

**Floral ecology and *in vitro* cultivation of *Tripleurospermum ziganaense* (Asteraceae): a critically endangered stenoendemic species**

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**Abstract**

*Tripleurospermum ziganaense* (Asteraceae) is a critically endangered (CR) stenoendemic species in Türkiye and is facing high risk of extinction. Little is known about the ecology or the life history of the species that could be used to inform conservation or management decisions. In this study, flower morphology, reproductive phenology (flowering and fruiting), microclimatic condition (air temperature and relative humidity), floral visitors and *in vitro* cultivation were presented. Reproductive season lasted from May to June. Flowering peaked from late May to early June, while fruiting peaked mid-June. The average temperature and relative humidity in the reproductive season of the species were detected as  $16.47\pm 6.61^{\circ}\text{C}$  and  $70.57\pm 21.19\%$ , respectively. The high insect visitors were observed in the groups of Coleoptera. The survival rate of plantules obtained from *in vitro* achene germination on Murashige & Skoog basal medium (MS) was 98% in botanical garden. After 30 days in the botanical garden, the plants developed new leaves and grew considerably.

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**Key words:** Conservation, endemic, reproductive ecology, *Tripleurospermum*