

Bothriochloa pertusa (L.) A. Camus, A Significant Summer Grass of Jharkhand, India



Botany

KEYWORDS : Poaceae, grass, harsh summer

Nirbhay Ambasta

Department of Biology, S. N. B. I. College, Unta, Chatra

ABSTRACT

Bothriochloa pertusa (L.) A. Camus belongs to the family Poaceae having quality to endure harsh summer when most of the grasses dry out. It is most common summer grass of Chouparan Block of Hazaribag District of Jharkhand State. It is commonly known as Indian Couch grass or Sweet pitted grass.

INTRODUCTION

Bothriochloa pertusa (L.) A. Camus in Ann. Soc. Linn. Lyon 1930. n.s. 76: 164. 1931; Bor, Common Grasses of the United Provinces 83. 1940; Bor, Grass. Burm. Ceyl. Ind. Pak. 109. 1960; SreeKumar & Nair, Fl. Kerala Grasses 54. 1991; Singh et al., Fl. Bihar 596. 2001; Kabir & Nair, Fl. Tamil Nadu Grasses 373. 2009. *Holcus pertusus* L., Mant. Pl. 301. 1771. *Andropogon pertusus* (L.) Willd., Sp. Pl. 4: 922. 1806; Hook. f., Fl. Brit. India 7: 1173. 1896. *Amphilophis pertusa* (L.) Nash ex Stapf in Agric. News W. Ind. 15: 179. 1916; Haines, Bot. Bihar & Orissa pt. 5: 1030. 1924 (Repr. ed., 3: 1077. 1961.)

The grass is quite common in Chouparan Block of Hazaribag District, State-Jharkhand, India (Fig.1&2). It resembles to *Dichanthium annulatum* (Forssk.) Stapf (Fig.3) but distinguished from the later by the presence of pit on it's lower glume (Roy, 1984). *B. pertusa* (L.) A.Camus is a good soil binder which checks erosion when strong wind comes through during mid-day period of summer season.

MATERIALS AND METHODS

The research was carried out at Chouparan Block of Hazaribag District, Jharkhand. Jharkhand is a state of Republic of India. The area was visited fortnightly and the specimens of *B. pertusa* (L.) A. Camus were collected. These are treated with 10% formalin there and the bundles were kept in tight polythene bags. After coming from the field all these specimens were spread out in loose papers then pressed them among blotting papers. Blotting papers were changed so that it get soaked water and moisture. Now it is ready to poison but since these are treated with formalin hence there's no need to poison. Now these are mounted on mounting sheets (28x42 cm) and identify them with the flora of the region concerned and later confirmed it at Botanical Survey of India, Howrah.

RESULTS AND DISCUSSION

The grass is perennial with variable habits (Haines, 1924). Culms 30-80 cm tall, erect or ascending (Mathew, 1982). Creeping or geniculate; nodes are bearded. Leaves linear, 2-15x0.2-0.5 cm, glabrous (Ambasta and Singh, 2011) except at base, midrib prominent; sheaths hardly compressed; ligules membranous, truncate. Inflorescence- Racemes subdigitate (Sarma and Sarkar, 2002), 2-10 on a peduncle, each one 2-8 cm long, shortly pedunculate, silky villous.; joints linear, 2-2.5 mm long, densely villous with long hairs. Spikelets are elliptic-lanceolate, 3-4 mm long; lower glume elliptic-lanceolate, 3-4x1 mm, shortly 2-fid at apex, chartaceous or subcoriaceous, faintly 7-9 nerved, densely hairy below the middle, with a deep circular pit above the middle (Fig.4) sometimes 2-pitted (Saxena and Brahmam, 1996), keels shortly pectinate towards apex; upper glume is boat-shaped or oblong-lanceolate, equalling the lower; acuminate, faintly 3-5 nerved or rarely nerveless, hyaline; palea absent; second lemma stipitate, 1-2 mm, awn 15-20 mm long, column 6-8 mm, brown; stamens 3, anthers 1-2 mm long, yellow; ovary oblong, 0.3-0.5 mm, styles ca 1 mm long, stigmas 1-2 mm long, feathery, pink; grain oblong. Pedicelled spikelet oblong or elliptic, 3-4 mm long (Singh et al., 2001); pedicels linear, 2-2.5 mm, long villous; lower glume oblong or elliptic, 3-4x1 mm, chartaceous, 13-15-nerved, margins hyaline, keels shortly pectinate; upper glume lanceolate, equalling lower; faintly 3-5-nerved, margins hyaline, villous; lower floret similar to that of sessile spikelets; upper floret male or empty; second lemma lanceo-

late, 3-3.5x 0.5-0.75 mm, entire, delicate, hyaline; palea absent (Singh et al. 2001).

