SUMMARY

CHAPTER I

The Shoolpaneshwar Wildlife Sanctuary, an extension of the old Dumkhal Slothbear Sanctuary is located between 73° 32' and 73° 54' east longitude and 21° 34' and 21° 51' north latitude. It is a hilly terrain covering an area of 675 sq. km. The area is important because it forms the catchment zone of Karjan Reservoir and the proposed Sardar Sarovar coming up on the Narmada river. Moreover, the area is one of the few dense patches of tropical mixed deciduous forests remaining in Gujarat with Teak and Bamboo as the dominant plant species. Geological formation of this area is a result of flow of Deccan trap lava, alluvial deposits and presence of limestone as well as sandstone.

Though the floristic analysis of the area was done recently, fauna at large was untouched. Hence, a bioinventory of the area was carried out and the checklist of various animal groups were made. The study revealed that the area harbours 4 species of annelids, 275 species of arthropods, 9 mollusks, 17 species of fishes, 19 species of amphibians, 18 species of reptiles, 175 bird species and 22 species of mammals.

CHAPTER II

The forest biotope of the SWS, like any of its type the world over, is facing acute biotic

pressure (human and cattle). Cattle grazing compounded by primitive agriculture practices had already cleared many acres of forest land. The loss of forest habitat would affect the survival, composition, abundance and distribution of the inhabitants. Birds, having a strict habitat preference and relatively short genesis time are more prone to any change in habitat and hence, could be used as an excellent indicator to assess the modification to existing ecosystem. The focus of the current study therefore, was on the status and abundance of avifauna in the sanctuary. Analysis of the study exemplified that of the 175 species of birds 131 birds are resident, 27 are winter visitor, 7 are resident/ local migratory, 1 local migratory, 1 breeding visitor, 1 monsoon visitor, 1 vagrant, 2 resident/winter visitor and 1 breeding/monsoon visitor. Abundance rating, however, reveals that 27 species are encountered very commonly, 22 commonly, 14 fairly common and 22 uncommon. Whereas 48 species of birds are scarce and 42 are rare. The importance of such a study is that, the study when repeated after several years could help in assessing the status of bird species themselves and their habitat.

CHAPTER III

The major resource which affect the species composition of a community in a given area is the food. Other factors which affect the community are the physical structure of habitat (stratification, foliage density, etc.) and also the micro ecosystems within the biotope. Systematic observations were therefore made to study the pattern of distribution and species composition of avian community in relation to food, habitat and vertical stratification in SWS. Based on results of this study it was found that different areas of woodland within the SWS had distinct avifaunal composition. The possible reasons for this have been discussed in chapter III.

CHAPTER IV

The analysis of trophic structure in the sanctuary indicates that birds of prey occupy the highest trophic level (along with a few leopards). However, the coexistence of so many raptors and owls occupying the same trophic level might not be possible without resource partitioning. Therefore an attempt was made to study the resource utilization pattern among various species of birds of prey: The observations prove that no two species have exactly similar food preferences. Moreover, their types of nest, nesting sites and breeding seasons differ in such a manner that, it minimize the competition for available resources. Which help them flourish in the sanctuary as the dominant group.