International Journal of Botany Studies
www.botanyjournals.com
ISSN: 2455-541X
Received: 16-08-2021, Accepted: 01-09-2021, Published: 17-09-2021
Volume 6, Issue 5, 2021, Page No. 613-615

Momordica cymbalaria (Hook. F.) fenzl ex naudin (Cucurbitaceae): A new record for Khandesh region of Maharashtra state, India

M B Jagtap*, N K Athawale, M K Dhanka, S K Tayade
Department of Botany, PSGVP Mandal's Shri SI Patil Arts, GB Patel Science and STKVS Commerce College, Shahada, District Nandurbar, Maharashtra, India

Abstract
The diversity evaluation and floristic listings are necessary to understand the present diversity status and its conservation. Although examining counts of species is perhaps the most common method used to compare the biodiversity of various places, in practice biodiversity is weighted differently for different species, the reason being that some species are deemed more valuable or more interesting than others. These include provisioning services such as food, water, timber, fiber, and genetic resources. Khandesh region of Satpura ranges is having a great diversity of plants. The present paper deals with addition of one species of *Momordica*, which is reported for the first time for Khandesh region from Satpura ranges. Detailed description and photo plate are provided for easy identification.

Keywords: cucurbitaceae, Khandesh, *Momordica cymbalaria*, Maharashtra, new addition

Introduction

The Jalgaon, Dhule and Nandurbar districts of Maharashtra State formed the Khandesh region. The Jalgaon district is known as East Khandesh and Dhule and Nandurbar is known as West Khandesh. The Khandesh region lies at the Northwestern corner of the Deccan plateau, in the valley of the Tapi river and is bound to the north by Satpuda ranges, to the east by the Berar (Vidarbha) region, to the south by the hill of Ajanta, belonging to the Marathwada region of the Maharashtra, and to the west by the Northern most ranges of the Western Ghats, and beyond that the coastal plain of Gujarat. Khandesh region lies between 20 ^{0} 8` and 22 $^0$ 7` North latitude and 73 ^{0} 42` and 76 $^0$ 28` East longitude. The forest of Khandesh region is dry deciduous type.

Khandesh region though botanically rich in biodiversity have been explored extensively except a few sporadic reports on floristic of Mathew (1988) [24], Garud (1999), Yadav (2003) [33], Khirsagar (2008) and Patil (2003) [33]. Thus, there are many endemic and threaten species have been added by many workers (Garud and Yadav; 2009,Valvi, *et al*; 2006, Khan *et al*, 2009, More *et al*, 2014, Khan and Chaudhari;2014, Gosavi and Koli;2015,Khan and Firdousi; 2015, Khan *et al*, 2015, Khan and Patil; 2015, Khan *et al* 2016, Undirwade and Bhadane; 2017, Khairnar *et al*, 2018, Khan; 2018, Khan and Khan; 2018, Rane; 2018, Khan *et al*,2019, Khan and Gosavi; 2019, Chaudhari and Khan; 2020, Khan and Khan;2020, Khan and Undirwade; 2020, Sonawane *et al* 2020) [6, 32, 18, 22, 7, 10, 7, 11, 11, 15, 20, 31, 8, 13, 13, 27, 12, 12, 3, 17, 17, 30].

During exploration of Cucurbitaceae members from Khandesh region, first author has collected an interesting species of Cucurbitaceae. After consult relevant literature (Bharathi, 2013; Khirsagar, 2008; Patil 2003; Singh, 2001, Mathew, 1988; Garud, 1998; Shah, 1978, Chakravarty, 1982; Cook,1958) [1, 33, 29, 24, 28, 2, 4], the unidentified species of Cucurbitaceae identified as *Momordica cymbalaria* (Hook. F.) Fenzl ex Naudin also confirm that this species is not reported to the Khandesh so far. Thus, in present commination we are reporting it as new to the Khandesh region.

Materials and Methods

While working on cucurbits or the gourd family, Cucurbitaceae from 2015 for Ph. D. research work, we undertook frequent collection tours in every season in Satpuda ranges to collect the members of Cucurbitaceae. As a result of this collection tour was the one species *M. cymbalaria* (Hook. F.) Fenzl ex Naudin new addition to the Khandesh region. The species have been identified by consult relevant literature (Bharathi, 2013; Khirsagar, 2008; Patil 2003; Singh, 2001, Mathew, 1988; Garud, 1998; Shah, 1978, Chakravarty, 1982; Cook, 1958) [1, 33, 29, 24, 28, 2, 4]. The voucher specimen is deposited at the herbarium Department of Botany, P.S.G.V.P. Mandal's Shri. S. I. Patil Arts, G. B. Patel Science and S. T. K. V. S. Commerce College, Shahada, Maharashtra, India. Detailed descriptions of the species, flowering and fruiting period and distributions and exsiccate numbers are appended at the end.

Momordica cymbalaria Hook. f. in Oliv. Fl. Trop. Afr. 2: 540. 1871; C.B.Cl. in Hook. f. Fl. Brit. India 2:618. 1879; Cooke, Fl. Pres. Bombay 1:564. 1958 (Repr.); Jeffrey in Kew Bull. 34: 789. 1980. *Luffa tuberosa* Roxb. Fl. Ind. 3:717. 1832; Chakr. in Rec. Bot. Surv. India 17: 81. 1959 & in Fasc. Fl. India 11:74. 1982.

Vernacular Name- 'Kartoli', 'Kartoll'.

