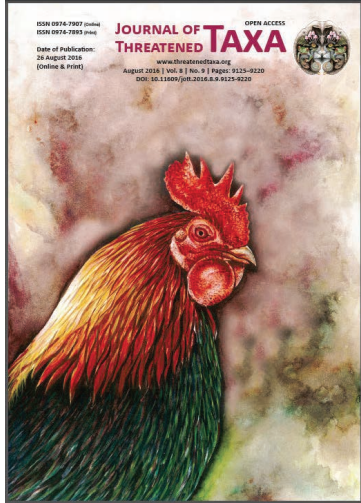


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NOTE **TWO ADDITIONS TO THE FLORA OF THE PALNI HILLS, SOUTHERN INDIA**

S. Soosairaj, P. Raja, B. Balaguru & T. Dons

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During a botanical exploration (2013–2015) of the Palni Hills of the Western Ghats (Fig. 1), Tamil Nadu the authors collected two rare plant specimens, which after a critical study and perusal of published literature (Hooker 1874; Gamble 1957; Dassanayake 1991; Srivastava 1997) were identified as *Hiptage parvifolia* Wight & Arn. (Malpighiaceae) and *Kalanchoe olivacea* Dalz. & Gibs. (Crassulaceae) that have not been reported earlier from Palni region (Fyson 1932; Gamble 1957; Nair & Henry 1983; Matthew 1999). Hence, our collections form new distributional records for the Palni Hills. A brief description, distribution, photographs and detailed illustrations are provided for their easy identification.

Malpighiaceae

Hiptage parvifolia

Wight & Arn. Prodr. 107. 1834; Hook.f., Fl. Brit. India 1: 419. 1874; Srivastava, Flora of India 4: 24. 1997 (Image 1 a,b & 2; Fig. 2).

Climbing shrub, up to 3m; branches and shoots elongate. Leaves ovate oblong, 6–8 × 2.5–3.5 cm, coriaceous, glabrous, base acute, margin entire, apex acuminate; petioles ca. 7mm long, glabrescent. Racemes axillary, 6–7 cm long, appressed pubescent; peduncles 0.5–2 cm; bracts ca. 1.5mm; bracteoles minute; pedicels ca. 2cm long, articulate at about 0.8cm below calyx. Flowers ca. 1cm across. Calyx lobes ovate obtuse, 2.5–4 × 2.5–3 mm, persistent, outer pubescent, inner glabrous; glands ovoid, ca. 3mm long. Petals 5,

TWO ADDITIONS TO THE FLORA OF THE PALNI HILLS, SOUTHERN INDIA

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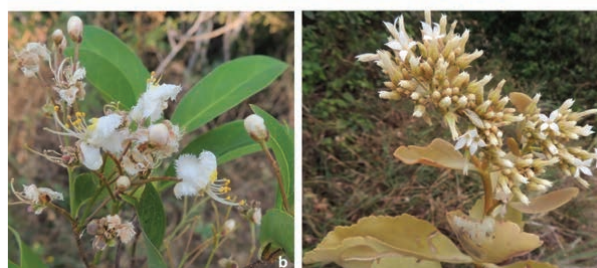


Image 1. a&b - *Hiptage parvifolia* Wight & Arn. (habit & flowering twig); c - *Kalanchoe olivacea* Dalzell & Gibs. (flowering twig)

