

Executive Summary

Taxonomic research and the sharing of associated data are an essential basis for further biodiversity studies, including surveys, inventories, and ecological and biological resource research. For plants, the process involves acquiring all the relevant information concerning the focus species, including specimen data and literature. Surveys and inventories provide the essential baseline data for monitoring change caused by factors such as habitat conversion (from forest to farmland, for example) and climate change, and for determining conservation priorities in-country. By their very nature, management inventories (full or by sampling) cover specific areas corresponding to management units (populations, plots, stands), while national and regional inventories cover wide areas, analysed on the basis of location-specific information

It is an accepted fact that the knowledge of the floristic and faunal composition of any place is an essential prerequisite for the study of various ecosystems and for preservation and conservation of natural resources. This necessitates a worker in the taxonomic field to assess and evaluate from time to time the biodiversity elements of the region. An inventory of floral was undertaken at Phansad Wildlife Sanctuary. Presence of butterflies and birds was also studied as these serve as pollinating agents and seed dispersal agents hence play a vital role in vegetational studies.

Phansad WLS, in Raigad district is about 152 kms from Mumbai via Panvel, Pen and Alibaug. The sanctuary is spread across an area of 52 sqkm. The Murud-Roha road passes through the sanctuary. The sanctuary was earlier private hunting block of the erstwhile Siddhi Nawab of the Janjira state. The Nawab constructed roads, water bodies, and evacuated several villages from the sanctuary. The sanctuary habitat is very rich and offers highly serene ambience to the visitors, who can take trekking through a nature trail located at Supegaon and visit Nature Interpretation Centre at Majgaon. The famous Janjira Fort located in the sea and place of Nawab of Murud are also the places of attraction to the visitors.

Vegetational Study:

- i. Terrain and vegetation types were studied and stratified.
- ii. Transects and quadrats of different sizes has been laid for trees, shrubs, climbers and herbaceous plants depending upon their micro and macro habitats.
- iii. The Quadrat sizes were Trees (10 x 10m), Shrubs & climbers (5 x 5m) and herbs (1 x 1m). GPS coordinates has been taken for each quadrat.
- iv. 200 quadrats for each category were laid down at equal distance on both the plots.
- v. Regular field surveys were undertaken, to cover both the project sites.
- vi. Random Sampling has been carried out for all the elements of the vegetation.
- vii. Various attributes such as habitat, altitude, phenology, soil, topography, anthropogenic pressure etc. have been recorded in format data sheet.

- viii. Data analysis and interpretation on the presence/absence of the species have been shown in terms of frequency, density, abundance etc for each quadrat.
- ix. Photo library of documented species is being maintained.
- x. Local use value of the plants is being collected as per format.

Butterfly Survey

Checklist survey was used for Butterflies in this study.

Avian Survey

Distance sampling technique was used to record the avian fauna

Results

Approximately 5 % of the sanctuary was studied. A total of 161 species were recorded belonging to 57 families. Of these trees were represented by 85 species followed by herb represented by 25 species, shrub by 21 species, climber by 19 species, climbing shrub by 3 species, scandent shrub by 3 species, twinner by 3 species, grass and fern by 1 species each. Acanthaceae is the dominant family followed by Euphorbiaceae, Fabaceae, Asteraceae and Caesalpiniaceae. Trees are the dominant habit followed by herbs, shrubs, and climbers.

A total of 74 species of birds were recorded during this study.

49 different species of Butterflies were observed during the study.