

SPATIAL DISTRIBUTION AND HISTORICAL DYNAMICS OF THREATENED CONIFERS OF THE DALAT PLATEAU, VIETNAM

Trang Thi Thu Tran

Dr. C. Mark Cowell, Thesis Supervisor

ABSTRACT

The Dalat Plateau is one of several biodiversity hotspots in Vietnam. It is considered to be one of five centers of plant diversity and one of three endemic bird areas in the country. Almost half of the conifer species known to occur in Vietnam are found in this area. Among the 14 species of conifers found here, six have been evaluated in the 2004 IUCN Global Red List of Threatened Species. However, due to the remoteness of the mountains where these conifers grow, there is very limited information on the ecology, habitat, distribution, population characteristics or historical disturbances for these species. This research examines selected aspects of conifer biogeography in Bidoup-Nui Ba national park to determine their distribution and relationship to topography, size class structure, and disturbances between the 1970s – 2000s. A combination of field work, remote sensing and GIS was used to determine these patterns.

Among the seven conifer species sampled, three were classified as threatened. Of the nine general land cover types in the study area, these conifer species occurred in the mixed forest and the coniferous forests, from 1,000 – 2,200 m asl. Results show that the stand structures for these conifer species were unimodal and decreasing. Age-class distribution of *Pinus krempfii* showed its population to be the oldest. This study suggests that the decreasing numbers of threatened conifers, especially the old age stands, are vulnerable.