



Plant Science Research

ISSN 0972-8546

 PLANT
SCIENCE
RESEARCH


Three new plant records for the state of Odisha

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ARTICLE INFO

Article history:

Received : 2 December 2013

Accepted : 5 December 2013

Keywords:

Homalium tomentosum,*Melinis repens*,*Vahlia digyna*,

new report, Odisha

ABSTRACT

Three angiospermic plant species namely, *Homalium tomentosum*, *Melinis repens* and *Vahlia digyna* are reported here as new distributional records for Odisha state.

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During the course of floristic inventories, survey of wild economic plants and quantitative assessment of plant resources in different parts of Odisha, three angiospermic plant species were collected, which after critical examination, could be identified as *Homalium tomentosum*, *Melinis repens* and *Vahlia digyna*. Perusal of literature on flora of Odisha revealed that wild occurrence of these three species has so far not been reported from the State and thus turned out to be new distributional records. Correct botanical name with synonym (s), botanical description, notes of taxonomy, ecology, phenology and distribution of these species are provided in the present paper. The herbarium specimens have been deposited in the Herbarium of Regional Plant Resource Centre (RPRC), Bhubaneswar.

Homalium tomentosum (Vent.) Benth. J. Proc. Linn. Soc. Bot. 4: 34. 1859; Gamble, Fl. Presid. Madras 1:522.1915. *Blackwellia tomentosa* Vent. Choix de Plantes t.57.1803. (FLACOURTIACEAE) Fig. 1 (a)

Common name: Burma Lancewood, Moulmein Lancewood

Deciduous, medium-sized tree, 20-25 m high, sometimes with buttresses, bark thin, white, smooth. Leaves broadly obovate to obovate-oblong, 10-15 cm long, rounded at apex, obtuse

or apiculate, cuneate to the base, rounded at the base, crenate, sub-coriaceous, nerves glabrescent. Inflorescence pendulous, about 30 cm long. Flowers small, greenish-white, 5-6 merous; in 3-5 flowered glomerules. Calyx tomentose, segments linear-oblong. Petals similar to calyx segments. Stamens solitary, opposite to petals. Ovary 1-celled. Fruit capsule, coriaceous, valvular at apex. Seeds few, angular-oblong.

Fls: June - November; *Frts.*: September- January.

Very rare, only few trees are found in mixed deciduous forest with calcareous soils.

Distribution: Myanmar, Cambodia, Bangladesh, Sri Lanka, Indonesia, Laos, Thailand, India (North-East India and Western Ghats)

Specimens examined: Brahmanipadar, Ganjam district, P. K. Acharya & S. C. Jena 18096, 19.10.2012.

Note: The accrescent calyx and corolla often form a parachute after anthesis. Thus seed dispersal is mainly by wind. Wood is said to be used for shoots of heavy carts, furniture, planking, electrical transmission poles, spars etc. in South East Asia.

The genus *Homalium* is represented by 180 species in the world (Mabberley, 1997). In Odisha, *H. nepanense* is the

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most common species and occur in a wide range of habitats. *H. tomentosum* varies from *H. nepalense* by having large tomentose leaves, flowers in 5-6-flowered glomerules borne on drooping racemes. Though Gamble (1915) reported its occurrence from Northern Circars (Ganjam), the available herbarium specimens are from outside the geographical boundary of present day Odisha. Therefore, it does not find a place in Flora of Orissa (Saxena & Brahmam, 1994).

Melinis repens (Willd.) Zizka, Biblioth. Bot. 138: 55. 1988. *Saccharum repens* Willd. Sp. Pl. (ed 4) 1: 322. 1797. *Rhynchelytrum repens* (Willd.) C. E. Hubb., Bull. Misc. Inform. Kew. 1934: 110. 1934; Bor, Grasses Burma Ceyl. Ind. Pak. 355. 1960; Hsu, Fl. Taiwan 5: 596. 1978. *Erianthus repens* (Willd.) P. Beauv. Ess. Agrost. 162: 177. 1812. (POACEAE) Fig 1 (b)

Common name: Natal grass, Rose Natal grass, Ruby grass

Annual or loosely tufted short-lived perennial. Culms geniculately ascending, often rooting at lower nodes, up to 150 cm tall. Leaf sheaths loose, usually with tubercle-based hairs; leaf blades linear, up to 20 cm long. Panicle silvery-pink or purple, ovate to oblong, 8–20 cm, fluffy; branches capillary; pedicels with a few long hairs. Spikelets ovate, 2–4 mm, densely villous, hairs up to 6 mm; lower glume narrowly oblong, 1-veined, with stiff short hairs, separated from the upper by a short internode; upper glume 5-veined, gibbous below middle, tapering upward into a glabrous membranous beak, emarginate, mucronate or with short awn up to 1 mm; lower floret staminate, lemma similar to upper glume but narrower and less gibbous, palea keels ciliate; upper floret whitish, thinly cartilaginous, smooth, shining, ca. 2 mm. Caryopsis ovate, flattened, about 1.3 mm long, light brown in colour.

