

Pericarp anatomy and utrastructure of some Epidendroid (Orchidaceae) species

Gülcan ŞENEL^{1,*}, Şenay SÜNGÜ ŞEKER¹, Mustafa Kemal AKBULUT²

¹ Department of Biology, Faculty of Arts and Sciences, Ondokuz Mayıs University, Samsun, Turkey

² Department of Garden Plants, Lapseki Vocational School, Onsekiz Mart University, Çanakkale, Turkey

* gsenel@omu.edu.tr

Fruits have been largely ignored in orchid researches. In this study, we have investigated the anatomical, morphometrical and micromorphological properties of the pericarp to determine important diagnostic characters of the ovary and fruit belonging to some Turkish Epidendroid species. Transversal sections were taken to determine the anatomical and morphometrical characters for each taxon. In addition, micromorphological properties of pericarp surface were determined by electron microscopy studies. Various epidermal features such as cell shape, length and surface ornamentation were identified on pericarp. Moreover, secretory hairs having various size and shape were founded on fruit surface in *Cephalanthera rubra* and *Cephalanthera epipactoides*, *Neottia nidus-avis*. There were no striation and not visible cell border on fruit surface of *Limodorum abortivum*. There were also significant differences in terms of epidermal cell size. These findings have suggested that pericarp features could be diagnostic for epidendroid species.

This research was funded by a grant from the Scientific and Technological Research Council of Turkey (114Z702).