

**GAULTHERIA BREVISTIPES (C.Y. WU & T.Z. HSU) R.C. FANG (ERICACEAE) – A
NEW RECORD FOR INDIA FROM TALLE VALLEY, ARUNACHAL PRADESH**

S. PANDA*

Botanical Survey of India, Indian Botanic Garden, Howrah-711103

The genus *Gaultheria* L. is represented by about 150 species in the world (Mabberley, 1997) of which 23 are known to occur in India. Majority of them are restricted to Eastern Himalayas at altitudes ranging from (600 –) 1300 – 4800 (– 5500) m. During a field trip to Talle valley in Lower Subansiri district of Arunachal Pradesh some interesting specimens of a species of *Gaultheria* L. were collected from Talle Wild Life Sanctuary. A critical study of these specimens revealed that they belong to *Gaultheria brevistipes* (C.Y. Wu & T.Z. Hsu) R.C. Fang, a Chinese species hitherto not recorded from India. For detailed study, fresh flowers were collected from the field, kept in 70% ethyl alcohol, dissected and examined under Olympus Binocular Microscope. Dissected parts were pasted on a white card of 10 × 5 cm.

Some specimens of this species collected by Dr. K. Haridasan (no. 6785) and B. Loder (no. 1972) were identified as *Gaultheria* sp. in State Forest Research Institute Herbarium (APFH), Itanagar (Arunachal Pradesh).

Gaultheria brevistipes (C.Y. Wu & T.Z. Hsu) R.C. Fang, Novon 9 (2): 164. 1999. *Leucothoe brevistipes* C.Y. Wu & T.Z. Hsu, Acta Phytotax. Sin. 23 (4): 315. 1985. *L. griffithiana* C.B. Clarke var. *sessilifolia* C.Y. Wu & T.Z. Hsu, Fl. Xizang 3: 684. 1986. (Fig. 1 & 2, Plate 3.)

Type : China, Xizang, Medog, 2800 m, Quinghai – Xizang Complex Exped. no. 3951 (Holo. : KUN, photo !).

Both *L. brevistipes* and *L. griffithiana* var. *sessilifolia* are based on the same collection number. Hsu (1991) incorrectly listed the species as *L. sessilifolia* C. Y. Wu & T. Z. Hsu.

Local name : Arunachal Pradesh: *Talleiang* (Apatanese of Hapoli, Lower Subansiri district).

Stout, erect shrub, 0.5 – 2 m high, often hanging down from the rock crevices. Stem deep green, flexible, profusely branched, glabrous, somewhat triangular to winged; branchlets blood red to pinkish-red, glabrous,

*Present Address: Botany Department, Bankura Christian College, Bankura-722101, West Bengal.
Date of receipt 11.07.2005. Date of acceptance 15.07.2005.

