



DIVERSITY AND DISTRIBUTION OF SEDGES FROM MARATHWADA REGION OF MAHARASHTRA STATE

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ABSTRACT

The present study gives general account of diversity and distribution of cyperaceae species from the tribal and the rural area of Marathwada. Maximum cyperaceae species were observed and collected from tribal and the rural area. Frequently visits were made during October- 2012 to January-2015 in the study region and specimens were collected and observed for identification. The specimens were identified with the help of floras and available from previous literature and herbarium of department of Botany, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra state. Inland sedge vegetation can be categorised in different ecological groups

KEYWORDS- *Diversity, Distribution, Cyperaceae, Marathwada Region*

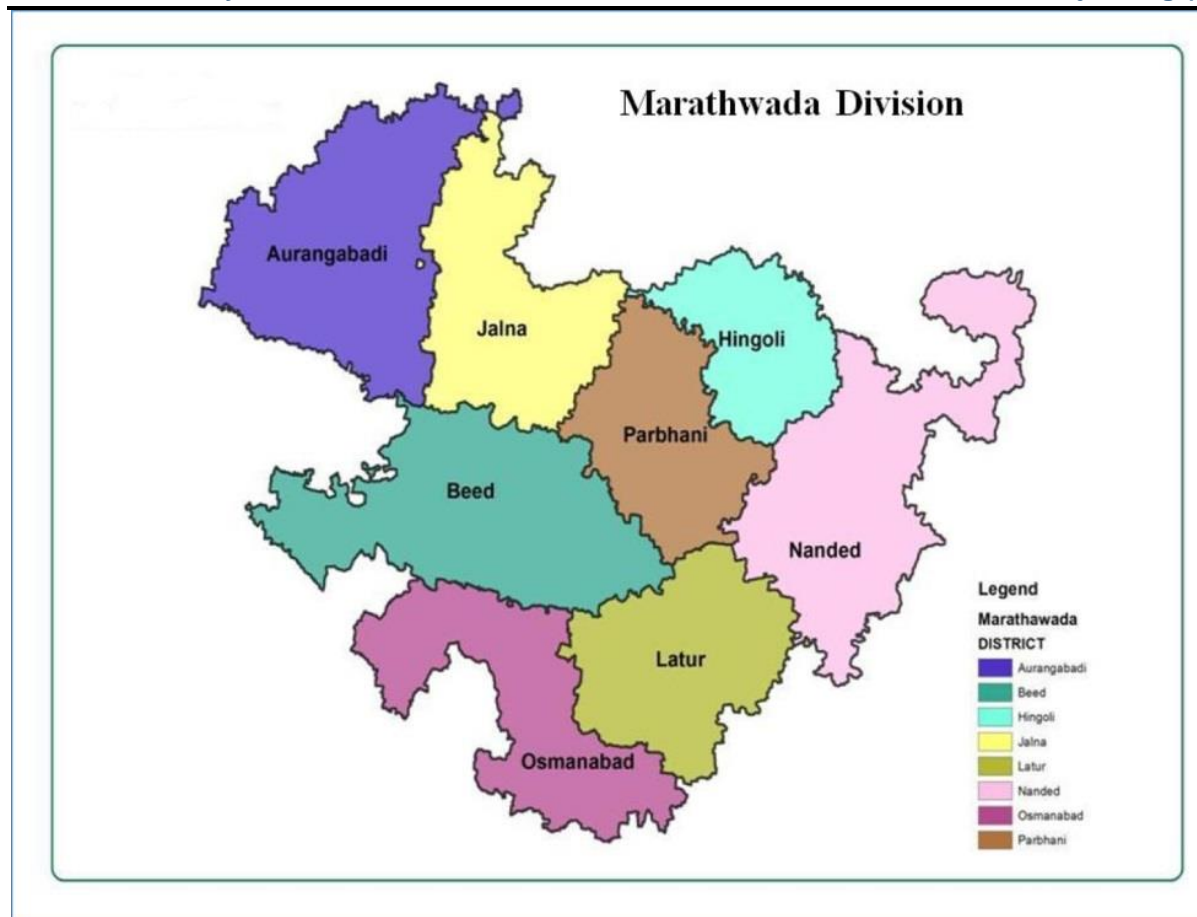
INTRODUCTION

The Cyperaceae, among the 10 largest families of flowering plants, contain about 5,000 species and, depending on the classification used, between 70 and 115 genera. The members are distributed throughout all the continents except Antarctica. Although there is a large number of species in Arctic, temperate, and tropical regions, the diversity of genera is far greater in tropical regions. Many species of sedges that occur in northern latitudes have circumpolar distributions. Species occurring in tropical or warm temperate regions, except for those that are widespread agricultural weeds, are generally confined to a single continent. Cyperaceae is the second largest family among monocotyledons and stands next to grasses. Cyperaceae is one of the most intricate families represented by 70-80 genera and 4000 species distributed throughout the world with about 28 genera and 500 species in India. Due to minute to smaller size of flower, least economic importance and intricacy due to narrow generic and specific delimitation, extreme

variation in vegetative and floral parts (Khan, 1983; 1998; 1999 and 2000) the sedges have been neglected by most taxonomists. This is probably the reason, why studies could not progress as compared to other families such as grasses. Thus taxonomically Cyperaceae are neglected group of flowering plants in India more so in Marathwada region. Therefore it needs to have been given specialized treatment from different angles and different aspects for the preparations of accounts. Marathwada region comprising of eight