The grass is commonly found along the roadside and forest glades, etc. (SreeKumar and Nair, 1991). It is found even in the month of May and June (temperature ca 42) when most of the grasses dry out and so shows it's endurance against harsh summer. Flowering and fruiting occur throughout the year if moisture is available. This plant is common throughout India (Diamond et al., 2013). It is grazed by the cattle when it is young but after flowering it generally seems to avoid by the cattle if other grasses available but in scarcity they eat that.

ACKNOWLEDGEMENT

I'm thankful to Miss Akanksha Lala, B.Sc. student of Kulti College, Kulti, West Bengal for her kind support in making illustration (Fig.5).



Fig 1: Map of India showing different states



Fig 2: Map of Jharkhand state showing Chouparan Block of Hazaribag District.



Fig.3: *B. pertusa* (L.) A. Camus in the field.



Fig.4: Spikelet's glume with pit and plenty of hairs.

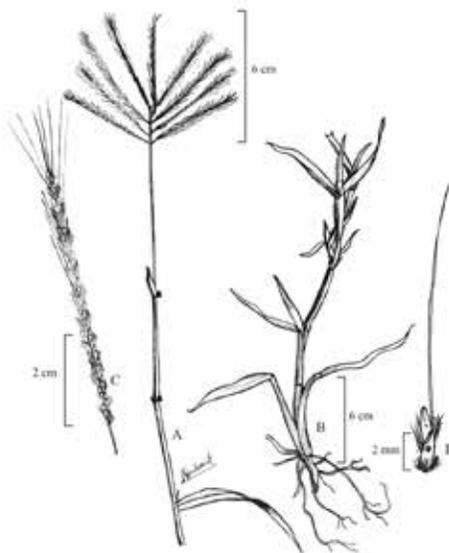


Fig. 5 : *Bothriochloa pertusa* (L.) A. Camus

Details of the Fig.5:

- A. Inflorescence
- B. Base of plant: a perennial
- C. A mature raceme: lower spikelets have shed their seeds and awns
- D. Pair of spikelets: the lower awned; note the pit in the lower glume.

REFERENCE

- Ambasta, N. and C. T. N. Singh 2011. Floristic Survey of the Sedges and Grasses of Gautam Budha Wildlife Sanctuary, Hazaribag, Vinoba Bhawe University, Hazaribag, India. 106-107. | Diamond, A. R., J. K. England and B. Dykes 2013. New to Alabama: Pitted bluestem, *Bothriochloa pertusa* (Poaceae). *Phytoneuron*. 1-5. | Haines, H. H. 1924. The Botany of Bihar and Orissa. Bishen Singh Mahendra Pal Singh, Dehradun. pt. 5: 1030 | Kabeer, K. A. A. and V. J. Nair 2009. Flora of Tamil Nadu-Grasses. Botanical Survey of India. 373. | Mathew, K. M. 1982. Illustrations on the Flora of TamilNadu, Carnatic. The Rapinat Herbarium, St. Joseph's College, Tiruchirapalli, India. 2: 816. | Roy, G. P. 1984. Grasses of Madhya Pradesh. Botanical Survey of India, Howrah 42. | Sarma, T. K. and A. K. Sarkar 2002. Flora of Palamau District. Botanical Survey of India, Howrah. 667. | Saxena H. O. and M. Brahmam 1996. The Flora of Orissa. Orissa Forest Development Corporation Ltd., Bhubaneswar 4: 2272. | Singh, N. P., K. K. Khanna, V. Mudgal, R. D. Dixit 2001. Flora of Madhya Pradesh. Botanical Survey of India, Howrah. 3: 378. | Singh, N. P., V. Mudgal, K. K. Khanna, S. C. Srivastava, A. K. Sahoo, S. Bandopadhyay, N. Aziz, M. Das, R. P. Bhattacharya and P. K. Hajra 2001. Flora of Bihar Analysis. Botanical Survey of India, Howrah. 596. |