A NEW VARIETY OF SMITHIA (FABACEAE) FROM THE SOUTHERN WESTERN GHATS, INDIA

Anoop P. Balan1* and S.V. Predeep2

1Centre for Medicinal Plants Research (CMPR), Arya Vaidya Sala, Kottakkal P.O., Malappuram, Kerala, India - 676503.
2Department of Botany, S.V.R.N.S.S. College, T.P.Puram P.O., Vazhoor, Kottayam, Kerala, India - 686505.
*Corresponding author. E-mail: anooppb01@gmail.com

ABSTRACT: Smithia venkobarowii Gamble var. glabra A.P. Balan and S.V. Predeep is described here as a new variety from the Southern Western Ghats of India. A detailed description, illustration and distribution map are provided for easy identification.

Key words. Smithia, Fabaceae, new variety, Western Ghats, India.

INTRODUCTION
The genus Smithia Ait. With c. 30 species is distributed in tropics of the Old World and is represented in India by 18 species [3, 4]. Of the 18 species 11 are endemic to India and the high percentage of endemism shown by this genus indicates the urgency of conservation efforts that are yet to be taken. Smithia is a taxonomically difficult genus due to the close resemblance between species and many of them represented in various Indian herbaria’s were poorly identified. No study of the genus in India has been made after Baker [1] and Gamble [2]. While exploring the legume flora of Kerala state in connection with the project ‘Studies on the legume flora of Kerala state’, the authors came across few interesting specimens of Smithia venkobarowii, a species endemic to the southern Western Ghats of India (Kerala). After examining the type specimen (INDIA. Kerala: Idukki District., Peermed, 16.10.1916, Venkoba Rao 3799 - K) it is confirmed as a new variety and is described and illustrated with distribution map.

Smithia venkobarowii Gamble var. glabra A.P. Balan et S.V. Predeep, var. nov.


Erect subshrubs, 80 – 125 cm high; stem glabrous. Stipules peltate, 3 – 5 x 1.5 – 2 mm, ovate, acuminate, scarioso, appendage 3 – 4 mm long; stipels 0. Leaves 2 – 3.5 cm long including 0.8 – 1.5 cm long rachis and 0.5 – 0.8 cm long bristly petiole; leaflets 3 – 4 pairs, 1.2 – 2 x 0.4 – 0.6 cm, obovate – oblong, obtuse-rounded at apex, slightly oblique at base, membranous, glabrous above, bristly along margins and outside. Inflorescence 2.5 – 4 cm long subcapitate heads, in pairs or rarely three in the upper leaf axils; peduncles 2 – 3.5 cm long, glabrous or sparsely strigose. Flowers c. 8 mm long, golden yellow; pedicels 2 – 3 mm long, sparsely strigose; bracts 4 x 2 mm, ovate, scarioso, minutely ciliate, deciduous; bracteoles 3 x 1 mm, oblanceolate, scarioso, sparsely bristly along margins and outside, persistent. Calyx bilipped, membranous with anastomosing veins, bristly along margins and sparsely so outside; upper lip broad, 4 x 4 mm, truncate and retuse at apex; lower lip 4 x 3 mm, obviously 3 – lobed. Corolla exserted: standard 3.5 x 3.5 mm, orbicular, tinged with red, emarginated at apex, claw c. 1.5 mm long; wings 3.5 x 1.5 mm, oblong, auriculate at base, claw c. 1 mm long; keels 3.5 x 1.5 mm, obliquely obovate, auricle c. 1 mm long, claw 1.5 mm long. Stamens 5 + 5: sheath 3 mm long; filaments c. 1 mm long; anthers uniform, 0.3 mm long, ovoid. Ovary subsessile, c. 2 mm long, linear, glabrous; 7 – 8 –ovuled; style 3 mm long, slightly up curved, glabrous; stigma pointed. Lomentum joints twisted and folded inside the calyx; joints 6 – 8, 2 x 2 mm, orbicular, reticulate with flat border. Seeds 1.5 x 1.3 mm, subreniform, flat, brownish, exstrophiolate.
Figure-1: Smithia venkobarowii var. glabra. A. Habit, B.Bract, C.Calyx, D.Standard, E.Wing, F.Keel, G.Stamens, H.Pistil, I Lomentum, J.Seed
Anoop and Pradeep

Figure-2: Distribution of Smithia venkobarowii var. glabra and s.venkobarowii var. venkobarowii

Diagnosis
Smithia venkobarowii var. glabra var. nov. Differs from Smithia venkobarowii by its glabrous stem, smaller, hairy leaflets, smaller flowers and up to 8-jointed lomentum.

Table 1. Comparison between the 2 varieties of Smithia venkobarowii

<table>
<thead>
<tr>
<th>Characters</th>
<th>var. venkobarowii</th>
<th>var. glabra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem</td>
<td>Densely bristly throughout.</td>
<td>Glbrous throughout.</td>
</tr>
<tr>
<td>Leaflets</td>
<td>4 – 5 pairs, 1.5 – 3 cm long, glabrous.</td>
<td>3 – 4 pairs, 1 – 2 cm long, bristly along margins and outside.</td>
</tr>
<tr>
<td>Flowers</td>
<td>1.3 – 1.5 cm across, 1 cm long.</td>
<td>1 cm across, c. 8 mm long.</td>
</tr>
</tbody>
</table>
Flowering & Fruiting: September – January.
Distribution and Ecology: So far known from the high altitude grass lands in Nelliampathy hills of Southern Western Ghats (Fig.2). This variety was collected from a single locality near Nelliampathy where we could locate only few plants. As it is a new variety described here, a proper status can only be possible after other areas are explored and more data is collected.
Etymology: The varietal name ‘glabra’ indicates the glabrous nature of the stem.
Notes: Gamble [2] described the species Smithia venkobarowii based on a collection of K. Venkoba Rao from the Peermedu Ghats of Kerala state (Venkoba Rao 3799, K, University College, Trivandrum). He described the species as a suberect or prostrate herb or even as a trailing herb. However, we could locate good populations of the species in and around the type locality which were tall, robust sub shrubs reaching 90 - 125 cm height.

ACKNOWLEDGEMENTS
The authors are thankful to the Kerala State Council for Science, Technology and Environment, Thiruvananthapuram for financial assistance and to the Principal, S.V.R.N.S.S College, Vazhoor for facilities provided. We are also grateful to the curators of K and University College, Trivandrum for allowing consultation. First author is thankful to the authorities of Centre for Medicinal Plants Research (CMPR), AVS, Kottakkal for the support given.

REFERENCES