districts, viz. Aurangabad, Beed, Hingoli, Jalna, Latur, Nanded, Osmanabad and Parbhani. The location of Marathwada is on 70 5' – 78 5' E longitude and 17 5' – 20 5' N latitude forms the part of the vast Deccan plateau all of India and is one of the six divisions of Maharashtra State. The total area of Marathwada region is of 64,813 km. and is bounded by the Vidarbha region on the North, by Andhra Pradesh on the East and Southeast, by Karnataka on the South and by Western Maharashtra on the West. The entire region is situated at an average height of about 300-650 m. above Mean Sea Level gradually sloping from West to East, and is traversed by hill ranges origination from the Sahyadris in the West and the Satpudas in the North. Different ranges derive their names from local sources, the northern being Ajanta-Satmala ranges and the Southern the Balaghat ranges. In addition to these there are scattered hillocks of varying heights throughout the region, the highest peak, Surpal Nath (960 m. above MSL) being situated near Kannad in Aurangabad district. Due to presence of large lakes and rivers the study region is rich for Cyperaceous plant as can be realized from review of literature. The climate of Marathwada region is generally hot and dry. It receives low rainfall. Some part of Marathwada having good fertile land with climate, so this particular region shows ample bio-diversity. Other part of the region also shows its importance by producing medicinal and other useful plants. Due to the lack of adequate rainfall, vegetation cover shows its diversified nature.

MATERIALS AND METHODS

During the present work an attempt is being made to document the occurrence of sedges of Marathwada region frequent visits were made during October-2012 to January-2015 to this area and 83 species belonging to 14 genera were collected and processed as per the method described by (Prain, 1996; Rao and Verma, 1990 and Prasad and Singh, 2002). The specimens were identified with the help of floras by (Clarke, 1893; 1902 and 1909; Fischer, 1928; Cooke, 1908; Hooper, 1976 and Sedgwick, 1918) and available literature (Karthikeyan, 1989; Kern, 1974; Sharma *et al.*, 1996. and Koyama, 1985) and identification is confirmed in herbaria of Department of Botany, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad district, Maharashtra state, India.



OBSERVATIONS AND RESULTS

Tribal and Rural sedge vegetation can be categorised in different taxonomical groups as under following eight different habitats:

