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**Morphological and Palynological Investigation on *Silene gigantea* L. var. *gigantea* and *Silene behen* L. (Caryophyllaceae) Distributed in Western Anatolia and Northern Cyprus**

Kemal YILDIZ

Celal Bayar University, Faculty of Science and Letters, Department of Biology, 45140 Muradiye, Manisa -  
TURKEY

 [Keywords](#)  
[Authors](#)



[bot@tubitak.gov.tr](mailto:bot@tubitak.gov.tr)

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**Abstract:** A comparative investigation was carried out on the morphology and palynology of *Silene gigantea* L. var. *gigantea* and *Silene behen* L. species of the family Caryophyllaceae distributed in Western Anatolia and Northern Cyprus. An examination conducted on *S. gigantea* var. *gigantea* revealed that the calyx length in Western Anatolian specimens was shorter than that of those from Northern Cyprus, that the basal petal blades of the Western Anatolian specimens did not have any ligula while those from Northern Cyprus did, and that the petal blades belonging to the specimens from Northern Cyprus demonstrated less clefting as compared to those from Western Anatolia. Therefore, *S. gigantea*, growing in Western Anatolia and Northern Cyprus, could be separated into 2 subspecies. In addition, *S. behen* also could be separated into 2 subspecies. It was also observed that the seeds taken from all specimens of both species were reniform, with the tubercles on the seed surfaces of the *S. behen* species having a longer conical structure as compared to those of *S. gigantea* var. *gigantea*. Pollen grains of both species are spheroidal, tectate and spinulose-microperforate. It was also determined that *S. gigantea* var. *gigantea* specimens collected from Northern Cyprus had greater pore diameters, whereas *S. behen* specimens from Western Anatolia had greater distances between the pores.

**Key Words:** *Silene* L., Morphology, Pollen, Western Anatolia, Northern Cyprus

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