

NOTES ON INDIAN GRASSES—V. TYPE MATERIAL OF THE GENUS  
*CYNODON* RICH. IN INDIAN HERBARIA

During a recent study of the genus *Cynodon* Rich. (Gramineae), the author made an attempt to find out if any type material of this genus was available in Indian herbaria. The present note records some interesting observations made during this search.

Three species of *Cynodon* Rich. are indigenous in India; these are *C. dactylon* (L.) Pers., *C. barberi* Rang. et Tad. and *C. intermedius* Rang. et Tad.

*C. dactylon* (L.) Pers. is based on a Linnean species *Panicum dactylon* L. It was described by Linne from southern Europe, and there was obviously no possibility of its type material being available in any Indian herbaria.

*C. barberi* Rang. et Tad. was described by Rangachari and Tadulingam in 1916. In their original description, these authors have cited several collections of C. A. Barber from Tinnevely and Godavari districts during 1901 and 1902, of C. Tadulingam from Kistna, Guntur and Nellore in 1907 and of K. Rangachari from Chingleput district in 1898 and 1914, and collections from the farm of the Agricultural College, Coimbatore in 1916. They have not designated any specimen as the holotype. The following specimens referred in the protologue were available to the present author:

1. Palamcott, Tinnevely Dt., 11 May 1901, S. India Flora, *C. A. Barber* 2726;
2. Samalcota, Godavari Dt., 24 Aug. 1902, S. India Flora, *C. A. Barber* 4469 (two sheets);
3. Sithampur, Chingleput Dt., 28 Oct. 1914, Madras Herbarium, S. India Flora, *Rangachari* 11203;
4. Vandalur, Chingleput Dt., 25 Oct. 1914, Madras Herbarium, S. India Flora, *Rangachari* 11119; and
5. Agricultural College, Central Farm, Coimbatore, Aug. 1916, Madras Herbarium, S. India Flora, 13715.

The specimen numbers 1, 3 and 4 listed above bear the annotation '*C. barberi* sp. nov. Rang. and Tad.' The first paragraph in the paper of Rangachari and Tadulingam (1916: 846) is important in this regard, it reads:

'While studying the grasses growing on the Farm of the Agricultural College, Coimbatore, this grass attracted our notice as it differed considerably from the ordinary *Cynodon dactylon* Pers. On examining the specimens of grasses in the herbarium there were specimens matching this grass that were collected by Dr. C. A. Barber in the districts of Tin-

nevelly and Godavari during 1901 and 1902, by M. R. Ry. C. Tadulingam in the districts of Kistna, Guntur, and Nellore in 1907 and by M. R. Ry. Rai Bahadur K. Rangachari in the Chingleput district during 1898 and 1914. After a careful study of this plant and after reference to all the literature on grasses available in the Agricultural College library, it appears to be to us an undescribed and unrecognised species. So we propose naming it *Cynodon barberi*.'

LECTOTYPE

The Italics in the above paragraph are mine, to emphasise that the authors clearly had in their mind the grass collected from the Agricultural College Farm, Coimbatore as the chief element on which they based their new species, *C. barberi*. However, as this collection from Coimbatore also comprises more than one specimen, and none of them is marked as type, all the specimens cited in the protologue are to be treated as syntypes and a lectotype has to be chosen. All the specimens listed above have been critically examined and Madras Herbarium, South India Flora no. 13715, collected from Agricultural College, Central Farm, Coimbatore in August 1916 is selected as the lectotype for *Cynodon barberi* Rang. et Tad.; this specimen is deposited in the Central National Herbarium, Calcutta (CAL.). A reference by Bor (1960:469) indicates that a duplicate of this specimen is present in Kew Herbarium.

SYNTYPES

The other specimens cited in the protologue are, therefore syntypes; these (numbers 1, 2, 3 and 4 listed above) are deposited in the Coimbatore Herbarium under numbers: MH 57705, MH 57729, MH 57730, MH 57702 and MH 95731.

