

### Origin of the Inferior Ovary in the Amaryllidaceæ

THERE are at present two main views about the origin of the epigynous flowers among the angiosperms. According to the first view, the inferior ovary is of receptacular origin and epigynous flowers are the result of a cup-like development of the floral receptacle which has fused with the original ovary wall and carried the other floral organs at its distal end. According to the second view, the epigynous flowers are the result of fusion of the ovary, and basal portions of stamens, petals and sepals. The wall of the ovary, therefore, consists morphologically, not of the receptacles, but of the basal portions of all parts of the flower.

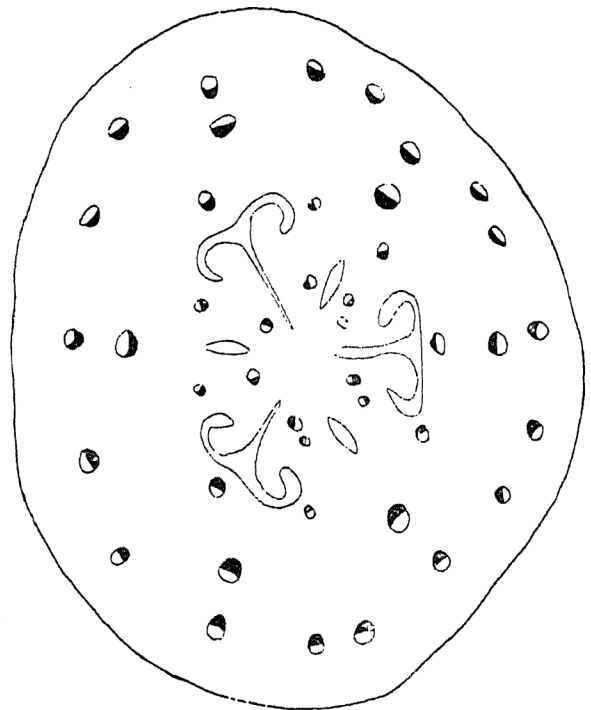


FIG. 1

*Polianthes tuberosa*

Transverse section of the inferior ovary about its middle showing the arrangement of vascular bundles

In order to determine the exact morphology of the inferior ovary in the Amaryllidaceæ, we have carried out an anatomical investigation of the flower of *Polianthes tuberosa* Linn., and find that this supports the second view.

The traces for the various floral parts separate out from the stele of the receptacle below the ovary, and in the wall of the inferior ovary the bundles of the sepals, petals and stamens and

carpels are present quite distinct from one another. This is quite clear from the accompanying figure which represents a transverse section of the ovary about its middle. There are seen on the outside 18 bundles for the six perianth leaves, each perianth leaf being supplied by three (one midrib bundle and two lateral bundles). Next there are six stamen bundles, one for each stamen, just to the inside of the six midrib bundles of the perianth leaves. Finally we see in the middle of the transverse section, the vascular supply of the three carpels, consisting in each case of a dorsal bundle, two dorso-lateral bundles at the sides of the carpels, two ventral bundles and their lateral branches. It is thus quite clear that in this case the inferior ovary is the result of fusion of the basal portions of six perianth leaves, six stamens and ovaries of three carpels.

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