

## ***Moringa concanensis* Nimmo. ex Dalz. & Gibs (Moringaceae): an addition for the flora of Marathwada, Maharashtra State (India).**

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**Abstract:** The present paper deals with a new addition of taxa of flowering plant to the Marathwada region of Maharashtra State. Updated information on nomenclature, correct description and locality is provided. This is a new additional record for this area.

**Key Words:** *Moringa concanensis*, Moringaceae, addition, Marathwada region, Maharashtra.

### **1. INTRODUCTION :**

*Moringa* belongs to the family Moringaceae. The family consists of the single genus *Moringa*. The family is distinguished by parietal placentation, 3-valved fruit, elongated, non-dehiscent berry and winged seeds. **Philips (1951)** reported four species; while **Pax (1936)** and **Puri (1942)** reported ten species, native to the Old World Tropics. **Bessey (1915)** placed the family under Rheadales. **Datta and Mitra (1942)** considered it more closely related to the Violaceae of the Violales.

The genus *Moringa* Adans. is represented by 13 species (**Mabberley, 2008**) in the world, of which only 2 species viz. *M. oleifera* Lam. and *M. concanensis* Nimmo ex Dalzell & Gibson are found in India (**Hooker, 1879**). *Moringa concanensis* is widely distributed species which occurs in hilly regions of Eastern Ghats (**Pullaiah & Chennaiah, 1997**), Western Ghats (**Prasanna, 2000**) Rajasthan (**Pandey, 1987**), Madhya Pradesh (**Kumar, 1997**) and Baluchistan & Sind of Pakistan (**Qaiser: Flora of Pakistan Database, 2014** at <http://www.tropicos.org/Project/Pakistan>). After examining protologue (**Graham, 1839; Dalzell & Gibson, 1861**) and subsequent publication (**Verdcourt, 1985**). **Sachin D Kuvar and R D Shinde (2019)**, reported in Wild edible plants used by kokni tribe of Nasik District, Maharashtra.

### **2. MATERIALS AND METHODS :**

During the floristic survey of Nanded District of Marathwada region, Maharashtra State, India. The collection of an interesting specimen belonging to the family Moringaceae has been collected while going through the cross examination with the other species of genus *Moringa*, the specimen identified as *Moringa concanensis* Nimmo. ex Dalz. & Gibs. Scrutiny of literatures revealed that this species was distribution in Pakistan, Asia Minor, Africa and Arabia (**Mughal et al., 1999**). India: Hilly region of Eastern Ghats [**Pullaiah & Chennaiah, 1997**], Western Ghats [**Prasanna, 2000**]. Rajasthan: Jodhpur (Dechu), Barmer (rocky area) [**Bhandari, 1990**]; Churu (Gopalpura), Jhalawar (Khanpur), Jaisalmer (Near Kuri), Pali (Piprol) and Tonk (Mayola forest) [**Shetty & Singh, 1987**]; Barmer, Jodhpur, Jaisalmer, Nagaur, Pali, Bundi, Jhalawar, Jalore [**Kumar & Purohit, 2015**]. The critical revise of this specimen and pertinent literatures

**Almeida M.R. (1998, 2001 and 2003), Cooke, T.C. (1958a, b, c), Naik, V.N. (1998a, b) and Singh, N.P. & S. Karthikeyan (2000 and 2001)**, exposed that the identity of the specimen as *M. Concanensis*.

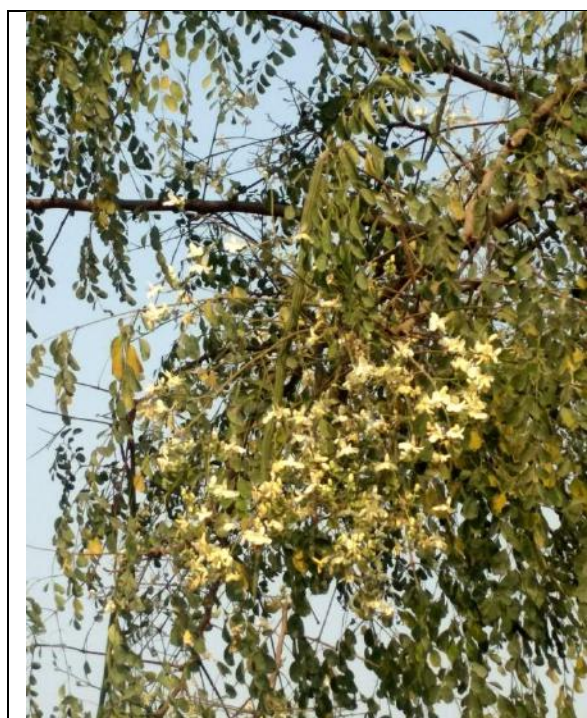
### 3. RESULT AND DISCUSSION :

#### Taxonomic Description:

A small tree with thick bark, glabrous. Stem glabrous. Leaves 2-pinnate, rarely 3-pinnate, 30 – 45 cm long, primary and secondary rachises thickened at base, articulated with a single gland at each articulation; leaflets 9 – 15, 1.5 – 3.4 × 1.2 – 2.5 cm, rounded at base, rounded or sometimes retuse at apex, rarely oblique sided, darker above, paler beneath petiolules 2 – 5 mm long, jointed near the apex. Inflorescence lax, panicles 40 – 50 cm long, tomentose. Flowers small. Pedicels 8 – 13 mm long, deflexed thickened, articulated at the base. bracts 0.5 – 1 mm long, caducous. Calyx 5-lobed, lobes oblong, white, reflexed, 8 – 12 mm long, thinly tomentose. Corolla yellowish-white with reddish near the base, oblong or oblong-spathulate, 1 – 1.5 cm long. Stamens 5 with alternating staminodes 4 – 5; filaments hairy at base. Pods linear, 30 – 45 cm long, sharply 3- angled, long pointed, valves hard, 10 – 18 seeded. Seeds 1.5 – 2 cm long, triangular with a very thin hyaline, wing at each angle, white or pale yellow.

#### Pharmaceutical and nutritional value of *moringa*:

All parts have been employed as cardiac and circulatory stimulants (**Chopra et al. 1965**). The seeds are pungent and stimulant (**Chopra et al. 1958**). 1. Entire plant parts used to cure inflammation, cardiovascular, gastro-intestinal, haematological disorders. Seed oil has good oxidative stability during frying. The seed oil is high in oleic acid favoured for replacing poly-unsaturated vegetable oils. The seed protein can be utilized after value addition, used for water purifying and also a good source of non-desiccating oil, commonly known as Ben Oil. The unripe fruits are eaten by natives, (**Ramakrishna et al 2017**), (**C.S. Purohit et al., 2020**) and **Admuthe Pokale, 2022**).



**Flowering and Fruiting:** February – May.  
**Specimens Examined:** Kamtha Village (Near Asna river bridge) NHI6,1 Nanded Maharashtra State, India.  
**G. P. S. Location:** Latitude:19.189329  
Longitude:77.34079  
**Collected by:** Rizwan Younus Khan on dated 15<sup>th</sup> February 2022. (Voucher No. 2414).



**Figure. No. 1-** Habit and flower of *Moringa concanensis* Nimmo. ex Dalz. & Gibs.

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