



***MENTHA PULEGIUM* L. VAR. *ERECTA* - A NEW SPECIES TO THE FLORA OF VIDARBHA, MAHARASHTRA, INDIA**

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Abstract: *Mentha pulegium* L.ar. *erecta* (Lamiaceae) is reported for the first time from Parsodi village, Bhandara district, Maharashtra state, India. Detailed physiography of the species is discussed in the present paper.

Keywords: Bhandara, Flora, *Menth pulegium* var. *erecta*, Parsodi.

Introduction

During botanical explorations in Bhandara rural area, the author collected a plant specimen from Parsodi village with a 79.538772 E Longitude and 21.146403N Latitude (near Ordnance factory, Jawahar nagar) in Bhandara district of Maharashtra. A critical survey of literature, (Annonymous in 1995, Hooker in 1885, Maheshwari J.K. in 1963, Sambamurthy AVSS in 2010, Singh et.al. 2001, Theodore Cooke CIE in 1904, Ugamuge 1986) floral examination and taxonomy expert's opinion, the collected specimen is confirmed as *Mentha pulegium* L. belongs to family Lamiaceae. *Melissa pulegium* (L.) Griseb. is one of the synonyms of *Mentha pulegium* L. , commonly called as Pennyroyal or pudding grass.

According to literature survey, this species is not recorded by the earlier workers from Vidarbha. Actually this *M.pulegium* is an introduced species from Europe to parts of Asia (Bossard, 2000). Now it is growing wild in Jammu & Kashmir (Annonymous, 1995). On the other hand, Agnihotri,



et.al. (2005) in Higher Himalayas, J&K. and Singh et.al (2001) in Morni hills, Haryana recorded for the first time.

Mentha belongs to family Lamiaceae, represented by 25 species, many varieties and natural hybrids (Davidson 1999). In the present investigation, *M.pulegium* is growing as wild in agricultural field near borders of irrigation canals. The suitable soil is moist clayey with moderate temperature range is 25-35^oc.

According to Lockton (2013), British botanist have long considered there to be two varieties of *M. pulegium*-an upright form (var. *erecta*) and a prostrate one (var. *decumbens*).

The habit of the previously reported species in J&K and Haryana is prostrate and roots arise in the nodal region (Agnihotri et.al. 2005 and Singh et.al 2001), while in the present report, stem is stout, erect with a height of 30-90 cm and not rooting at the nodes. On the base of critical studies of above relevant literature, the present specimen confirmed as ***Mentha pulegium L. var. erecta***. This species is growing in the gardens in Pune (Singh et.al, 2001). But this species **variety** is not recorded by the earlier workers from Vidarbha region. Thus, present findings of the species constitute a new record for Vidarbha, Maharashtra state.

The present investigation provides habit, habitat, distribution data, description, field photograph (Fig.1) and Herbarium (Fig.2) information. Herbarium (Voucher No: P.Rao-03) deposited in the Dept. of Botany, J.M.Patel College, Bhandara (M.S).

Phytogeographical distribution

The district is also known for the Ordnance Factory Bhandara of the Ordnance Factories Board, which manufactures products for the Indian Armed Forces, Jawahar nagar. The present specimen was observed on



23/03/2017 near Jawahar nagar, Parsodi village, Bhandara district, Maharashtra state, India. Parsodi village is situated at an altitude of 800 ft (243 mtr) above sea level. This village is 10km away from Bhandara town. Paddy is the main crop in Parsodi. A lake is also situated near agriculture fields. This lake is the main source for rice irrigation through irrigation canal. The present specimen is observed along the borders of the irrigation canals as wild, where the soil is clayey, moist and fertile.

Repeated field visits were undertaken to collect the digital photos of plants in their natural habitat and plant specimens for observation, identification and data preparation in the laboratory during the study period. Plant specimens identified with Flora of Maharashtra State: Dicotyledons Volume 1 & 2 (Singh et al., 2001); Flora of Marathwada Volume I & II (Naik, 1998); The Flora Of The Presidency Of Bombay (Cooke, 1958) .and Flora of Nagpur District, Ugamuge 1986.

