'pinnae' also developed sori just like the main fronds. The number of 'pinnae' varied from 2-3 in most of the fronds (Plate) while the maximum number in one frond rose to 9. The plant is still showing the same tendency.

Description of the abnormal frond: Frond up to 117 cm long, 13 cm wide. "Pinnae" 61 cm long, 10.3 cm wide, 2-9 in number, soriferous, lanceolate, acute or acuminate at apex; with its own midrib, veins open dichotomous, areole formation at some places also seen.



Plate : Central portion of the frond showing one 'pinnae' on each side ×0·268

Hope (1901) *mentioned in 'The ferns of North-Western India' that,* "A frond in the Kew Herbarium, got by Hooker f. in Sikkim, is remarkable by having a lobe projecting 2½ inches beyond the margin of the frond, towards the apex with a midrib of its own, 4 inches long from the main rachis, with veins and sori normal to it. There is a similar frond in British Museum marked "Khasya(?). H. & T."

An examination of the specimens at CAL, also revealed a sheet collected from Western Himalayas (*Falconer* in 1849) which resembles very much with the description given by Hope (1901), but for the size of the lobe which is 13 cm long and without sori.

It is worth mentioning that "pinnae" developed on the fronds show considerable variation in their size and outline. It is suggested that varieties created on the basis of such characters of fronds need further study (cf. Bir, 1964).

Specimens examined: MANIPUR: Churachandpur (*ca* 1000 ft), 1.3.1978. *Lal and Kar* Fern-18 (CAL), living plant in IBG, Howrah. UTTAR PRADESH: Western Himalayas, 3.2.1849, *Falconer* No. 145, Acc. No. 10143 (CAL).

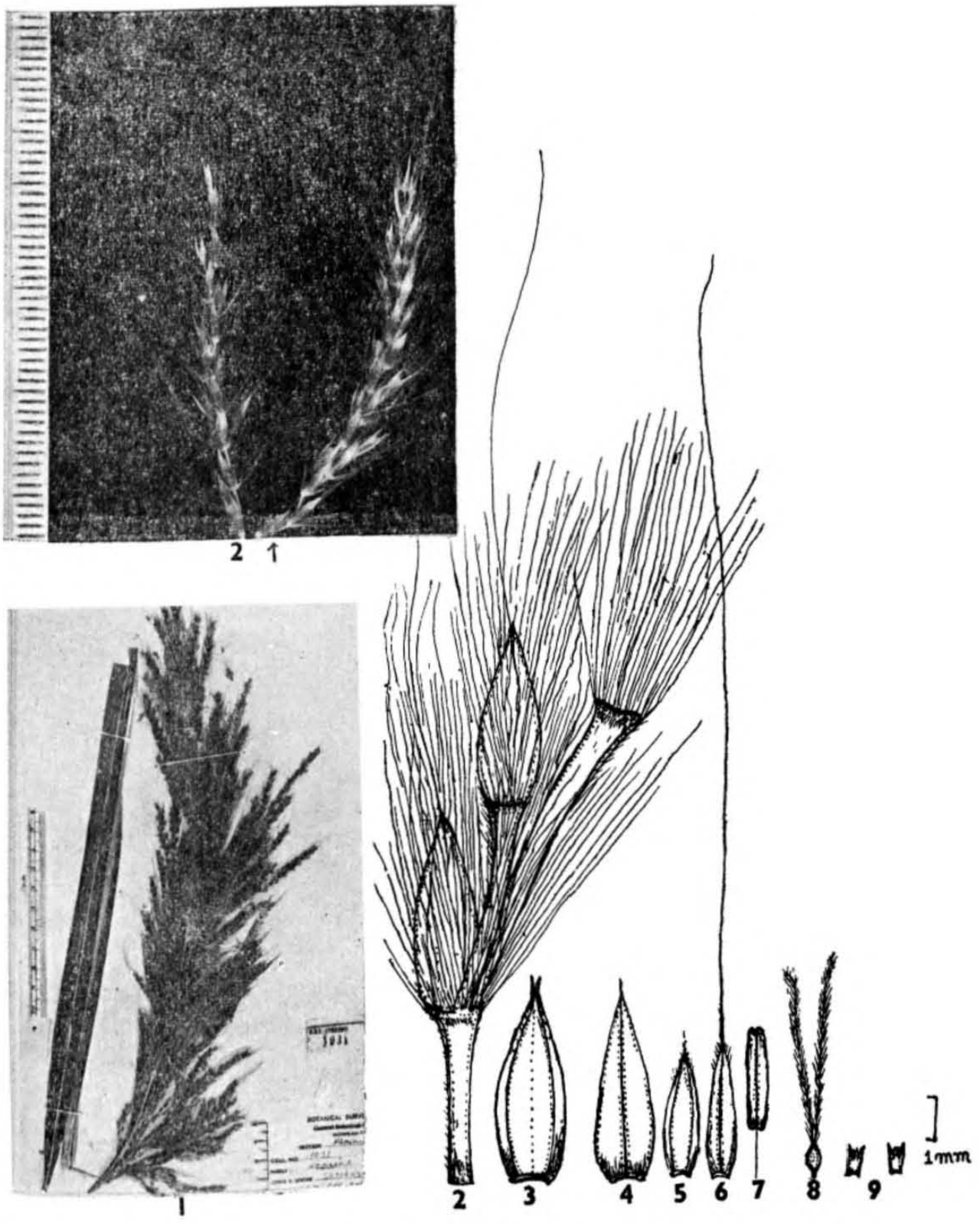
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SACCHARUM WARDII (BOR) BOR EX COPE (POACEAE) —A NEW RECORD FOR INDIA