Herbaceous climber, tuberous roots; stems slender, herbaceous, angular, hairy, simple tendril present. Leaves, simple, exstipulate, alternate, 3.0-5.0 x 2.8-6.3 cm, cordate at base, 3–5–lobed, lobes triangular, ovate or oblong, margins serrate. Male flowers solitary, pedicellate 1-3.2 cm yellowish white, bracteate; Stamens 5, basifixed; monothecous, Female flowers with ebracteate peduncles, Polysepalous, sepals brownish black; Polypetalous, petals, yellowish white. Fruits Pepo, 8 ridges present, ellipsoid, shortly beaked, 3-6 cm long, Seeds many, broadly ellipsoid, blackish brown.

Fls. and Frts
June–October.
Illus. Wight, Ic. tt. 505–506. 1841; Ic. Roxb. Fasc. 8, t. 17. 1978 (Repr. ed.).

Distribution in Maharashtra
Common among bushes near human inhabitations. Ahmednagar, Akola, Nasik, Raigad, Satara, Sindhudurg, Yavatmal.

Distribution in Khandesh
Rare, only few individuals have located near Amoda village of Shahada Taluka, Nandurbar District.

Specimen examined
India: Maharashtra, Nandurbar district, Shahada, Coll.: M. B. Jagtap 247 (PSGVPASC).

Photo Plate

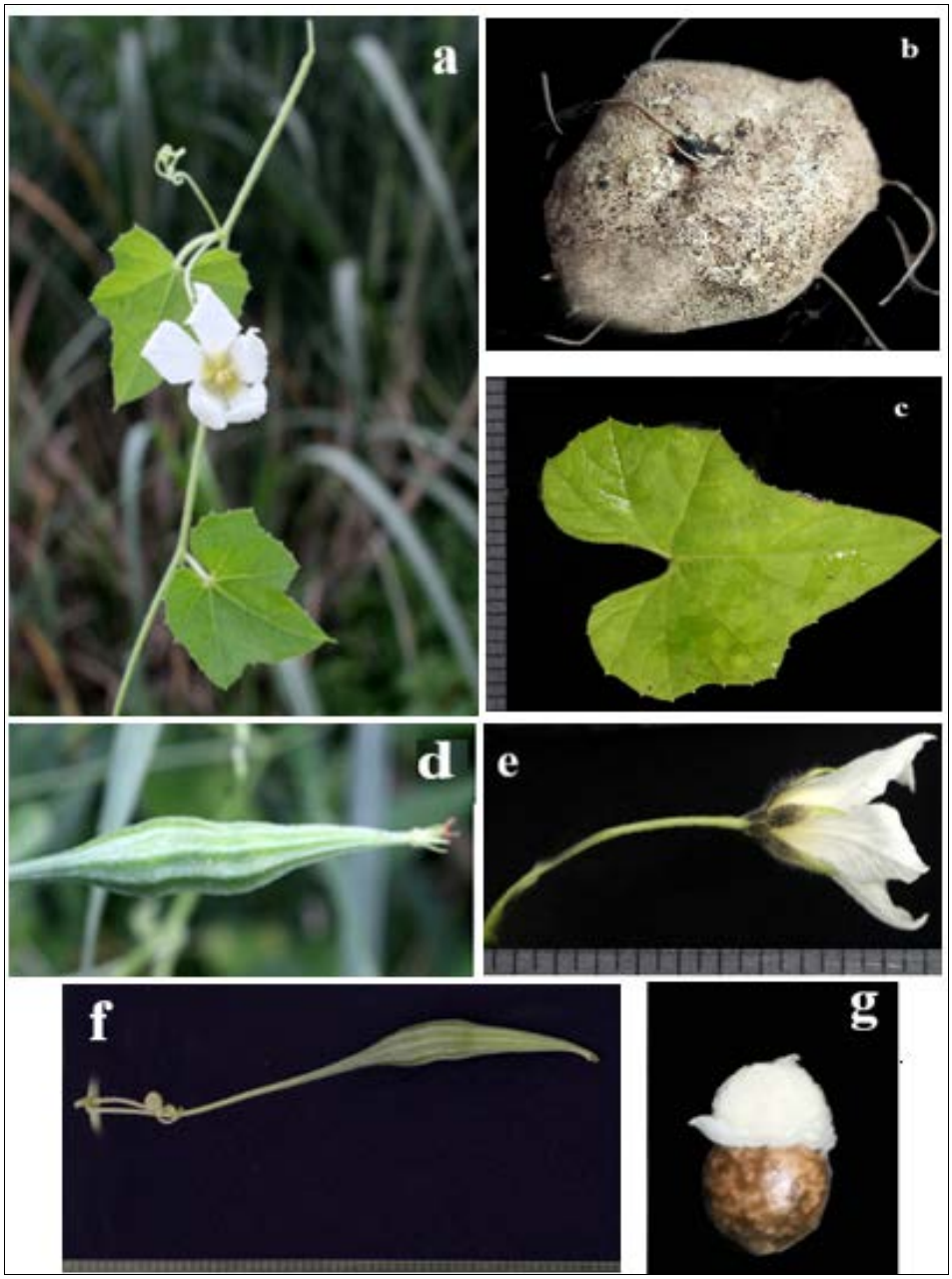

Fig 1: *Momordica cymbalaria* (Hook. F.) Fenzl ex Naudin: a. Habit b. Tuber c. Leaf d. Young Fruit e. Male Flower f. Fruit g. Seed

Acknowledgements
The authors wish to express their gratitude to Dr. K.V.C. Gosavi (Dept. of Botany, HPT Arts and RYK Science College, Nashik 422 005, Maharashtra, India) for confirmation of species and necessary help. The authors are also thankful to the to the Principal, P.S.G.V.P. Mandals, Shri. S.I. Patil Arts, G. B. Patel Science and S.T.K.V.S. Commerce College, Shahada, Dist-Nandurbar (M.S.), for providing laboratory and library facilities and constant inspiration.

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