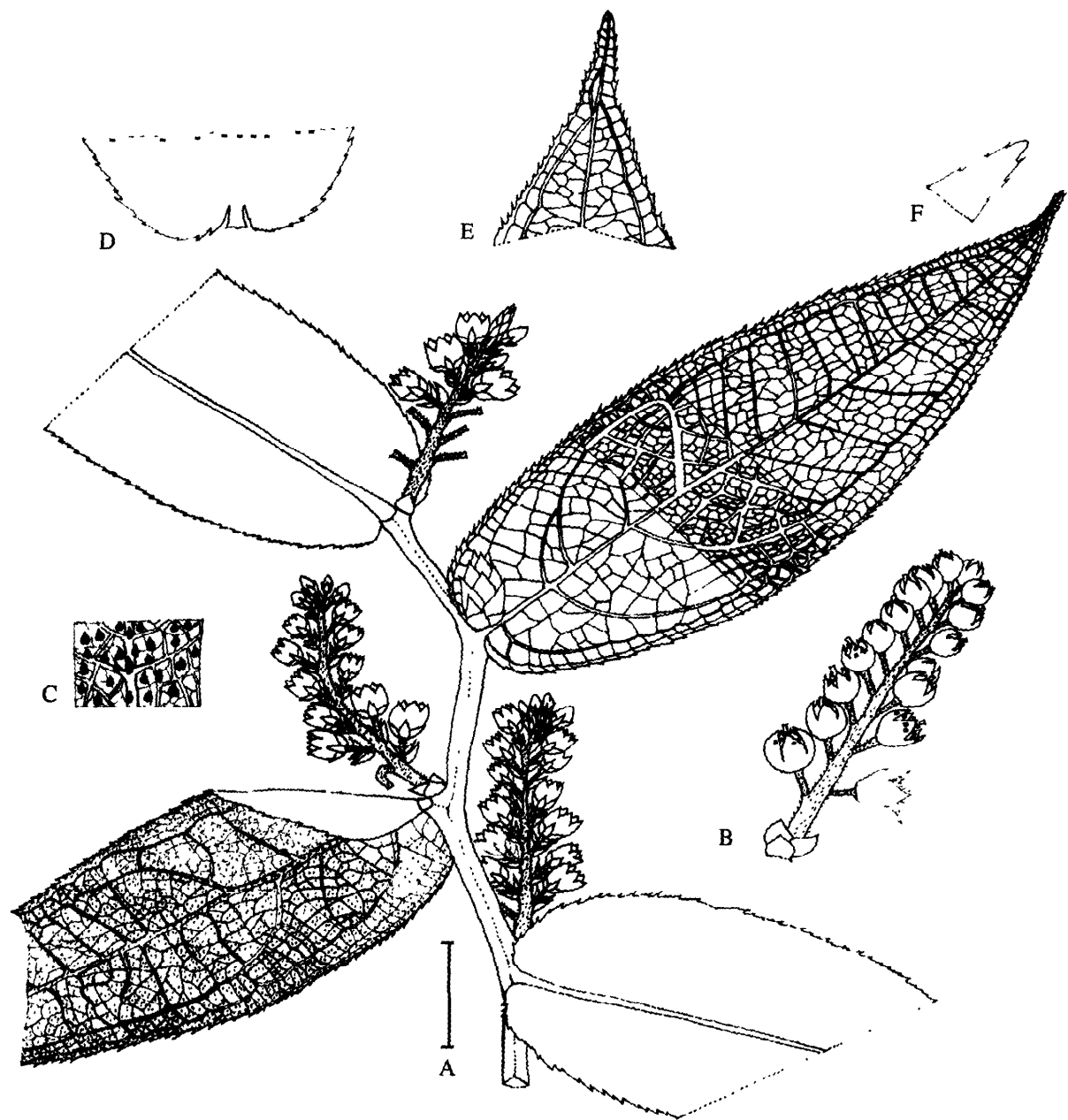


Fig. 1: *Gaultheria brevistipes* (C.Y. Wu & T.Z. Hsu) R.C. Fang: A. habit; B. infructescence; C. lower surface leaf (part mag.); D. leaf base; E. leaf apex with reticulation; F. leaf apex (part mag.) (scale bars: A=2cm; B = 1cm); A-F: drawn from S. Panda 30841.