Fls & Frts.: June–November; most part of the year at suitable localities.

Locally abundant in waste places, roadsides and open grassy fields.

Distribution: Native grass of tropical South Africa, introduced into most warm countries for soil conservation and as a forage crop. Very widely naturalised in Australia, southern USA, Pacific islands, parts of the Mediterranean, India, Taiwan, Pakistan

Specimens examined: RPRC campus, Bhubaneswar, Khurda district, S. C. Jena 18861, 04.11.2013.

Note: This is a polymorphic, pantropical weed, recognizable by its pink, fluffy panicles. These flower spikelets are densely covered with silky hairs that are initially reddish or purplish in colour. These hairs tend to lose their colour as the seed -

heads mature and often end up a pinkish or silvery colour. These light and fluffy seeds are often wind-dispersed and may also become lodged in clothing, vehicles and animals. Seeds can also be dispersed along with agricultural produce (*i.e.* fodder and pasture seed).

Vahlia digyna (Retz.) Kuntze, Revis. Gen. Pl. 1: 227. 1891; Anon., Draw. Ind. Pl. (Icon. Roxb. No. 592) 6: t. 20. 1973; Bridson in Kew Bull. 30: 177. 1975. *Oldenlandia digyna* Retz. Obs. Bot. 4: 23. 1786. *Bistella digyna* (Retz.) Bullock in Acta Bot. Neerl. 15: 84 & 85. 1966. *Vahlia viscosa* Roxb. Fl. India 2: 89. 1832; Hook. f. Fl. Brit. India 2: 399. 1878; Gamble, Fl. Madras Presidency 1: 447. 1919. (VAHLIACEAE) Fig. 1 (c)

Erect sparsely to much-branched annual herb, 10-20 cm tall; stems covered with patent or crisped, often glandular, hairs. Leaves ovate to ovate-lanceolate, acute at apex, tapering or rounded at base, usually pubescent. Flowers sessile or subsessile. Calyx-tube copular, 1–2 mm. long, sparsely covered in patent or shorter crisped hairs; lobes 5, ovate, acute, glabrous or sparsely pubescent outside. Petals 5, yellow, fading to white, always shorter than sepals, round to ovate, usually distinctly apiculate, narrowed to base, entire to finely or irregularly crenate towards apex, with mid-vein alone distinct. Filaments translucent with vein apparent, with a small membranous hairy scale-like appendage at the base. Style-bases distinctly thickened, styles 2, up to 1 mm long, glabrous. Capsule 1.5–2.5 mm. long, sparsely pubescent. Seeds straw-coloured, ovoid-cylindrical, with indistinct longitudinal ridges.

Fls. & Frts.: February- April.

Occasional, in moist sandy soils along rivers, lakes and in harvested rice fields.

Distribution: W. Pakistan, Iran, Egypt, tropical Africa, Madagascar and India.

Specimens examined: Rambha, sandy shore of Chilika lagoon, Ganjam district, P. C. Panda 10375, 27.02.2013; Purohitpur Sasan, bank of Dhanua river, Khurda district, S, C, Jena & S. K. Kar 9374, 19.02.2012.

Note: The genus *Vahlia* is represented by five species in the world (Mabberley, 1997) and two species are reported to occur in Odisha. *V. digyna* differs from *V. dictotoma* by having sessile flowers borne in axillary pairs. The flowers of *V. dictotoma* are pedicellate and peduncled. Though flower colour of *V. dictotoma* is described as either white or yellow elsewhere, plants collected from Odisha invariably bear white flowers. However, *V. digyna* always have yellow flowers. Haines (1921-25) apprehended the occurrence of this species

Fig.1: (a) *Homalium tomentosum*(b) *Melinis repens*(c) *Vahlia digyna*

from the then Bihar and Orissa, but did not provide any precise locality, nor does this species find a place in Flora of Orissa (Saxena & Brahmam, 1994).

Acknowledgements

Financial support from Chilika Development Authority, Bhubaneswar under Integrated Coastal Zone Management (ICZM) Project and also Department of Biotechnology, Govt. of India is gratefully acknowledged.

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