A new species for the Italian Flora, belonging to the genus *Polygala*, has been recognized in Sardinia. In the study of this species, determined as *Polygala rupestris*, we carried out a comparative morphometric analysis of the main morphological characters (similarities and differences) among several populations from Sardinia, Spain, Africa and France. In particular, we performed a multivariate analysis to understand the systematic adscription of Sardinian populations: the *Polygala rupestris* group or a new *Polygala rupestris* subspecies.