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CATAMIXIS BACCHAROIDES THOMS.: A VULNERABLE SPECIES -A STUDY ON POPULATION STATUS

***Anup Chandra, Ashok Kumar and Anil Kumar Kewat**

Systematic Botany Discipline, Botany Division, Forest Research Institute, P. O. New Forest, dehradun-248006, Uttarakhand (India)

**Author for Correspondence*

ABSTRACT

Catamixis baccharoides Thoms is a threatened species of family Asteraceae. In the present study, survey of population status of the species was carried out. It is reported that species has very restricted distribution and low population. It is suggested that suitable conservative measure should be taken to save the species from extinction.

Keywords: *Threatened Species, Catamixis baccharoides*

INTRODUCTION

Catamixis baccharoides Thoms. is monotypic genus belonging to family Asteraceae. The genus is reported from western Nepal extending upto lower shivalik belt of Indian Himalaya. Precisely species is endemic to Shivalik, Tehri Garhwal hills and extremely rare in a small part of Nepal (Pundir, 2001). Species was fairly common in most of its localities but in the later half of 20th century most of the workers observed a continuous decline in population. There may be number of reasons for decline of population of *Catamixis baccharoides* such as habitat fragmentation, development activities, forest fire, grazing, environmental conditions etc. Owing to restricted distribution and low population, it is included in Red Data Book of Indian Plants 1997 in Vulnerable category (Nayar and Sastry, 1987). Therefore, suitable in-situ and ex-situ conservation measures should be adopted to save the species from extinction.

MATERIALS AND METHODS

The vegetative survey was carried out in Mohand, Saharanpur district, Uttar Pradesh and Byasi, Tehri Garhwal in Aug. 2015. Belt transect sampling method (Buckland *et al.*, 2001) was used for survey which is one of the most widely used techniques for estimating the size of the populations. A 20 meter wide transect line was laid down straight across the road. Length of the belt was kept 20 km. All individuals across the belt were counted.

RESULTS AND DISCUSSION

Description: *Catamixis baccharoides* Thomson in J. Linn. Soc., Bot. 9: 343, t. 4. 1866 (1867); C.B. Clarke, Compos. Ind.: 248. 1876; Hook. f., Fl. Brit. India 3: 389. 1881; Kanjilal, For Fl. Chakrata, Dehradun & Saharanpur for Div.: 284. 1928; R.N. Parker, Forest Fl. Punjab with Hazara & Delhi: 294. 1956; M.B. Raizada & H.O. Saxena, Fl. Mussoorie 1: 390. 1978; S.K. Jain & A.R.K. Sastry, Threat. Pl. India: 18. 1980; R.D. Gaur, Fl. Garhwal: 565. 1999; Uniyal & al., Flow. Pl. Uttarakhand Checkl.: 153. 2007.

Bushy, much branched shrub, to 1.5 m tall. Stem glabrous, dark brown to black at maturity; young branchlets terete, white, silky pubescent. Leaves alternate, petiolate, coriaceous, 3-8 × 2-4.5 cm, obovate, sometimes obovate-spathulate, base cuneate, decurrent on petiole, apex rounded, dentate, margins crenateserrate or serrate-dentate, glabrescent or sparsely pubescent near base, glabrous on maturity; petioles to 1 cm long, sericeous. Inflorescence a corymbose panicle, terminal; rachis glandularpubescent; bracts and bracteoles reduced, herbaceous. Capitula ligulate, 0.5–1 cm long, consisting of 5-7 florets. Florets white, bisexual. Phyllaries multiseriate, apex acute to acuminate, ciliate, purplish; outer ones c. 1 mm long, ovate or ovatelanceolate; inner ones longer c. 5 mm long, linear-lanceolate. Ligule limb

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spreading, apex 5-toothed. Stamens exerted, to 3 mm long. Achenes c. 2 mm long, turbinate or obovate, densely

pubescent; pappus biseriate, 4-8 mm long, barbellate, white.

Population Status

Survey for occurrence and population status was the species was found in calcareous cliffs and on exposed rocky steep slopes. Two populations were reported in the study. Population status of *C. baccharoides* in Biyashi and Mohand region is presented in table no. 1 & 2. Total number of individuals in Biyashi and Mohand region were found to be 15 and 6 respectively. Per hectare number of plants of *C. bachharoides* in Biyasi and Mohand region were estimated to be 0.75 and 0.30 respectively.

Table 1: Population Status of *Catamixis baccharoides* in Biyasi and Adjoining Area

Belt Width	Belt Length	Total Area	Total No. of Plants	Plant ha ⁻¹
20m	10 km	20 ha	15	0.75

Table 2: Population Status of *Catamixis baccharoides* in Mohand and Adjoining Area

Belt Width	Belt Length	Total Area	Total No. of Plants	Plant ha ⁻¹
20m	10 km	20 ha	6	0.30



Figure 1: Flowering Twig of *Catamixis baccharoides*



Figure 2: A Young Seedling of *Catamixis baccharoides* Growing on Rocky Slope

Srivstava *et al.*, (2016) first time reported *C. baccharoides* from Himachal Pradesh. They observed few individuals of the species. In the present study, species was reported from the restricted location with few individuals. Other prominent species occur in the areas are *Adina cordifolia*, *Aegle marmelos*, *Shorea robusta*, *Holoptelea integrifolia*, *Lannea coromandelica*, *Mallotus phillippensis*, *Pinus roxburghii*, *Acacia catechu*, *Rhus parviflora*, *Ficus glomerata*, *Lantana camara*, *Syzygium cumini* etc. The indiscriminate exploitation and destruction of its natural habitat by road construction and extensive mining, particularly in its type locality have resulted in large-scale depletion of its populations and the species is facing high a risk of extinction. Therefore, there is an urgent need to conserve this species. *Ex-situ* and *In-situ* conservation should be given top priority to save this species. People should be sensitized about conservation of species through training programmes, seminars/ workshops etc.

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ACKNOWLEDGEMENT

Authors are thankful to the Director, Forest Research Institute, Dehradun and the Head, Botany Division, Forest Research Institute, Dehradun for encouragement and support.

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