This explanation could apply in all cases where inhibition is overcome by histidine alone including *Prototheca* and several yeasts[5,6]. Castelfranco and Brown[15] suggest that the inhibition involves one electron oxidation of the amitrole.

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Somatic Apospory and Polyembryony in *Minuria integerrima* (DC) Benth

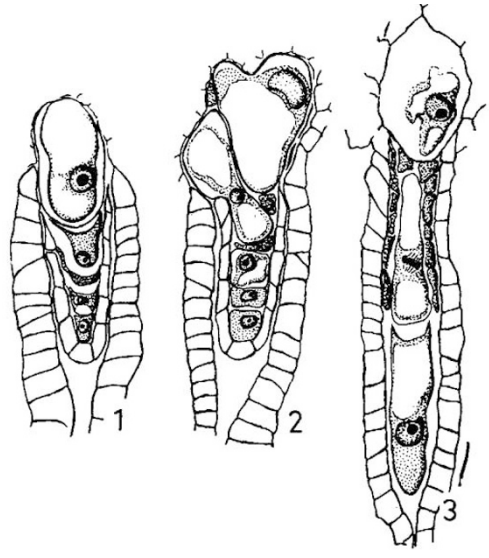
The genus *Minuria* (DC) is endemic to Australia and its six species are small undershrubs of the drier parts of the continent.

Material of *M. integerrima* (DC), Compositae, Astereae was examined from western New South Wales (Bourke, Condobolin, Brewarrina) and western Queensland (Dalby), all plants of which proved to be obligate apomicts with frequent polyembryony.

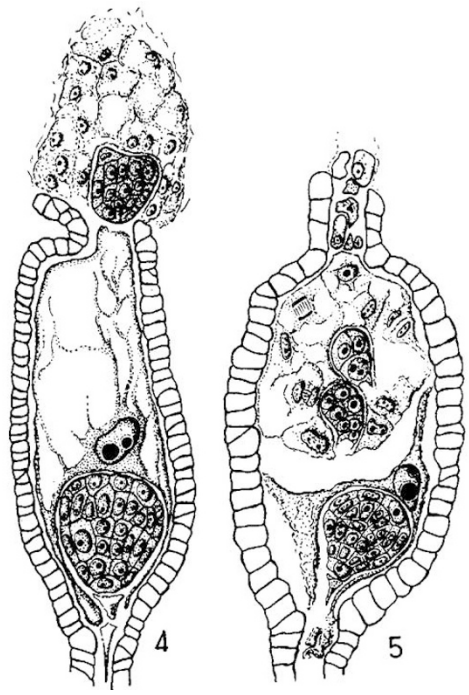
The single hypodermal archesporial cell functions directly as the megaspore mother cell and meiosis results in the formation of an apparently normal linear tetrad of megaspores which is enclosed by the nucellar epidermis.

During megasporogenesis, however, 1–3 chalazal nucellus cells develop large vacuoles and the closest one enters the nucellar lobe where it crushes, and finally replaces, the megaspores (Figs. 1 and 2). Breakdown of the nucellar epidermis then releases this aposporic cell into the micropylar chamber and after three successive nuclear divisions it becomes an 8-nucleate unreduced embryo sac of normal constitution. Fig. 3 shows two such aposporic cells developing within the endothelium, and a third one in the chalaza.

Multicellular apospory of this type has been reported in *Hieracium*[1], *Artemisia*[2] and *Crepis*[3], and in *M. integerrima* it is the basis of polyembryony, since each aposporic embryo sac commonly gives rise to an embryo by parthenogenetic development of the unreduced egg. A similar conclusion was reached by Rosenberg[4] in connexion with polyembryony in *Hieracium* subj. *Pilosella*.



Figs. 1–3. (Figs. 1 and 2, × 500; Fig. 3, × 400)



Figs. 4 and 5. (Fig. 4, × 150; Fig. 5, × 250)

In *M. integerrima*, when a single embryo sac develops, the polar nuclei unite to form the secondary nucleus which almost immediately divides into the first two endosperm nuclei. However, in every instance in which polyembryony occurred, the secondary nucleus of the micropylar embryo sac did not divide and consequently no endosperm was formed, although its embryo developed normally (Figs. 4, 5).

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A Staining Technique for the Examination of Nematode-trapping Fungi

Janus green, a bluish green basic dye of the mono-azo group, was observed to react in an interesting and useful manner with both nematode-trapping fungi and their prey. The dye is used at a concentration of 0·01 per cent in 0·2 M sodium acetate–acetic acid buffer at *p*H 4·6, and added drop by drop to the test material. Excellent results were obtained when the staining solution was applied directly to surface cultures of *Arthrobotrys conoides*, *A. dactyloides* and *Dactylella ellipsospora*, on maize-meal extract agar and on 'Cellophane'[1]. These fungi capture nematodes by means of adhesive hyphal loops, constricting rings, and adhesive knobs, respectively. The nematode used was *Panagrellus redivivus*.