# DEPENDENCE BETWEEN SOME MORPHOLOGICAL INDICATORS OF *ORCHIS PURPUREA* HUDS. AND *ORCHIS SIMIA* LAM. AND NUMBER AND SPECIES COMPOSITION OF MYCOBIOTA

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Members of the Orchidaceae family have formed symbiosis with soil fungi over a very long evolutionary period. Orchid seeds with small, reduced embryos cannot germinate without the action of mycorrhizal fungi. Therefore, most orchid species maintain relationships with symbionts throughout their ontogeny [1]. With this in mind, our studies studied the relationship between some morphological parameters of *Orchis purpurea* Huds. (Lady orchis) and *Orchis simia* Lam. (Monkey orchis) plants and the abundance and species composition of micromycetes living in their rhizospheres.

The studies were carried out in April-May 2022 in the Altiaghaj village of the Khizi district at altitudes of 597-656 m above sea level, and in the area of the Gizilgazma village at altitudes of 724-768 m. In morphological studies, the height of plant (h/p), lenght of inflorescence (l/i), number of flowers (n/f), width of leaves (w/l) were determined and length of leaves (l/l) was measured and mycological analysis was carried out in plant rhizosphere.

Based on the obtained results, a comparison of the average value (Σ) of the morphometric parameters of the plant shows that high values of w/l, l/l, n/f, l/i for *O. purpurea* were observed in plants common in the Gizilgazma village of the Khizi village (l/i-12.1, n/f-33, l/l-10.9cm, w/l-4.5cm). Similarly, the morphological parameters of the *O. simia*, which is naturally distributed in the villages of Altiaghaj and Gizilgazma, were measured (h/p-28.4/33.6cm, l/i-7.2/9.7 cm, n/f-25/31, l/l-9.7/12.4cm, w/l-4.1/4.1cm). The results obtained show that representatives of the monkey orchid, common in the vicinity of the village of Gizilgazma, have higher morphological indicators. So, as a result of the analysis of soil samples taken from the rhizosphere of the *O. purpurea* in the Altiaghaj village, 11 (*Alternaria alternata, Aspergillus niger, A. ocraseus, Cladosporium cladosporides, Fusarium sambcinum, Mortiriella alpina, Penicillium janthinellum, P. freguentans, P. luteum, Trichoderma hamatum and Verticillium album*) and 12 species (*Alternaria alternata, Aspergillus niger, Fusarium oxysporium, F. solani, Mortiriella alpina, Mucor mucedo, Penicillium chrysogenum, P. glaucum, P. janthinellum, Rhizopus stolonifer, Trichoderma koningii and Verticillium album*) in the soils collected on the territory of the Gizilgazma village, a type of fungus was found. Similarly, when analyzing soil samples taken from the rhizosphere of the *O. simia* plant, 8 species (*Alternaria alternata, Aspergillus niger, Fusarium oxysporum, Penicillium janthinlllum, Mucor musedo, Rhizopus stolonifer, Trichoderma hamatum, T.viride,*) were identified in the soil of the Altiaghaj region, and 10 species (*Alternaria alternata, Aspergillus niger, Fusarium oxysporium, Mortiriella alpina, Mucor mucedo, Penicillium chrysogenum, Trichoderma harzianum, T.koningii Trichothecium rosem* və *Verticillium album*) were identified in the soil collected from the rhizosphere of the plant in Gizilgazma. Mycological analyzes of soil samples taken from the rhizosphere of both plants showed that the soil taken from the rhizosphere of the plant in the Gizilgazma region was richer in fungi. Thus, while the number content of fungi in the soils taken from Gizilgazma is 5.3x103 CFU/g, this indicator is expressed as 3.7x103 CFU/g in Altiaghaj.

Thus, we observe that there is a positive relationship between the morphological indicators of plants and the numerical composition of their mycobiota. The fact that the rhizosphere of plants with high morphological indicators is rich in mycobiota shows the possibility of using fungi as a tool in the introduction of orchis in the future.

**REFERENCES**

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