There are 3 components of biodiversity as alpha diversity (diversity within area), beta diversity (diversity between areas) and gamma diversity (total diversity). Alpha diversity indices have been frequently used to examine the relationships between biodiversity and environmental factors. However, the number of the studies concerning the relationships between beta diversity and environmental factors are very few despite the fact that beta diversity gives more information about ecosystem stability against internal and external threatening factors. The present study was carried out to examine beta plant diversity and climatic factors in Kuyucak Mountain District of the Mediterranean region. In the study, bioclimatic data was obtained from wordclim.org for the district. Next bioclimatic variables having the cell size of 752x752 meters were storied in the GPS. Four sample plots were taken in each selected cell by controlling from GBS. Coverage values of plant species were recorded in the sample plots. After field survey, beta plant diversities of the cells were calculated by using Whittaker beta index (βw). Next, regression analysis was applied to show the relationships between beta diversity and bioclim variables. As a result, beta diversity showed positive linear relationships with BIO1 (Annual Mean Temperature), BIO2 (Mean Diurnal Range (Mean of monthly (max temp - min temp)) and BIO9 (Mean Temperature of Driest Quarter) while it has negatively linear relationships with BIO4 (Temperature Seasonality), BIO17 (Precipitation of Driest Quarter) and BIO18 (Precipitation of Warmest Quarter).

Key Words: Biodiversity components, Mediterranean region, Environmental factors