitzia reginae* Ait., would be to follow the development of a seedling to its maturity. It is intended that this should be done as part of a comprehensive project on the genus *Strelitzia* which is being undertaken at the University of Port Elizabeth under Prof. J. G. Small.

The present note is the outcome of observations stimulated by the "Comments on *Strelitzia*" published in *Baileya* Vol. 17, p. 65., 1970, by H. E. Moore and Peter A. Hyypio of the Bailey Hortorium, Cornell University.

The distichous production of leaves is to be observed in quite a number of genera of Monocotyledons. *Strelitzia* is one of them. The leaves arise distichously from the rootstock of the acaulescent species and from the stems of caulescent species, that is, the youngest leaf is produced opposite the previous one to form a pair. In bulbs and the arborescent species of *Strelitzia* the process is more or less indefinite, whereas in the acaulescent species of *Strelitzia* it is finite.

In *Strelitzia reginae* Ait. and *S. juncea* Link (sensu stricto) and their allied forms, 2–4 pairs of leaves are produced distichously in the usual manner to form a 'fan'. At the crucial stage of subdivision the innermost two leaves emerge back to back from the axils of the next older leaves. The two innermost back-to-back leaves then become the first leaves (eventually the outermost) of 2 new shoots and so the process of dichotomous subdivision is initiated and continues by repetition. There is no continuation of growth between the back-to-back leaves. Once subdivision begins, displacement of the older leaves takes place and obscures their distichous origin. Inflorescences may emerge from the axis of one or more of the median leaves of the 'fan'.

In one exceptional case the petioles of the two innermost leaves of a "fan" of *S. reginae* were fused along their backs, but normal leaves emerged from the axis of each to initiate the growth of 2 new fans.

It is hoped that the two illustrations will make the principle of the vegetative multiplication clear.

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PLATE 1.—*Strelitzia reginae*: aa, outside pair of leaves of the “fan”; bb, next pair of leaves facing each other; cc, next pair of leaves (innermost pair) back to back.

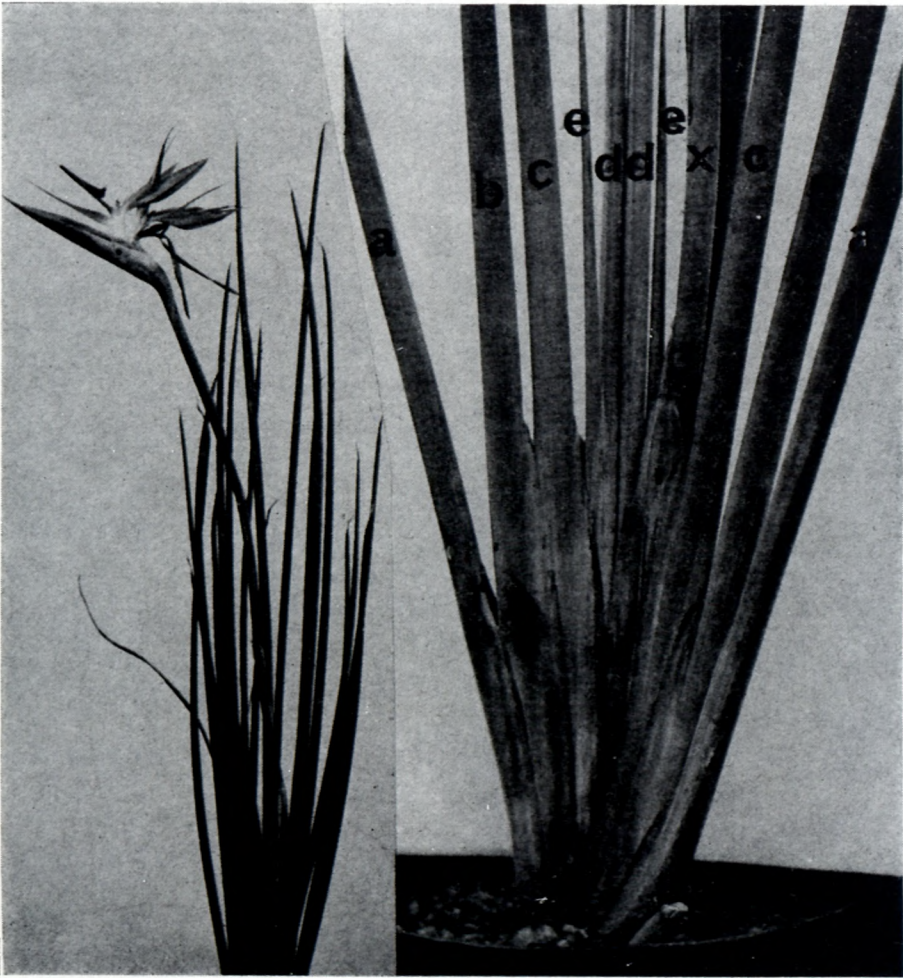


PLATE 2.—*Strelitzia juncea*: aa, outside pair of leaves of the 'fan'; bb, next pair of leaves facing each other; cc, next pair of leaves facing each other; dd, next pair of leaves (innermost pair) back to back; ee, first young leaves of 2 new 'fans'; x, scape of the inflorescence.

