

Chapter Three

Associations of Woody Plant Species Along a Gradient of Forest Use

I identify four associations of woody plant species around Chitre Village: mixed broadleaved, oak/laurel, rhododendron, and clearings. Ordination analysis indicates the associations are distinguished by distance, canopy closure, relative moisture, successional status, and % slope. Mixed broadleaved forest has highest diversity and equity of species, yet the lowest total number of species. TWINSpan preferential species of the mixed broadleaved association are all late-successional species, whereas those of the oak/laurel association are mesic habitat pioneers, and those of clearings are disturbance- and sunlight-tolerant pioneers. The distributions of species are more strongly influenced by anthropogenic factors than environmental heterogeneity. Most late-successional species decrease sharply with proximity to the village because they are heavily harvested. Most species that occur exclusively near the village have been transplanted or protected there for cultural reasons. Analysis of large relict stumps and trees near the village center confirms the entire study area was formerly covered in mixed broadleaved forest.