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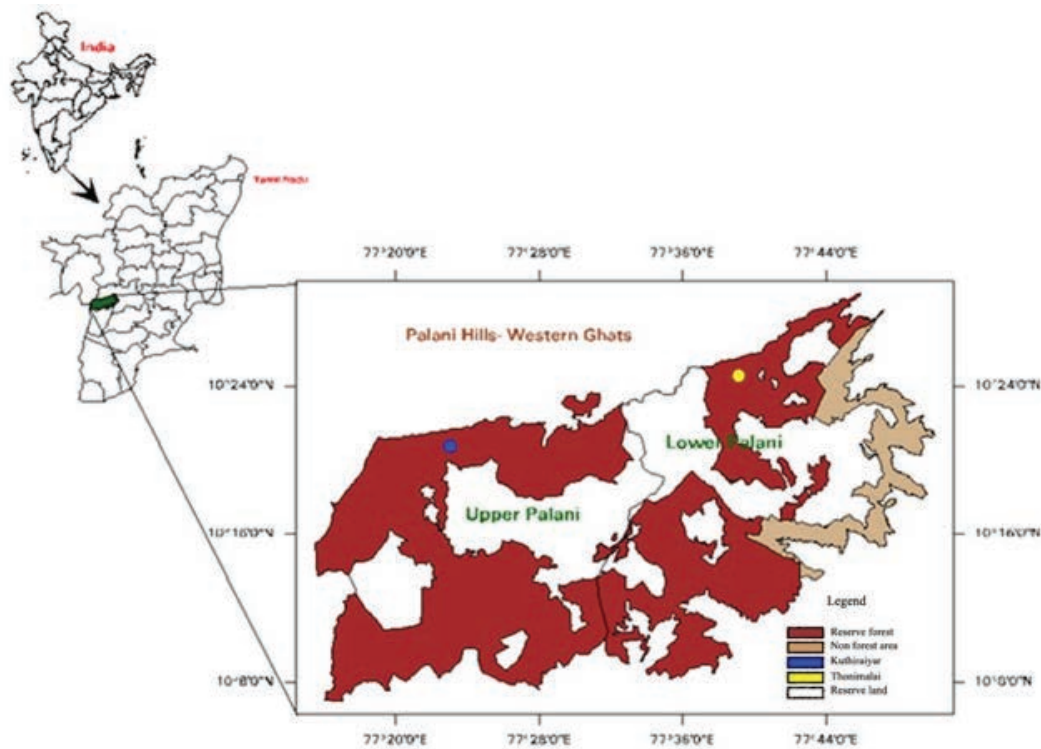


Figure 1. Map showing the Palni Hills of Western Ghats

white, one with yellow blotch, orbicular, 7–8 × 7–8 mm, outer surface pubescent, clawed, fringed at margins. Stamens 10, declinate, unequal; longer ones to 7mm; others 5mm; filaments connate at base; anthers ovoid, ca. 1mm long. Ovary 3 lobed, 3-celled; ovule 1 per cell; Style 1–1.5 cm long; stigma capitate. Samaras light brown; median wing obovate, rounded at apex, 2–2.5 × 0.8–1 cm; lateral wings elliptic, 1–1.5 × 4.5 mm.

Specimens examined: 2058 (SJCBOT), 20.iii.2015, on the way to Kukkal Shola from Kuthiraiyar Dam, Tamil Nadu, India, 10°22'11.48"N & 77°22'13.18"E at 525m, coll. S. Soosairaj & P. Raja (Image 2).

Flowering & Fruiting: February–May

Habitat & Ecology: Species is located along the stream and are associated with *Alphonsea sclerocarpa* Thwaites, *Putranjiva roxburghii* Wall. and *Commiphora caudata* (Wight & Arn.) Engl.

Distribution: India (Meghalaya, Karnataka, Tamil Nadu and Kerala), Sri Lanka and Timor.

Notes: The genus *Hiptage* Gaertner is represented by about 30 species distributed in western China, Subtropical Asia, Taiwan, Malay and the Pacific islands. In India, Srivastava (1997) has reported nine species of *Hiptage* of which five are endemic to India. In Tamil Nadu, Gamble (1957) recorded it from the southern Western Ghats of Tirunelveli District. In the present

study, only two individuals were located.

IUCN status: Not evaluated

Crassulaceae

Kalanchoe olivacea

Dalzell & Gibs. Bombay Fl. 313.1861; Fischer in Rec. Bot. Surv. India 9: 78. 1921; Gamble Fl. Pres. Madras 1: 319. 1957 (repr. ed.). (Image 1c & 3; Fig. 3)