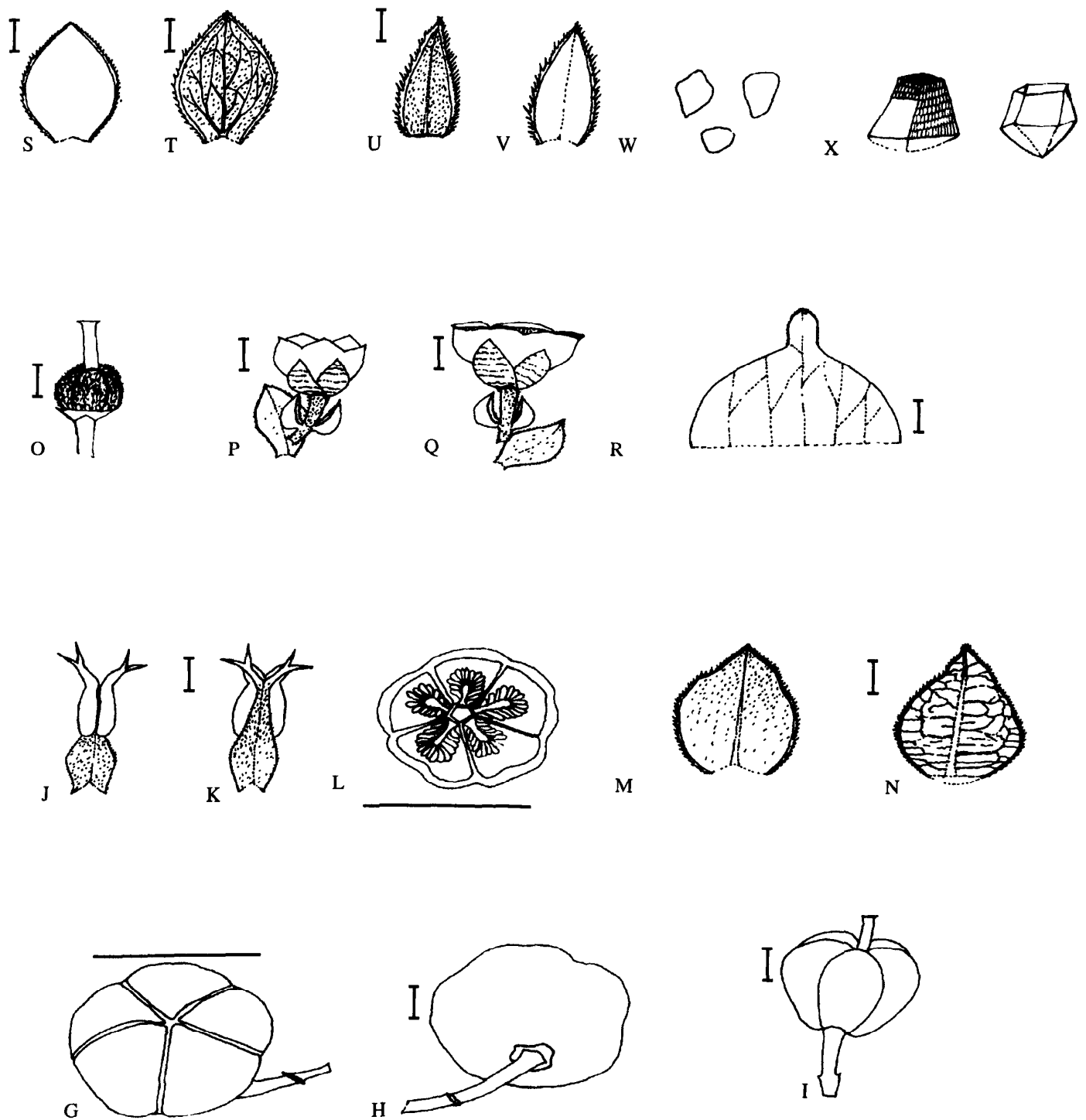


Fig. 2 : G-I. fruits; J-K. stamens; L. ovary (t.s.); M-N. sepals; O. pistil; P-Q. flowers; R. corolla lobe; S-T. bracts; U-V. bracteoles; W. ovules; X. seeds (G=1.1 cm; H-I = 0.5cm; J-K = 0.1cm; L=0.3cm; M-N=0.1cm; O=0.2cm; P-Q=0.5 cm; R-V = 0.1cm); G-X: drawn from *S. Panda* 30841.

