

*Nirmal*

## Piper barberi gamble - a redescription of the species with a note on the karyotype

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### ABSTRACT

*P. barberi* was described by Gamble (1924) based on the male plants only. Here the species is being redescribed based on the female plant characters as well. *P. barberi* is a unique species among the *Piper* taxa occurring in South India. The somatic chromosome number of *P. barberi* was determined to be  $2n = 52$ .

Key words: *Piper barberi*, South Indian *Piper*, karyomorphology.

The genus *Piper* is represented by about 14 species in South India, distributed mainly in the tropical evergreen and moist deciduous forests of the Western Ghats. This region is also the centre of diversity for the species *P. nigrum*, the black pepper of commerce. Gamble in his floristic study of the region described 13 species including *P. barberi*, while another species was added later (Ravindran, Nair & Nair, 1987). A systematic survey of the region by the National Research Centre for Spices (NRCS) led to the collection of *Piper barberi*, a species reported to be almost extinct. *P. barberi* was erected by Gamble (1924) based on the collection of

Barber from the Tinnevely forests of South India. Barber's collection consisted of only specimens from male plant, and Gamble's description of the species was based only on such specimens. An attempt was made by Subramaniam and Henry (1970) to describe the female specimens of *P. barberi*. However the descriptions is not complete with regard to habit and other morphological details, especially the juvenile branches of the species. Here the species is redescribed based on the live specimens available at the NRCS germplasm conservatory.

*P. barberi* Gamble, Kew Bull. 387, 1924

*P. barberi* redescription

Perennis repens, glabrosa, dioecia, ramosa, polymorpha, cujus juveniles surculi sunt tenues persistenter squamatis foliis praediti, orthotropici surculi cum parvis foliis 5-7 cm in longitudinem, 2-3 cm in latitudinem, fructiferi rami cum collis 8-12 cm in longitudinem, 2-5 cm in latitudinem, glabrosi, lanceolati, summitas acumata, basis inaequaliter acuta, pinnate reticulata. Males spicae angustae, 7-10 cm in longitudinem, feminae spicae 4-7 cm, cylindricae, pendulosae, longo aetenui pedunculo suffultae, bracteolae peltatae, orbiculares, ovarium 0.5-10 mm, sessile monocellularis mono-ovularis, stigma cum triplici auricula, papillata, stylus 0, fructus carnosus, druposus, 5-6 mm transversus, ruber cum maturescit, semina 2-3 mm, ovoida (oviformia).

*Piper barberi* Gamble, Kew Bull. 387, 1924

A very distinct species among the south Indian *Piper* having reticulately veined leaves and spikes borne on slender, long dangling peduncle.

A perennial climber, glabrous, dioecious, branching polymorphic, juvenile shoots

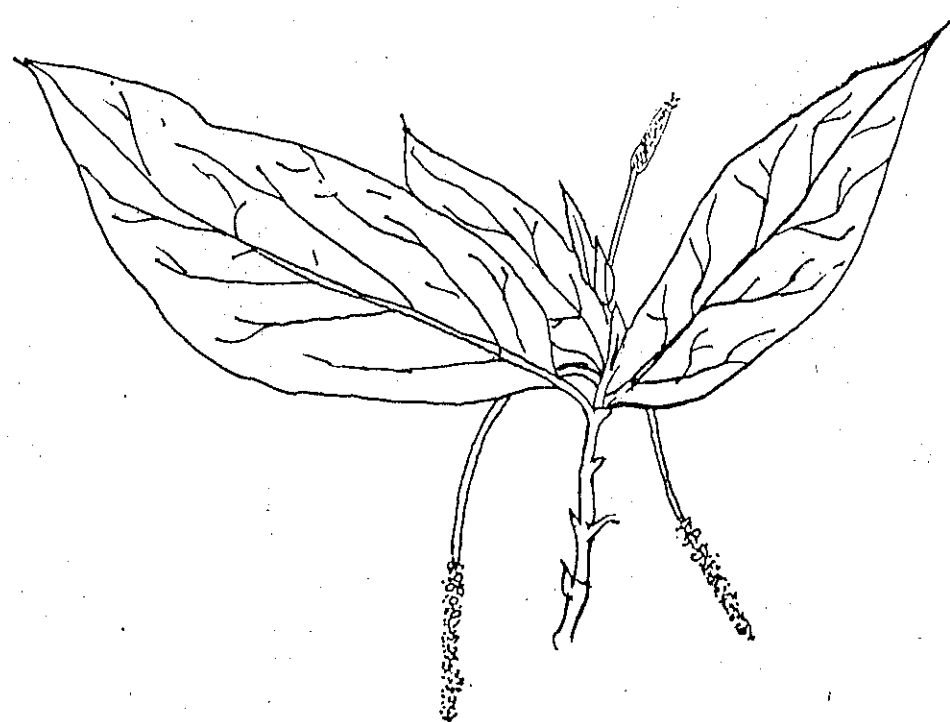


Fig. 1. A twig of *P. barberi*

slender with persistent scale leaves, orthotropic shoots with small leaves, 5-7 cm long, 2-3 cm broad, fruiting branches with leaves 8-12 cm long, 2-5 cm broad, glabrous lanceolate, tip acuminate, base unequally acute, pinnately reticulate. Male spikes narrow, 7-10 cm long, female spikes 4-7 cm, cylindrical pendulous, borne on long, slender peduncle; bracts peltate, orbicular; ovary 0.5-10 mm, sessile, 1-celled, 1-ovuled, stigma 3-lobed, papillate, style 0; fruit fleshy drupe, across, red when ripe; seeds 2-3 mm, ovoid.

