Abstract

Little is known about the ecology and demography of the genus Magnolia. Magnolia dealbata Zucc. is an endangered species endemic to Mexico. Two contrasting populations of M. dealbata (one from the grasslands and other from a secondary cloud forest) were studied. We asked the following questions: (a) Are size structure (diameter at breast height, DBH) and infrutescence production significantly different between the two populations? (b) What are the populations´ growth rates (λ) based on an initial 1987 study? (c) Are the associated species diversity indices of these M. dealbata populations significantly different? The results show no significant differences between the population size structure (p=.094); the growth rates of the populations were 0.992 in grassland and 1.053 in secondary cloud forest. The number of infrutescences produced in year 2001 and DBH relationship were significantly linear (p<.001) in both populations, and there was no significant difference (p>.01) between their slopes. The diversity indices were not significantly different (p>.05), and only 54% of the species were common to both sites. Our study suggests that both populations are relatively stable and that the management history could impact more on the species composition than on the diversity indices.

Keywords

Cloud forest, diversity, endangered species, infrutescences, Magnolia dealbata, Mexico, population