



THE ANATOMY AND ULTRASTRUCTURE OF THE NECTARIES AND OSMOPHORES OF WATER FORGET-ME-NOT (*MYOSOTIS SCORPIOIDES* L.)

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Flowers of *Myosotis scorpioides* L. (Boraginaceae) are pollinated by different insects, among others by the honey bee. They produce both secondary attractants (colour, odour) and primary attractants which include nectar and pollen. The nectary glands occurring in the flowers form a ring surrounding the base of a superior ovary.

The aim of this study was to determine the anatomical characteristics and ultrastructure of the nectary and odour-producing tissues located on the petals. The study was carried out using light, scanning and transmission electron microscopy.

The nectary forms a uniform ring surrounding a 4-loculed superior ovary. Nectar is secreted through stomata. The presence of large cell nuclei, numerous plastids and rough endoplasmic reticulum (ER) was found in

the ultrastructure of the nectary cells. In the parenchyma cells of the nectary, ER was fused to large cisterns (vesicles) situated in the marginal parts of the cytoplasm.

This study shows that essential oils are emitted through papillae located in the adaxial epidermis of the petals and through large palisade epidermal cells occurring in the yellow region of the corolla, which form the osmophore tissue. The epidermal cells of the osmophore were characterized by the presence of thin cell walls, large nuclei and numerous chromoplasts. Lipid plastoglobules were observed in the chromoplasts; their presence can be associated with the production of essential oils. It was found that the tissues forming the yellow ring at the mouth to the corolla tube (osmophore) released a more intense scent than the surface region of the petal on which the papillae occur.