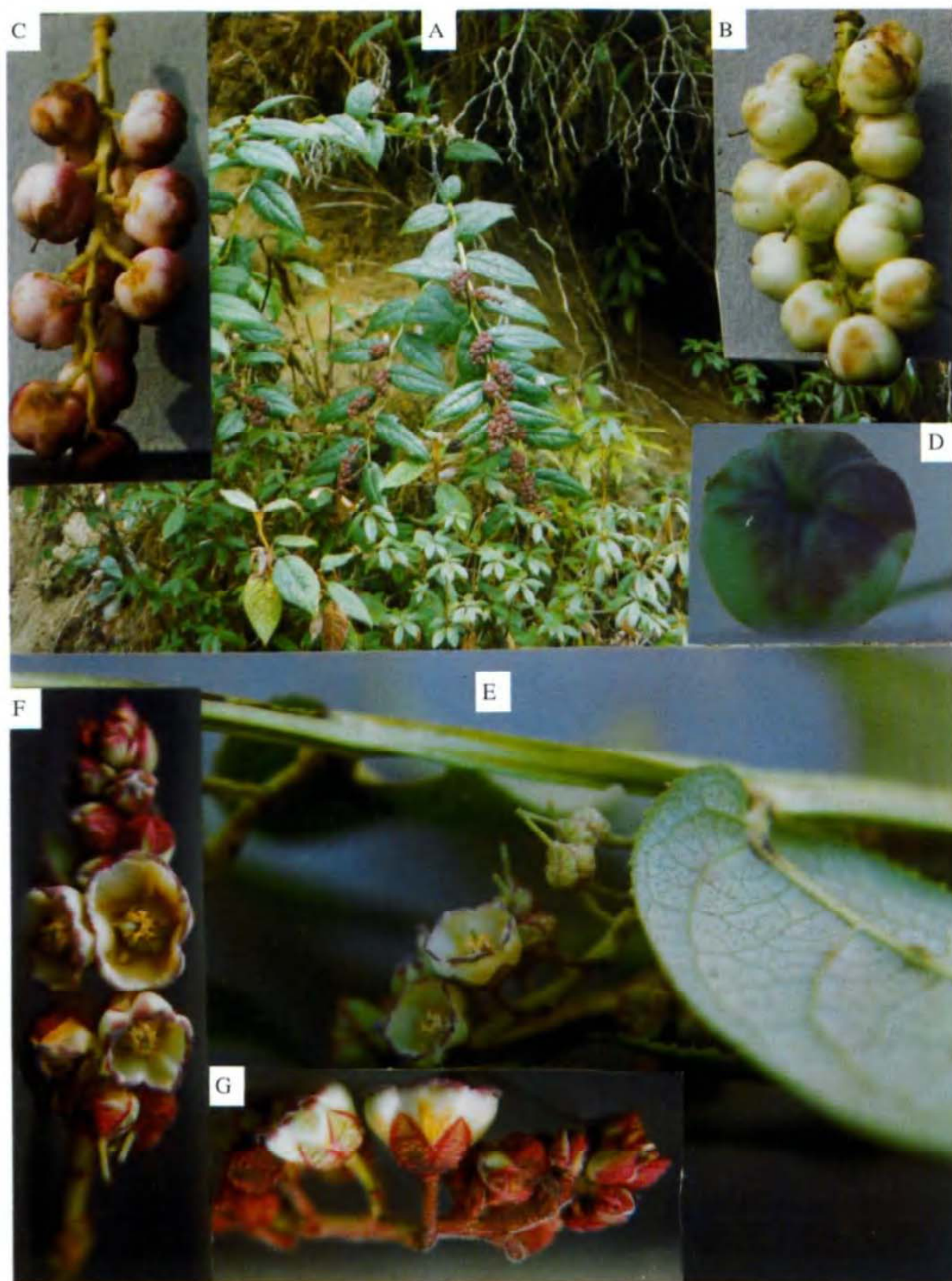


Plate 3 : *Gaultheria brevistipes* (C. Y. Wu & T. Z. Hsu) R. C. Fang : A. in fruits (Talle reserve forest, Arunachal Pradesh); B-C. infructescence (close up); D. fruit (close up); E. Flowering twig (close up); F-G. racemes (close up).