Semi succulent erect herb, up to 30cm. Leaves decussate, obovate, sessile, 8–11 × 3–6 cm, thick coriaceous, greenish-red, glabrous, base narrowed, margins crenate, apex obtuse, glabrous, red-dotted. Cymes dense, corymbose, ca. 4cm, terminal; bracts foliar; bracteoles linear, 5–7 mm; peduncles, 2–3 cm, many flowered, glandular hairs; pedicels ca. 1.2 cm. Calyx tube lobed to the base; lobes 4, lanceolate ca. 7mm, glandular pubescent, acuminate. Corolla white, flask-shaped; petals 4 lobed, connate, lobes ca. 7mm, ovate-lanceolate, apiculate, tube ca. 11×3 mm, inner glabrous, outer glandular pubescent. Stamens 4+4, inserted above the swollen base of corolla, 8–1.2 mm, anther ca. 1mm, apiculate. Pistils ca. 1cm; carpels 4, free, surrounded by 4 linear hypogynous scales ca 3.3mm long, 2 fid at apex styles 4, stout; stigmas oblique. Follicles ca. 8×3.5 mm, glabrous.

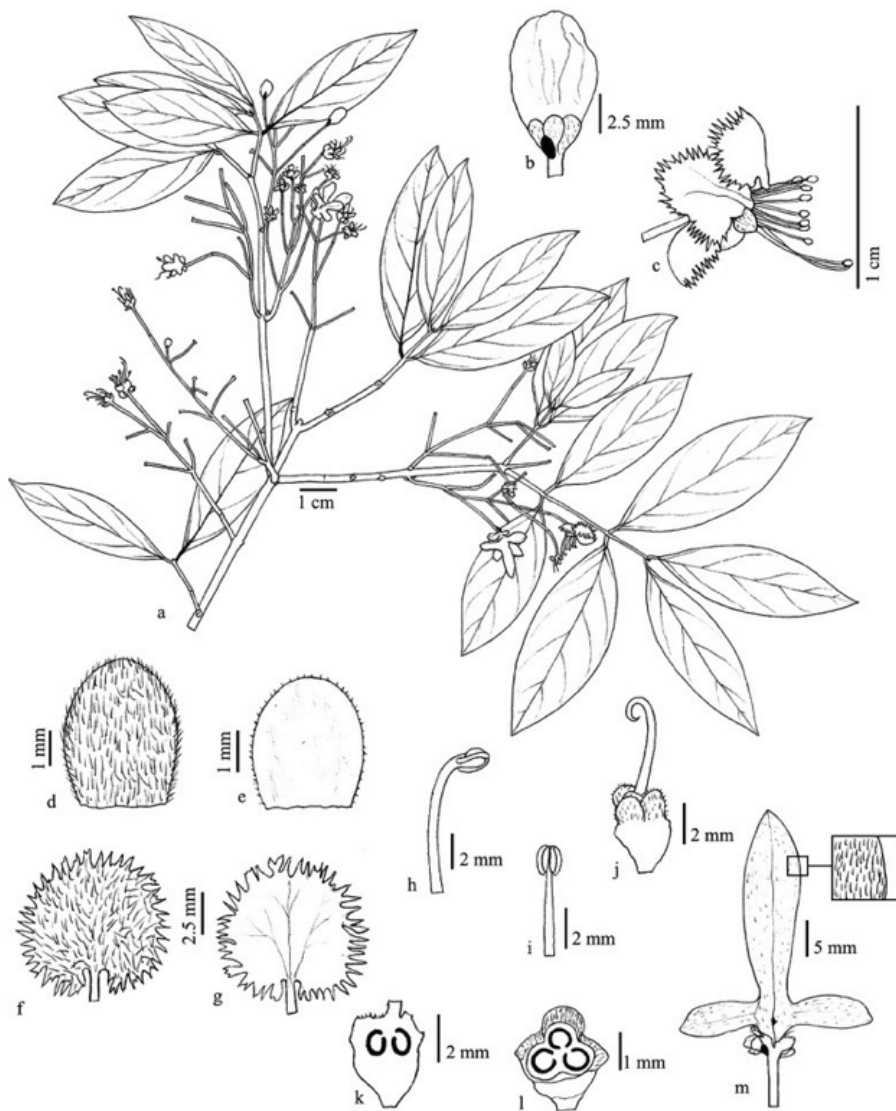


Figure 2. *Hiptage parvifolia* Wight & Arn.

a - flowering twig; b - flower bud; c - flower; d&e - sepal dorsal & ventral; f&g - petal dorsal & ventral; h&i - stamens; j - pistil; k&l - ovary l.s & t.s.; m - samara

Specimens examined: 2030 (SJCBOT), Thonimalai, Kannivadi, Dindigul District, Tamil Nadu, India, 10°21'48.92"N & 77°44'16.83"E at 1,370m, 26.i.2015, coll. S. Soosairaj & P. Raja (Image 3).