One syntype specimen (Coimbatore, August 1916) is deposited in the Poona Herbarium (BSI). An original letter in the handwriting of Shri C. Tadulingam is attached to the sheet; it shows that this specimen was sent by Shri C. Tadulingam to Shri R. K. Bhide (then Assistant Economic Botanist, Agricultural College, Poona) in November 1916. Though this specimen is collected from Coimbatore and also in 1916, yet, there is no number on the specimen to show that it is a duplicate of the specimen selected as lectotype (i.e. no. 13715). This specimen is to be regarded as a syntype (and not isotype).

Recently, Jain (1966) described a new form of this species, viz., *C. barberi* Rang. et Tad. f. *longi-*

*folius* Jain. The type material of this taxon is deposited as below:

Holotype: Puri, Orissa, 1889, *J. H. J. Walsh* s. n. in CAL.

Paratypes: Adhkata, Bankura, Bengal, 20 July, 1955, *Ganguly* s. n.; Chaibasa, Bihar, rains 1898, s. l., s. n.; Madras Presidency, precise locality? *Ramaswami* 541; Nagarjunakonda Valley, Andhra Pradesh, 15 July 1961, *Thothathri* 9683; all in CAL. Parlakimedi, Orissa, Sept. 1903, *Grant, Candler and Burkill* 20584, in herbarium of Industrial Section, Botanical Survey of India, Calcutta.

Rangachari and Tadulingam described another species of *Cynodon*, namely *C. intermedius* Rang. et Tad. in 1918. Fischer (1934) regarded this species as a variety of *C. dactylon* (L.) Pers.; Bor considers it synonymous with *C. arcuatus* J. S. Presl ex C. B. Presl. The type specimen of *C. arcuatus* is not available to the present author. Leaving aside the question of the identity of *C. intermedius*, a lectotype has to be selected for the taxon, even if it later proves that Bor is correct and the new taxon is but a synonym of *C. arcuatus* Presl.

Rangachari and Tadulingam (1918) have cited five specimens for their new species, *C. intermedius*; these are:

1. Gokhavaram, Godavari Dt., 4 Sept. 1907, *S. India Flora*, *C. A. Barber* 8262;
2. Chingleput, *S. India Flora*, 11488;
3. Way to Mahendragiri Hills, Tinnevely Dt., 18 Sept. 1916, Madras Herbarium, *S. India Flora*, 13129;
4. Mahendragiri Hills, Tinnevely Dt., 18 Sept. 1916, Madras Herbarium, *S. India Flora*, 13259; and
5. Kallar, Nilgiris, Dec. 1917, 13988.

#### LECTOTYPE

The authors have not designated any specimen as the type of their new taxon, and hence all the specimens cited in the protologue are syntypes. The syntype material was critically examined and compared with the original description given by the authors. The specimen, Madras Herbarium, *S. India Flora* no. 13259, collected from Mahendra-

giri Hills, Tinnevely Dt. on 18 September 1916 is selected as the lectotype for *C. intermedius* Rang. et Tad. This specimen is deposited in the Coimbatore Herbarium under number MH 57732.

#### SYNTYPES

The remaining syntypes of *C. intermedius* Rang. et Tad. are also deposited in the Coimbatore Herbarium under numbers MH 84322, MH 57734 and MH 58704.

Haines (1924) described a new variety of *C. dactylon* (L.) Pers. viz., *C. dactylon* (L.) Pers. var. *suberectum* Haines. He cited two specimens, one from Singbhum, without collector's name, and another from Rajmahal Hills, collected by Kurz. One specimen collected by Kurz—Rajmahal Hills, south of Sahibganj, Oct. 1870, Kurz s. n. is present in Calcutta herbarium. In all probability, this is a syntype of Haines' new variety *suberectum*. This grass, however, exactly matches *C. arcuatus* Presl.

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