Table: Distribution of *Mentha* species in India.

S.N	Author	Species	State
1.	Agnihitri et.al. (2005)	<i>Memtha pulegium</i> L.	Jammu& Kashmir
2.	Anonymous (1995)	<i>M. aquatica</i> L.	-
		<i>M.arvensis</i>	Jammu&Kashmir
		<i>M.longifolia</i> (L.) Nathh.	Jammu& Kashmir(Gulmarg)
		<i>M. pulegium</i> L.	Jammu& Kashmir(Baramulla)
		<i>M. piperita</i>	Jammu&Kashmir,UttarPradesh (Kanpur)



3.	Hooker 1885	<i>M.sylvestris</i> var. <i>incana</i> <i>M.sylvestris</i> var. <i>royleona</i> <i>M. arvensis</i>	Garuval Hills, Tibet, Kashmir Western Himalayas
4.	Maheshwari J.K.	<i>M. spicata</i>	Delhi
5.	Sambamurty A.V.S.S	<i>M. arvensis</i>	Punjab,Kashmir,Western Himalayas,Kumaon Hills
		<i>M.arvensis</i> var. <i>paperascens</i>	Jammu& Kashmir
		<i>M. pulegium</i> L.	Punjab,Kashmir,
		<i>M. piperita</i>	Maharashtra, U.P,Punjab
		<i>M. spicata</i>	Maharashtra
6.	Sartaj Singh et.al. (2005)	<i>M. longifolia</i> L.	Haryana(Morni Hills)
		<i>M. pulegium</i> L.	Haryana (Morni Hills)
7.	Lakshminarai Singh N.P.,Mohan P.,Karthikeya N S. & PrasannP.V.	<i>M.arvensis</i> L.	Grown in Gardens, Thane
		<i>M.piperata</i> L.	Grown in Gardens, pune
		<i>M.pulegium</i> L.	Cultivated in gardens, Pune
		<i>M.spicata</i> L.	Throughout the state
7.	Theodore Cooke CIE(1904)	<i>M.arvensis</i> L.	Western Himalayas, Common in Indian Gardens
		<i>M.piperita</i> L.	Grown in gardens
		<i>M.suaneolens</i> L.	Grown in gardens
		<i>M.viridis</i> L.	Throughout the plains of India
8.	Ugamuge N.R.(1986)	<i>M.spicata</i> L.	Cultivated in gardens in Pune



Description:

Mentha belongs to family Lamiaceae, represented by 25 species and many varieties and natural hybrids (Davidson 1999). This plant is commonly called as pennyroyal, pudding grass. In the present investigation, *M.pulegium* var. *erecta* is located as wild in agricultural field near borders of irrigation canals. The soil is moist, clayey and fertile with moderate temperature range is 25-35°C.

M. pulegium var. *erecta* stem is stout, angular, ascending erect 30cm to 90cm, much branched and individual plants cannot be distinguished easily because of the formation of daughter plants from stolon. The stolon is sub aerial and produces new daughter plants in favourable conditions. So the plant is perennial. Leaf blade ovate, puberulent, base rounded, margin crenate apex obtuse, opposite, exstipulate, gray green, petiole short, leaf blade 5-30 mm long and 4-20 mm wide, densely hairy with rough and multicellular hairs and strong minty smell. Veins arranged in a feather like pattern. Internodes gradually longer than leaves. Leaves near the flower head are smaller and sessile. Inflorescence is verticillaster of densely packed. The flowers are in whorled clusters, rising in tiers one above the other at the nodes, where the leaves spring in pairs, flowers with short pedicel and small leaf-like bracts, corolla colour is pink or purple and in bloom during December to April. Flower calyx with 5 lobes, hairy, dotted with glands on the outside, with a prominent white hairy tuft in the throat. Corolla with notched upper lip and three lower lobes. Stamens four subequal, exceeding corolla. Style with two unequal stigmas. Ovary superior, 4 lobed. The seed is light brown, oval and very small. Flowering and fruiting : December –April.



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PLATE



Fig.1. Habit of *Mentha pulegium* L.



Fig : 2 Herbarium (V.No: 03)