A grass collected from Lohit District, Arunachal Pradesh, on study was found to be *Saccharum wardii* (Bor) Bor ex Cope, so far known only from Burma. Two more



Saccharum wardii (Bor) Bor ex Cope

Figs. 1-9 ; 1. Inflorescence. 2. Spikelets. 3. Lower glume. 4. Upper glume. 5. Lower lemma. 6. Upper lemma. 7. Stamen. 8. Carpel. 9. Lodicules.

specimens collected respectively by Griffith in 1836 in Mishmi hills and Burkill in 1911 in Abor hills were found wrongly labelled as *Erianthus longisetosus* Anders. *S. wardii* can easily be distinguished from *E. longisetosus* by its glabrous glumes, longer callus hairs and smaller anthers (*ca* 2.5 mm long). Therefore both the specimens have been determined as *S. wardii*. A description of the species based on the above mentioned specimens is given below.

Saccharum wardii (Bor) Bor ex Cope in Kew Bull. 35(3): 702. 1980. *Erianthus wardii* Bor in Kew Bull. 9: 498. 1954 & Grass. Burm. Ceyl. Ind. & Pak. 152. 1960. (Figs. 1-9).

Tall grass. *Culms* terete; *nodes* glabrous. *Leaf sheaths* tight, striate; *ligule ca* 2 mm long, coriaceous, rounded, ciliate; *blades ca* 1 m × 2.5 cm, glaucous, narrowed towards base; margins scabrous. *Inflorescence* a panicle *ca* 20 × 10 cm, axis angled. *Spikelets* 2 at each node, one sessile, the other pedicelled. *Sessile spikelet ca* 4.5 mm long, 2-flowered; callus hairs *ca* 8 mm long. *Lower glume ca* 4.5 mm long, oblong-acute, glabrous, 5-nerved, shortly 2-aristate at the tip. *Upper glume ca* 4.5 mm long, boat shaped, 3-nerved with the median nerve produced into a mucro; margins hyaline, ciliate. *Lower lemma* empty, *ca* 3 mm long, hyaline; margins ciliate. *Upper lemma* hermaphrodite *ca* 3 mm long, hyaline, awned; awn *ca* 20 mm long. *Stamens* 3; anthers *ca* 2.5 mm long. *Styles* 2; stigma plumose. *Lodicules* 2, truncate. *Pedicelled spikelet* similar to the sessile spikelet.

Found along the open hilly tracks. Commonly known as Harrahu among local tribes. Used as fodder for "mithun" and "goru".

Specimens examined: INDIA: Arunachal Pradesh: Abor hills, Janakmukh, Dec. 17. 1911. *Burkill* s.n. (acc. no. 37706). Lohit Dist., Hayuliang Block, on way from Maanchal to Khamlaighat, Nov. 20. 1980, *V. Mudgal* 1031; Mishmee, 1836, *Griffith* 351 (CAL).

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LYCOPODIUM OBSCURUM L.—ITS OCCURRENCE IN BHUTAN

A study of the material of the Lycopodiaceae, extant in Central National Herbarium, Howrah, attracted the attention of the author to an unidentified collection of J. C. White from Bhutan. Two specimens were found to be distinct. A critical look at the description by Linnaeus in his species plantarum and study of the specimen in the Linnaen Herbarium (*LINN* Microfiche no. 1257.12) showed that Bhutan plants with these characteristics—rhizome subterranean giving off tall aerial branched shoots, simple in basal region, copiously branched above, flabellate, branchlets crowded, ascending; strobili sessile, 2-10, terminal on the upper branchlets are only *L. obscurum* L. This is further confirmed by the comparative study of collections from other areas of the world. The establishment of its identity and occurrence in Bhutan is of interest as a record of extension of distribution from Pacific Islands,