glaucous. Leaves coriaceous, lamina oblong-elliptic to oblong, $17.3 - 13.2 \times 4.2 - 6.2$ cm, serrulate at margin, cordate at base, caudate-acuminate at apex, acumen up to 2 cm long, dark green, glabrous above, light green, punctate with few setulose hairs along midvein beneath; venation conspicuous brochidodromous with 9 – 12 pairs lateral veins; petioles short, 1 – 2 mm long, glabrous. Racemes axillary, rachis pinkish-green, 3.5 – 6.5 cm long, 16 – 22-flowered, puberulous, drooping. Flowers 12 – 14 mm long; pedicels pinkish-white to green, 6 – 7 mm long, puberulous; bract 1, basal, pinkish-green, elliptic to ovate-elliptic, *ca* 5×3 mm, ciliate at margin, acute at apex, glabrous outside, puberulous inside; bracteoles 2, subbasal, opposite to subopposite, pinkish-green, ovate, *ca* 3×1 mm, ciliate at margin, acute at apex, glabrous outside, puberulous inside. Calyx lobes pink, ovate to ovate-elliptic, *ca* 3×2.5 mm, ciliate at margin, acute at apex, glabrous and shrivelled outside, puberulous inside. Corolla narrowly campanulate, greenish-white with pinkish stripes at apex, caducous, *ca* 6 mm long, *ca* 10 mm (at apex), 7 mm (at middle) and 4 mm (at base) diameter, glabrous, lobes ovate, *ca* 2.5×4 mm, entire at margin, rounded to obtuse at apex, glabrous. Stamens 10, *ca* 4 mm long, loosely epipetalous; filaments greyish-white, *ca* 3 mm long, slender, pilose, dilated at middle; anthers dark brown, oblong, *ca* 1.5 mm long, glabrous, each lobe with 2 minute apical awns. Pistil 5 – 7 mm long; ovary globose to subglobose, deep green, *ca* 2×3 mm, densely white tomentose, ovules numerous on axile placenta in each locule; disc minutely 10-dentate; style impressed, light green, 3 – 5 mm long, slender, glabrous; stigma truncate. Capsule loculicidally 5-valved, enclosed in a fleshy accrescent calyx, globose to subglobose, greenish-white (immature) to pinkish (mature), *ca* 14 mm long including *ca* 3 mm long persistent style, *ca* 11 mm diameter with *ca* 7 mm long pedicel, glabrous. Seeds numerous, minute, obconical, scariose.

Distribution : India : E Himalaya (Arunachal Pradesh: Talle Wild Life Sanctuary) and China (Xizang).

Habitat : This species grows gregariously in moist humus-covered rocky slopes, often hanging down from rock crevices, sometimes in loose rocky soils in association with *Gaultheria seshagiriana*, *G. fragrantissima*, *Leucothoe griffithiana*, *Agapetes incurvata*, *Rhododendron arboreum*, *R. vaccinioides*, *Vaccinium nuttallii*, *V. dunalianum*, *V. subdissitifolium*, *Aralia* sp. and a varieties of *Bambusa* spp. at altitudes ranging from 2200 – 2800 m.

Flowering : December – January. *Fruiting*: December – February.

Specimens examined : Arunachal Pradesh: Pange to Talle valley, Lower Subansiri district, 2200 2800 m, 30.12.2002, *S. Panda* 30841; specimens at APFH: Talle valley, 24.03.1994, *Haridasan* 6785; Talle valley, 22.04.1985, *B. Loder* 1972.

Note: The population of Arunachal Pradesh (*S. Panda* 30841) showed flowers and a peculiar type of branching reticulation near the apex of leaves not reported in Chinese collections. Fruits are edible with sweet taste and appear like bunches of grapes with promising potential of a fruit crop. During field trip to Talle valley, our expedition team faced an acute shortage of food and drinking water. Although we were aware that the fruits of *Gaultheria* spp. are edible; the porters and local tribals reported them to be poisonous. Later when a bird seen eating fruits of this species, we could not resist eating these fruits. Fruits

are juicy and sweet in taste. Fruits have good digestive properties and also appear to increase the body temperature.

ACKNOWLEDGEMENTS

I am grateful to my supervisor, Dr. M. Sanjappa, Director, Botanical Survey of India for guidance, encouragement and for awarding fellowship. Thanks are also due to Dr. K. Haridasan (APFH) and Dr. A. K. Baishya (ARUN) for providing all facilities for field trip to Talle valley.

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