- (a) **Oligotropic Habitat-** The common swamp and marshy sedges with excess of moisture, the characteristic members are *Cyperus babakan*, *C. digitatus*, *C. exaltatus*, *C. scariosus*, *C. alopecuroides*, *C. procerus*, *C. pilosus*, *C. platystylis*, *C. laxus*, *Pycneus sanguinolentus*, *P. diaphanus*, *P. stramineus*, *P. flavidis*, *P. polystachyos*, *Fimbristylis miliacea*, *F. tertragona*, *Kyllinga brevifolia*, *Scripus grossus*, *S. kaysoor*, *S. mucronatus*, *S. articulatus*, *S. praelongatus*, *Rhynchospora corymbosa* and *Fuirena sp.*
- (b) **Eutrophic Habitat-** *Cyperus bifax*, *C. alulatus*, *C. esculentus*, *C. sphacelatus*, *C. difformis*, *C. squarrosus*, *C. corymbosus*, *C. pangorei*, *C. distans* var. *pseudonutans*, *C. cuspidatus*, *C. nutans* subsp. *eleusinoides*, *C. halpan*, *C. hyalinus*, *Scripus affinis*, *Kyllinga melanosperma*, *K. squamulae*, *Fimbristylis alboviridis*, *F. microcarya*, *F. complanata*, *F. bisumbellata*, *F. argentea*, *F. tomentosa*, *F. dispacea*, *F. adenolepis* several forms of *F. dichotoma*, *F. striolata*, *F. oblonga*, *Scripus jacobii*, *S. laterflorus*, *Scleria terrestris*, *S. benthamii*, *S. rugosa*, *S. Caricina* and *S. biflora*
- (c) **Floating Sedges-** *Cyperus cephalotes*, *C. Platyphyllus* and *Scripus fluitans*

- (d) **Rice Fields-** Rice field provide favourable habitat with excess of moisture suitable for sedge-growth. A diverse form of sedges is found to occur in rice-field habitat. The notable ones are *Cyperus tenuispica*, *C. halpan*, *C. corymbosus*, *C. iria*, *C. rotundus*, *C. stoloniferous*, *C. distans*, *C. compactus*, *C. pseudokyllingioides*, *C. difformis*, *Pycreus pumilus*, *P. punctatus*, *P. nervulosus*, *P. sanguinolentus*, *P. hyalinus*, *Scirpus squarrosus*, *S. kernii*, *S. juncoides*, *S. lateriflorus*, *Fuirena capitata*, *F. ciliaris*, *Scleria biflora*, *S. multilocunosa*, *S. benthamii*, *S. caricina*, *Fimbristylis quinquangularis*, *F. miliacea*, *F. merrilli*, *F. Dichotoma* and *Lipocarpha sphacelata*
- (e) **Mixed Dry Land Sedges-** Many types of sedge are found even in semidry soil or localities providing comparatively less moisture. The common ones are *Cyperus compressus*, subsp. *Micranthus* and subsp. *compressus*, *C. distans* ssp. *pseudonutans*, *C. iria*, *C. pygmaeus*, *C. squarrosus*, *C. teneriffae*, *C. maderaspatanus*, *C. rotundus*, *C. stoloniferous*, *C. bulbosun*, *C. meeboldii*, *C. compactus*, *C. leucocephaltus*, *Fimbristylis tenera*, *F. ovata*, *F. polytrichoides*, *Bulbostylis barbata*, *Kyllinga bulbosa*, *Scirpus kyllingioides*, *Scleria levis*, *S. Annularis* and *S. lithosperma*
- (f) **Marginals Habitat-** A few sedges are found along the margins of rivers, lakes, streams and similar other water bodies the notable ones *Cyperus corymbosus*, *C. pangorei*, *C. bifax*, *C. articulates*, *C. nutans* subsp. *eleusinoides*, *C. alopecuroides*, *C. exaltatus*, *C. difformis*, *C. teneriffae*, *C. halpan*, *C. articulates*, *Pycreus flavidus*, *Fimbristylis dichotoma*, *F. miliacea*, *Scirpus affinus*, *S. littoralis* and *S. corymbosus*
- (g) **Grass Land Sedges-** A few sedges are found in wet open grass-lands or marshy grass-lands. They are *Fimbristylis salbundia*, *F. aphylla*, *F. dichotoma*, *F. merrillii*, *F. quinquangularis*, *F. falcate*, *Fuirena ciliaris*, *F. umbellate*, *Cyperus iria*, *C. compactus*, *C. pseudokyllingioides*, *Scirpus juncoides*, *Rhynchospora wightiana*, *R. longisetis*, *Scleria terrestris*, *S. multilocunosa*. Among the small grass such *Pycreus pumilus*, *Cyperus cuspidatus*, *Scleria africana*. The species found common to all habitats are *Cyperus rotundus*, *C. iria*, *C. alulatus*, *C. tenuispica*, *C. squarrosus*, *C. compressus*, *C. stoloniferous*, *C. difformis*, *Pycreus pumilus*, *P. flavidus*, *P. benthamii*, *Fimbristylis tenera*, *F. dichotoma*, *F. microcarya*, *F. tetragona*, *F. schoenoide*.

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