

## SURVEY OF SUCCULENT PLANTS FROM KOPERGAON TEHSIL OF MAHARASHTRA

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### ABSTRACT

Survey of succulent plants in Kopergaon region was done by collecting the information from the experienced medicinal practitioners. In present investigation it is observed about 8 Families, 10 Genus and 13 Species were identified with relevant information and documented in this paper with regard to their Botanical Name, family, Habitat, flowering Fruiting session and plant part used and medicinal properties like anti-inflammatory, antioxidant, antipyretic, anti-diabetic, anticancer etc.

**Keywords:** Succulent Plants, Family, Genus, Antipyretic

### INTRODUCTION

The succulent plants also known as succulents or sometimes fat plants having some parts that are more than normally thickened and fleshy, usually to retain water in arid climates or soil conditions. The succulents comes from the latin word *sucus*, meaning juice or sap succulent plants may store water in various structures, such as leaves and stems. Some definitions also include roots so that geophytes that survive unfavourable periods by dying back to underground storage organs may be regarded as succulents. In horticultural use the term succulent is often used in a way which excludes plants that botanists would regards as succulents such as cacti. Succulents are often grown as ornamental plants because of their striking and unusual appearance. Nearly all cacti are succulents but not all succulents are cacti .A general definition of succulents is that they are drought resistance plants in which the leaves stem of roots have become more than usually fleshy by the development of water storing tissue. Plants adapted to living in dry environments such as succulents, since there are other ways of adapting to storage of water e.g. by developing small leaves which may roll up or having leathery rather succulent leaves. (Dimmitt, Mark. "The Tucson Cactus and Succulent Society").

Succulents are the camels of the plants world. They take in water and store it in their fleshy interiors, allowing them to go long periods of time without additional life giving liquid. Some of our favourite plants are succulent like as aloes and most cacti. Add it all up and there are several hundred different species of succulent in the world. There are more than 60 plant families divided into about 300 genera that have evolved succulent species in the world. The succulent plants all over the world mostly distributed in 09 families and are with approximately 6711 plants. The distribution of five species of succulent plants in south India as compared other plant is about 8.1 present. In the Maharashtra 10 genus and 12 species so far been recorded by some workers (Singh *et al.*, 2000, 2001, 2002). The study of succulent plant also was carried out in Marathwada university Botanical garden. In that survey that found 200 species of cacti and succulent plants.

In Ahmednagar district of Maharashtra 5 genus and 5 species so far have been found (Pradhan and Singh, 1999). Floristic study of Parner Tehsil of Ahmednagar District, from Maharashtra (Aher, 2015) was recorded five families with six genera and six species.

In Maharashtra some of the explorers of western India in 18<sup>th</sup> century did floristic studies. This includes Graham (1837) in “catalogue of Bombay plant; followed by the flora of Bombay by Dalzell and Gibson (1861) flora of the presidency of Bombay (1901-1908) continued till to be the most important floristic work for identification of species in Bombay presidency that included Gujarat, Maharashtra, Goa, north Kanara (now in Pakistan) (Singh *et al.*, 2000).

**Review Article**

The study of succulent plants was also been worked upon for their ethanobotanical significance and some members belonging to it was found to be of great significance in Ayurveda and Medicinal Botany (Mitra et al., 1991 and Sharma et al., 2001). Substantiate to these aspects, there are many botanists who have worked upon the phyto constituent evaluations and pharmaceutical implications of the family. Over all using these aspects the current status of the family cactus and its position amongst other angiosperms can be interpreted significantly. Study Area: Kopergaon Tehsil situated on the bank of river Godavari. The total area is 725.16 km<sup>2</sup> lies between 19°54'9'' North latitude and 74°28'38'' east longitude.

**MATERIALS AND METHODS**

An extensive and intensive survey for rare succulent plants species was carried out from different parts of the Kopergaon Tehsil during 2015- 2016. Detailed survey of plants species was carried out in various localities like Derde, Sonevadi, Javalake, Chande-kasare, Kopergaon and Pohegaon. Plants mostly collected from rocky, barren places. The method of plant collection and their identification was done through methods used earlier by Salunkhe et al., (2001), Chavan et al., (1973). It was carried out for survey of succulent plants from the study area. The collected specimens were identified with the help of available literature, matching with herbarium and relevant standard books (Ingahalikar, 2001 and Sharma et al., 2001, Flora of Maharashtra state, B.S.I. 2000, Flora of Ahmednagar District 1999).

**RESULT AND DISCUSSION**

**Table No. 1 – Plant of Botanical, Family Name, Habit, Flowering and Fruiting Season, Plant Part used, Medicinal value**

Sr. No	Name of Plant	Family	Habit	Flowering and Fruiting Season	Plant part used	Medicinal use
1	<i>Agave americana</i> L.	Agavaceae	Shrub	Spring	Leaf, Root	Antiseptic
2	<i>Agave bracteosa</i> S.Wats	Agavaceae	Shrub	Spring-Summer	Leaf	Anti-inflammatory
3	<i>Agave desmetriana</i> Baker	Agavaceae	Rosette	Rainy – Winter	Leaf, Flower	Stomach inflammation
4	<i>Aloe vera</i> L.	Liliaceae	Shrub	Spring	Stem	Antioxidant
5	<i>Aptenia cordifolia</i> L.	Aizoaceae	Herb	Summer-Rainy	Leaf, Flower	Anti-inflammatory
6	<i>Bryophyllum pinnatum</i> (Lam.) Oken.	Crassulaceae	Herb	Summer	Leaf, Tuber, Rhizome	Antipyretic, Antidiabetic
7	<i>Cissus quadrangularis</i> L.	Vitaceae	Shrub	Spring – Autumn	Stem	Antioxidant
8	<i>Eriocereus bonplandii</i> Riccob.	Cactaceae	Shrub	Spring – autumn	Stem	-
9	<i>Euphorbia antiquorum</i> L.	Euphorbiaceae	Shrub, Small Trees	Winter	Whole Plant	Toxic
10	<i>Euphorbia neriifolia</i> L.	Euphorbiaceae	Shrub, tree	-	Leaf	Anticancer
11	<i>Fucraea foetida</i> L.	Agavaceae	Shrub	Spring – summer	Leaf	Kidney disorder
12	<i>Huernia zebrine</i> L.	Asclepidaceae	Herb	Throughout year	-	-
13	<i>Opuntia elatior</i> Mill.	Cactaceae	Shrub	Winter	Fruit	Antioxidant

### Review Article

In the survey of succulent plants from Kopergaon Tehsil we observed about 8 Families, 10 Genus and 13 species. Some families were having cultivated plants. From the given study area so far 13 plants belonging to 8 families have been recorded as well as their medicinal uses were explored. The Botanical, Family Name, Habit, Flowering and Fruiting Season, Plant Part used, Medicinal value of thirteen plants are enumerated in table no. 1.

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