MATERIALS AND METHODS

The area under investigation has been botanically least explored. Regular excursions were arranged in different seasons during the year 1986-1990. Well planned exploratory trips of 8-10 days duration each, were undertaken to cover different areas of Western Kachchh. Special emphasis was put to study the area in greater depth and special attention was given to the hilly forest areas.

The area is about 500 km away from Baroda. For the purpose of botanical exploration, the different parts of the area were intensively explored through field trips. For camping, the rest houses of the Forest Department or P.W.D were preferred. Bhuj, Nalia, Nakhtrana, and Narayan Sarovar were selected for base camps. Nearby places were visited on foot but for distant places, available state transport bus facilities were utilised. Selected forest ranges of the area were explored through carefully planned field trips. Each range was visited at least twice in a season. During monsoon period frequent visits were made to different localities so as to collect important ephemeral plant species which complete their life cycle in short duration during early monsoon. All the plants have been collected in flowering and fruiting stages.
During each trip, field notes pertinent to relative abundance, habit, habitat, association, colour of flowers and fruits, odour of the flowers and other characters were entered in field diaries. All the plants collected during field trips were dissected in the laboratory in details to reveal the morphological features as well as floral variations, if any. All the information was duly analysed and entered in the index cards.

In order to depict the different vegetational aspects, photographs were taken. Rare interesting plant taxa and their associates were also documented with the help of colour photographs.

The plants collected on excursions were processed for herbarium preparation following the routine herbarium techniques recommended by Lawrence (1951), Santapau (1955) and Radford et al. (1974). All the specimens collected during field trips were critically examined through dissection of floral parts, and referring to available literature viz., Flora of Presidency of Bombay by Cooke, Flora of British India by Hooker, Flora of Gujarat State by Shah and other relative floras. The identification was further confirmed by reference to various other floras like, Flora of Saurashtra by Santapau, Flora of the Indian Desert by Bhandari (Rev.ed) and the Flora of North-East Rajasthan.
by Sharma and Tiagi. The doubtful specimens were carried to Blatter Herbarium, Bombay and Herbarium of the Botanical Survey of India, Western Cricle, Pune, for confirmation. In addition, all other available collections from the area made by earlier workers were also studied and have been incorporated in the thesis.

Rare and ephemeral plants have been illustrated with the help of line drawings, based on careful scientific observations, under dissecting stereo microscope. The system of Bentham and Hooker, with few minor modification has been followed for the arrangement of the families. All the genera within a family are arranged in alphabetical order for easy reference. Artificial dichotomous keys are based on simple macro-morphological characters. The different types of keys included in this work are (a) general key to the families, (b) key to the genera and (c) key to the species. All possible efforts have been made to provide up-to-date nomenclature in accordance with the International Code of Botanical Nomenclature. Information regarding the currently accepted names was gathered from recent publications. For brevity full citations of plant names have not been provided. However, standard floras were referred to for detailed nomenclature. All the new names have been given on the authority of the latest available
floras.

Local names, wherever available, are also given in capitals within single inverted comas. In general, the description of the plant has been suitably condensed by incorporating all important characters, but a detailed description of a few selected plant species from the area has been given separately at the end of chapter 7. An attempt has also been made to analyse the floristic constituents and determine 10 dominant families, Dicot-Monocot and Genus-Species ratios. The worked out analysis is also compared with the floristic element of bioclimatically similar adjoining regions of Pakistan, Rajasthan and South-Eastern Kachchh.