INTRODUCTION

In the ebb and tide of times new uses for plant products arise. If we trace the history of man, we would find, that ever since his origin on earth, he has depended on plant products in some way or other for his primary needs like food, shelter and clothing. The civilization of a country depends on the intimate relationship of man with plants.

The area of India is estimated to be 324 million square kilometers. In this vast area with its diversity in climatic and geographic condition, almost every natural plant family on the world is represented. From time immemorial some of these plants have been used in the treatment and control of diseases, but detailed studies on their medicinal properties are still necessary. For their proper utilization, it is of utmost importance that we have a complete knowledge of their occurrence, frequency and phenology. Information on this data is inadequate in our Indian floras. The revision of the flora of India is, therefore, very necessary (a project already in progress under the auspices of the Botanical Survey of India, Calcutta and a research scholar is revising the Cruciferae of India under the guidance of Dr. G.L. Shah), but it can be more fruitfully effected only after careful, intensive and extensive field explorations of various parts of the country.

It is also essential to have a detailed knowledge of the plant wealth of the country and therefore, the flora of small regions of the states should be prepared. Moreover, if we have
to derive full benefit from our plants by the study of their useful properties, we need more precise information on their exact distribution and frequency, flowering and fruiting time etc. Detailed floristic studies will greatly help in the economic development of an over populated country like ours.

These were the reasons for undertaking the present work, the results of which, based on accurate and adequate information, it is sincerely hoped, will be an humble contribution in preparation of the flora of Gujarat State and to supplement the information published by Cooke (1901-1908) in his flora of the Presidency of Bombay. Another important reason for undertaking the present investigation was also on an academic ground. The absence of any good flora written on modern lines for Gujarat State has seriously hampered the teaching and learning of Botany because a knowledge of identifying the plants and knowing them is a must for every student of Botany in the State. Many a times local botanists or laymen send queries regarding the identification of the plants. Thus the aim of entire study is also to (1) bring out information on plants growing in the areas selected (2) to serve the academic purposes if any and also to help laymen and local botanists with identification of plants from the areas selected.

The area of Chhotadepur forest division is about 819.06 sq. kms. Kawant, Chhotadepur, Pav-Jetpur, Jambughoda and Naswadi ranges of this forest division were selected for the present study, because, the information on the flora of the last 3 ranges is lacking and where it is been published for the first
two ranges, it is not complete and much of the desired information has to be supplemented.

HISTORICAL SKETCH OF THE FLORA OF GUJARAT

Cooke (1901) in the preface of his FLORA OF THE PRESIDENCY OF BOMBAY remarked it can hardly be expected that the present flora will be an absolutely exhaustive one, although I have every reason to believe that plants which still remain undiscovered are few. Cooke was quite optimistic about his work but the results of botanical explorations in different parts of erstwhile Bombay Presidency have shown that this is not true because a number of new plants have been added to the flora of the erstwhile Presidency of Bombay since then.

From the localities cited by Cooke (1901-1908) it will be also evident that most of the localities are from Konkan, Kanara and Sind but relatively few localities are given from Gujarat indicating that very little attention has been paid to the flora of Gujarat at the hands of botanists in the time of Cooke. This is true because out of about 2500 species enumerated in Cooke's flora only 425 species (about 17%) are listed from Gujarat. Significantly, therefore, Saxton & Sedgwick (1918) wrote "But for Gujarat and especially North Gujarat has hitherto been touched by flying visits. Whereas the notes on geographical distribution within the Presidency of the various species described by Cooke are fairly complete for other regions, the flora of Gujarat is inadequately indicated." This is equally true for all the areas in Gujarat. The localities frequently
cited by Cooke are Kathiawar, Rajkot, Voraal, Porbandar, etc., all now in Saurashtra. Other localities occasionally mentioned are Ahmedabad, Panchmahals, Dakor, Godhra, Baroda, Broach Collectorate, Surat, Dangs etc.

Most of the localities from Gujarat given in Cooke's Flora are on the authority of extensive plant collections made by two active workers (1) Dalzell N.A., a forest officer, and (2) Prof. G.M. Woodrow who succeeded Dr. Th. Cooke as Director of Botanical Survey of India, Western Circle, Poona. Casual collectors from Gujarat were Kanitkar, Cooke himself, Brandis, Bhiva, Graham etc.

As far as flora of Gujarat is concerned very few papers were published between 1908-1925 (Blatter, 1908-1909; Thaker 1910, 1926; Saxton & Sedgwick, 1918; Sedgwick, 1914; Saxton 1922). However, in the last quarter of a century organised efforts are made by different botanists to explore different areas of Gujarat with a view to contribute materials towards the flora of Gujarat.


Cooke (1901-1908) has listed 425 species occurring in Gujarat of which 139 species are found in my area. A relevant
reference to localities cited by Cooke is given along with
citation of reference of Cooke's flora in the text. It will
be evident from such citations that not even a single species
is cited from Chhotaudepur forest division. Therefore, our
knowledge about the flora of Chhotaudepur Forest Division is
only through the works of Thaker et al. (1967-68, 1970, 1970-71).
The first paper by these authors is a list of 464 angiospermous
plants from Chhotaudepur forest range (1967-1968); of 464
species 52 are cultivated and wild ones, therefore, are 412.
This paper is followed by an enumeration of 723 plants from
Kawant range (1970 and 1970-71); of these 723 plants, the wild
ones are 628. After carefully scrutinizing the data published
in this paper, it is found that there are 224 plants more in
Kawant range than those in Chhotaudepur range. The total number
of wild plants listed by these authors from both the ranges is,
therefore, 636. Of the 636 wild plants there are only 57 plants
not represented in our collection. These results are summarised
below for ready reference.

<table>
<thead>
<tr>
<th>Number of plants published</th>
<th>Wild</th>
<th>Cult.</th>
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<tbody>
<tr>
<td>(a) by Thaker et al. from Chhotaudepur range ..........</td>
<td>412</td>
<td>52</td>
</tr>
<tr>
<td>(b) by Thaker et al. from Kawant range ...</td>
<td>628</td>
<td>95</td>
</tr>
<tr>
<td>(c) Net addition of wild plants from Kawant range is ..................</td>
<td>224</td>
<td></td>
</tr>
<tr>
<td>Total number of wild plants reported for Chhotaudepur forest division by Thaker et al. is a + b ..................</td>
<td>636</td>
<td></td>
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<tr>
<td>(d) Number of plants reported by Thaker et al. but not collected by me (List XI) .</td>
<td>57</td>
<td></td>
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