Flowering & Fruiting: December and March

Distribution: India: Peninsular (Endemic to the Western Ghats); rare, among grassy slopes.

Habitat & Ecology: Dry grass land, barren slopes associated with *Kalanchoe bhidei* T. Cooke and *Laggera alata* Nanth.

Notes: Gamble (1957) reported this species from the Anamalai Hills of Coimbatore in Tamil Nadu. Later, Sasidharan (1999, 2002) reported it from Palakad and Idukki districts of Kerala. The present collection forms

a first report in the Palni Hills of Western Ghats in Tamil Nadu.

IUCN status: Not evaluated

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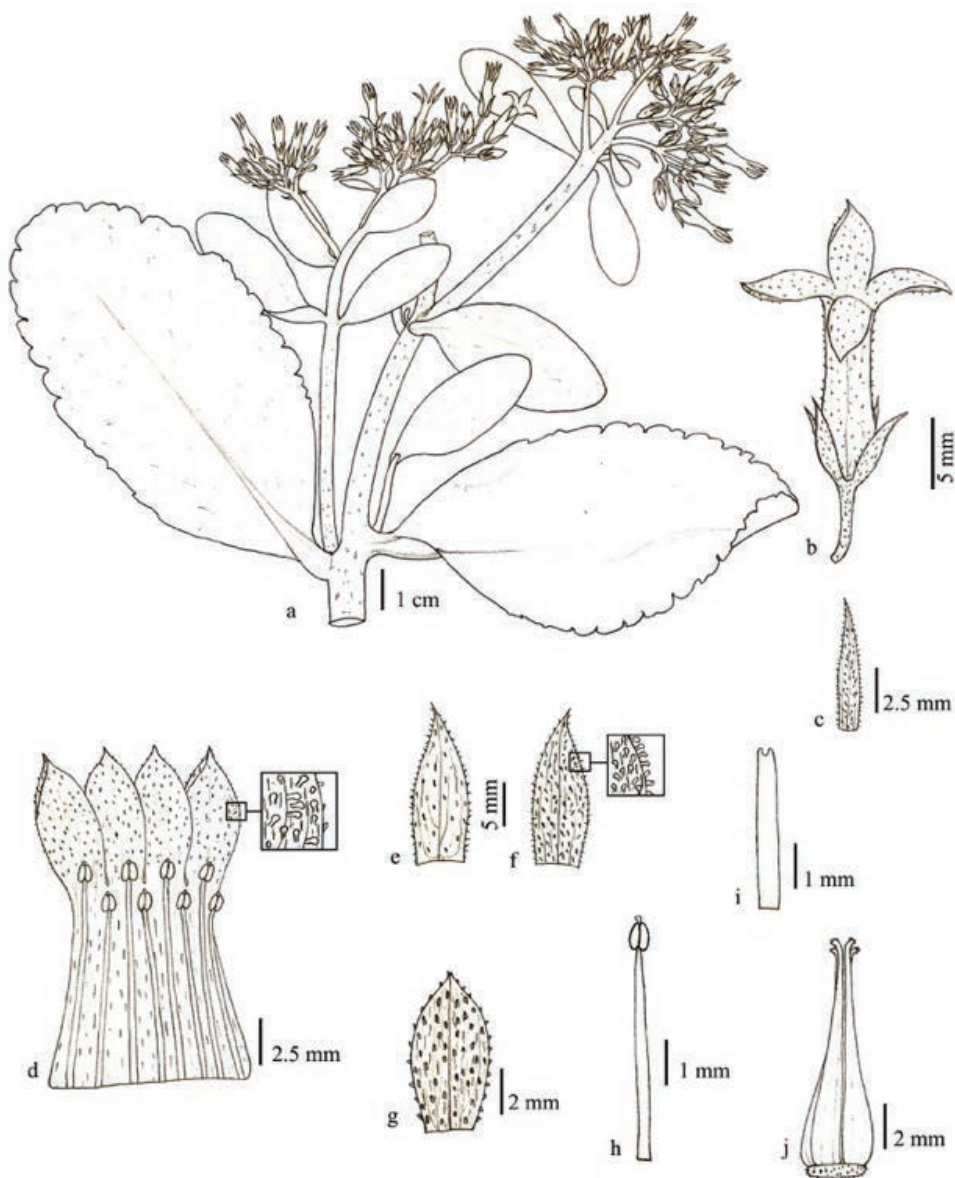