Not related to any other known South Indian Species.

*P. barberi* : Holotype 613, Babu and Ravindran.

Type: India, Western Ghats, Kerala, Trivandrum District, Breymoor forest area, altitude 700 m MSL.

Holotype: NRCS Germplasm conserva-

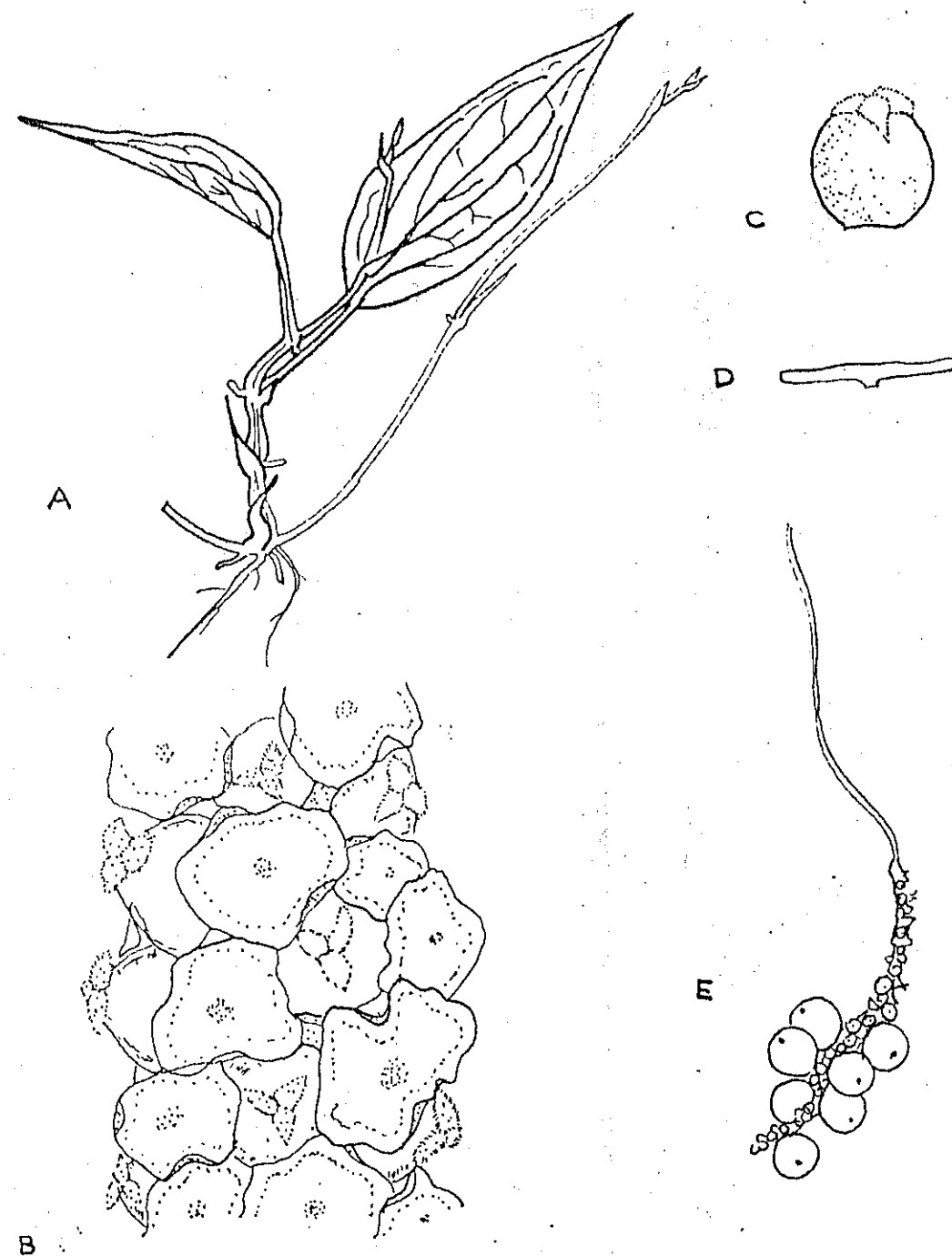


Fig. 2 A. Juvenile branch showing leafless orthotropic shoot. B. Portion of the female spike enlarged, showing the peltate bract. C. Ovary. D. Lateral view of the bract. E. Spike with fruits.

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