Abstract

Aim: Anatolian black pine (*Pinus nigra* Arnold), an economically important conifer, is widely distributed in Turkey. The main objective of present study was to analyze the relationship between potential geographical distribution of this plant and some primary environmental factors in inner parts of central Black Sea region of Turkey. **Methodology:** Generalized Additive Model (GAM) technique was used to model the potential distribution of the Anatolian black pine in relation to environmental variables. The potential distribution map of Anatolian black pine in the district was created using ArcGIS software by ESRI (Environmental Systems Resource Institute, ArcMap 10.1.). **Results:** Results of GAM showed that elevation, climate and bedrock formations were the most influential factors on the potential distribution of Anatolian black pine in the district. **Interpretation:** Elevation appears to be the most important factor for potential distribution of Anatolian black pine. It seems that climatic factors depend on the elevation. Bedrock formations are the other important environmental factors that might influence distribution of the species. **Keywords:** Anatolian black pine, Black Sea region, climatic factors, elevation, potential distribution