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Cover: Rufous-headed Hornbill *Rhabdotorrhinus waldeni* © Philip Godfrey C. Jakosalem.



Abnormalities in the female spikelets of *Coix lacryma-jobi* L. (Poaceae) India

Nilesh Appaso Madhav¹ & Kumar Vinod Chhotupuri Gosavi²

^{1,2} Department of Botany, HPT Arts & RYK Science College, Nashik, Maharashtra 422003, India.

¹ nileshmadhav@gmail.com, ² kumarvinodgosavi@gmail.com (corresponding author)

Coix lacryma-jobi L. consists of three varieties, *Coix lacryma-jobi* var. *stenocarpa* Oliv., *Coix lacryma-jobi* var. *ma-yuen* (Rom. Caill.) Stapf, and *Coix lacryma-jobi* var. *puellarum* (Balansa) E.G. Camus & A. Camus. *C. lacryma-jobi* var. *stenocarpa* can be easily distinguished by very much longer than broad and having cylindrical or roughly bottle shaped utricle and this variety distributed in South East Asia (Bor 1960). *Coix lacryma-jobi* var. *ma-yuen* can be distinguished by having soft utricle than other taxa of *Coix* and cultivated in China, Myanmar, and northeastern India for its medicinal and food value (Arora 1977; Li 2006; Xi et al. 2016). *Coix lacryma-jobi* var. *puellarum* can be distinguished by its perennial habit and white to bluish globose utricle (ca. 4 mm in diam.), distributed in Myanmar, Malaysia, and Indo-China (Bor 1960). *Coix lacryma-jobi* is widely distributed throughout pantropic in different habitat like seasonal streams, stagnant water, along seashore, saline water, muddy region, slopes of hills; thus, the species shows a range of morphological variations. During taxonomical study of the genus *Coix*, authors collected *C. lacryma-jobi* var. *lacryma-jobi* from different habitat in different regions of the Western Ghats and the western coast, India (Figure 1). Some populations show same type of abnormalities but these are rare.

Usually, all the taxa of *Coix* shows single basal sessile pistillate flower, however, rarely two to three pistillate flowers are reported in *C. lacryma-jobi* var. *lacryma-jobi* for the first time in present communication. In three pistillate flowers, top most flower becomes rudimentary. These abnormalities located from hilly slopes of Harishchandra gad, cultivated fields of Rajur, Aluva, and Kalmanja from state of Maharashtra, Kerala, and Karnataka, respectively (Table 1, Figure 1, Image 1). That means the genus shows more advance nature as reducing pistillate flowers and showing affinities towards related genera like *Polytoca* R.Br., *Tripsacum* L., and *Trilobachne* M. Schenck ex Henrard as these genera consists of more than one pistillate flowers. Another interesting rare abnormality is appearances of leaf blade on utricle with range of variation in length. During our investigations populations bearing extended leaf blades of utricles from 0.5 mm to 10 cm these populations were in different habitats like on hilly forest slopes of Harishchandra gad, cultivated marshy water-logged soil of Rajur, and estuary of Arabian sea of Devgad (Table 1, Figure 1, Image 1). Such abnormality is relict of leaf sheath, which is modified as protective covering around the seed and shows affinities with *C. gasteenii* B.K.Simon.

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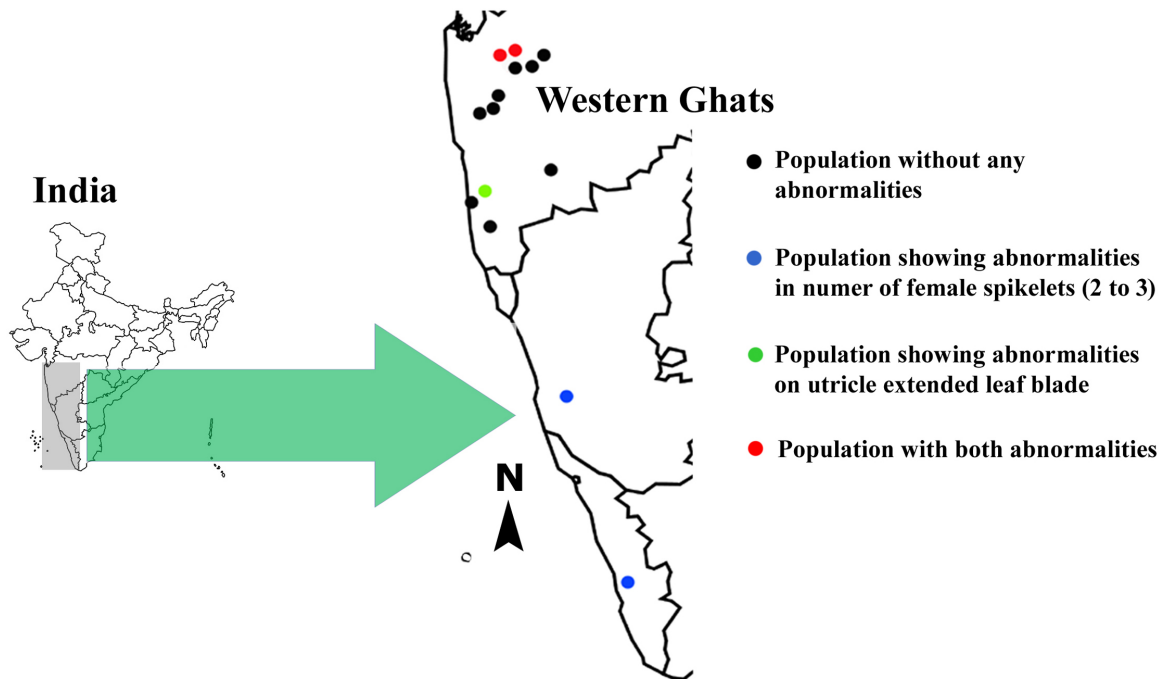


Figure 1. Map of Western Ghats and western coast showing observation localities of *Coix lacryma-jobi* L.



Image 1. Abnormalities in female spikelets of *Coix lacryma-jobi* L.: A—Inflorescence with single female spikelet | B—Inflorescence with two female spikelets | C—female spikelets without leaf blade on utricle | D–F—female spikelets with different lengths of leaf blade on utricle.

Table 1. Observed localities in Western Ghats and western coast of *Coix lacryma-jobi* L. populations.

	Localities	Abnormalities observed	
		No. of female spikelets more than one	Extended leaf blade
1	Shivaji University Kolhapur (Dist: Kolhapur; MH)	-	-
2	Harishchandragad (Dist: Ahmednagar; MH)	+	+
3	Kudal (Dist: Sindhudurg; MH)	-	-
4	Napane (Dist: Sindhudurg; MH)	-	-
5	Titvala (Dist: Thane; MH)	-	-
6	Devgad (Dist: Sindhudurg; MH)	-	-
7	Igatpuri (Dist: Nashik; MH)	-	+
8	Gawalwadi (Dist: Nashik; MH)	-	-
9	Tryambakeshwar (Dist: Nashik; MH)	-	-
10	Mokhada (Dist: Palghar; MH)	-	-
11	Plot pada (Dist: Thane; MH)	-	-
12	Rajur (Dist: Ahmednagar; MH)	+	+
13	Aluva (Dist: Ernakulam; KL)	+	-
14	Kalmanja, (Dist: Dakshina Kannada; KA)	+	-

Dist—District | MH—Maharashtra | KL—Kerala | KA—Karnataka.

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