Figure 3. *Kalanchoe olivacea* Dalz. & Gibs.

a - flowering twig; b - flower; c - bracteole; d - corolla splitopen; e&f - calyx lobe; g - corolla lobe; h - stamen; i - hypogynous scale; j - pistill

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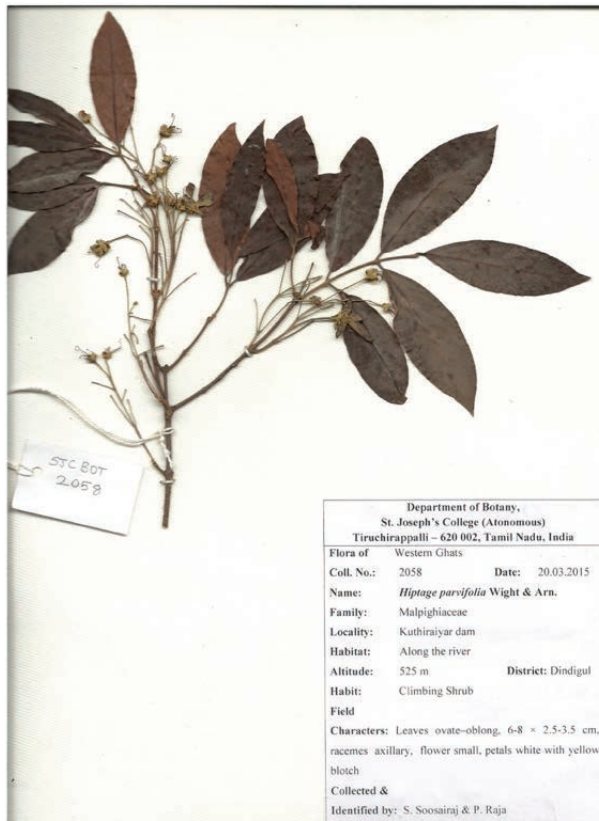


Image 2. Herbarium of *Hiptage parvifolia*

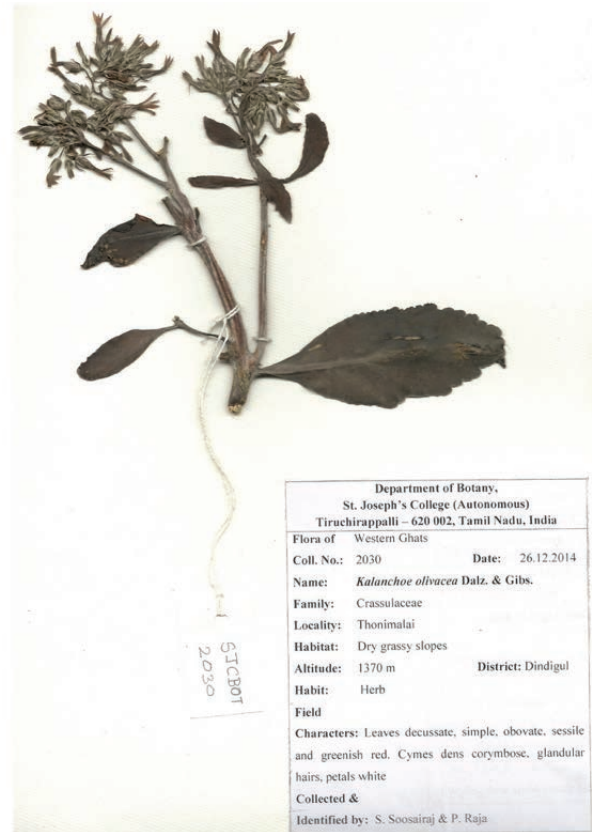


Image 3. Herbarium of *Kalanchoe olivacea*





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