

SIX NEW SPECIES OF *VACCINIUM* (ERICACEAE) FROM NEW GUINEA

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Six new species of *Vaccinium*, identified as new to science by the late George Argent while compiling a revision of *Vaccinium* sect. *Orianthe* for New Guinea, are described and illustrations provided.

Keywords. Ericaceae, Indonesia, new species, Papua New Guinea, *Vaccinium*.

PREFACE

George Argent died unexpectedly in April 2019. He had been revising the genera in Sleumer's account of Ericaceae in *Flora Malesiana* (Sleumer, 1966–1967), incorporating the many new collections and the knowledge gained over the past 50 years. Having recently published a revision of the genera *Rigiolepis* Hook.f. and *Vaccinium* L. in Borneo (Argent, 2019), he was in the process of revising *Vaccinium* in New Guinea and the Philippines. Using his research material, notes and partially completed manuscripts held in the archives and herbarium of the Royal Botanic Garden Edinburgh, the second author has completed his treatment of the six new species of *Vaccinium* from New Guinea that he was working on at the time, and is publishing them here.

INTRODUCTION

Vaccinium species in the tropics (Ericaceae: subfamily Vaccinioideae: tribe Vaccinieae Rchb.) display a high degree of endemism and are largely found in montane vegetation. The classic work on the Ericaceae by Sleumer (Sleumer, 1966–1967) is still an invaluable tool in the identification of Malesian members of this family but is in need of revision. During revision of *Vaccinium*, six new species have been found. These new species belong to *Vaccinium* sect. *Orianthe* Schltr., a section that is essentially based on the combination of the absent to very short peduncle, which results in a single-flowered inflorescence or fasciculate inflorescence when there are occasionally two or three from one axil, and small leaves (mostly less than 40 × 20 mm, rarely to 63 × 25 mm) (Sleumer, 1966–1967). The New Guinean species of this section have globose or urceolate, thick-walled articulated flowers, and the stamens are usually without spurs. In the present treatment, stem and leaf indumentum are described from young growth because older growth is almost invariably

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glabrescent, and all measurements are from dried herbarium material – measurements from fresh or rehydrated material can be up to 25% greater.

IUCN conservation assessments are provided for each species, using *IUCN Red List Categories and Criteria*, version 3.1 (IUCN, 2012).

TAXONOMIC TREATMENT

***Vaccinium hansmeyeri* Argent, sp. nov.**

This species is placed in *Vaccinium* sect. *Orianthe*. It is similar to *Vaccinium whiteanum* Sleumer but the indumentum on the stem is appressed or only weakly and irregularly spreading, not patent, the anther cells are longer (c.1.3 mm versus 1 mm), the tubules significantly shorter than the cells (0.5 mm versus 0.9 mm), and the disc is glabrous not “slightly to subdensely set with erect hairs”. – Type: Papua New Guinea, New Ireland, Namatanai subprovince, Hans Meyer Range, approach ridges to Mt Angil, c.10 km N.W. of Taron on East coast (map distance). 4°24'S, 152°57'E, 1800 m altitude, 19 x 75, M.J.S. Sands, G.A. Pattison & J.J. Wood 2432 (holo K, iso E, LAE n.v.). **Fig. 1.**

Epiphytic shrub, to 60–70 cm tall. *Twigs* rounded or weakly grooved, subdensely covered in appressed or weakly spreading white hairs to c.0.1 mm (0.5 mm in young parts), youngest parts with a few small brown glands but these disappearing very early, leaves laxly arranged; lateral buds up to c.0.6 mm, pyramidal, indistinct. *Leaves*: petiole 1–2 × c.0.7 mm, hairy, grooved above; blade 10–17 × 5–8 mm, elliptic, flat to somewhat concave, spreading, base mostly rounded, sometimes broadly tapering, apex rounded, often minutely emarginate, margin entire, not cartilaginous, narrowly revolute throughout, without marginal glands, coriaceous, glabrous above, laxly glandular hairy below, midvein weakly raised above, slightly more distinctly so below, lateral veins mostly 1 or 2 on each side, arising at c.25° from midvein, just above base of blade, the strongest of which disappears close to apex, often with 1 or 2 shorter laterals arising distally, all veins weakly raised above and below. *Inflorescence* 1-flowered, sparse, axillary, from upper leaf axils; peduncle 0; pedicel 5.5–7 mm, glabrous, arising from a cluster of ovate to narrowly triangular scales with entire margins. *Flowers*: calyx tube c.1 × 1.7 mm, broadly conical, glabrous, limb spreading, lobes broadly ovate, c.1.2 × 1.4 mm, glabrous outside and without cilia on margins or apices; corolla broadly urceolate, slightly open, c.4 × 3.5 mm, red, glabrous outside, laxly hairy in distal half inside, lobes c.1 × 1 mm, ovate, not reflexed, with minutely but distinctly erose margins; stamens 10, filaments c.1.8 mm, filiform and hardly expanded at base, white hairy at base, anther cells c.1.3 mm, oblongoid, not spurred, echinate proximally, more or less smooth distally, tubules 0.5 mm, tapering gradually, dehiscing by small oblique pores; disc glabrous; style 4 mm, swollen in middle (almost cylindrical when dry), glabrous. *Fruit* not seen.

Distribution. Known only from the type locality.

Ecology. Epiphytic, in partial shade, c.2 m from the ground in montane forest of small trees, with Ericaceae, Myrtaceae (*Syzygium* P.Browne ex Gaertn.) and *Podocarpus* L'Hér

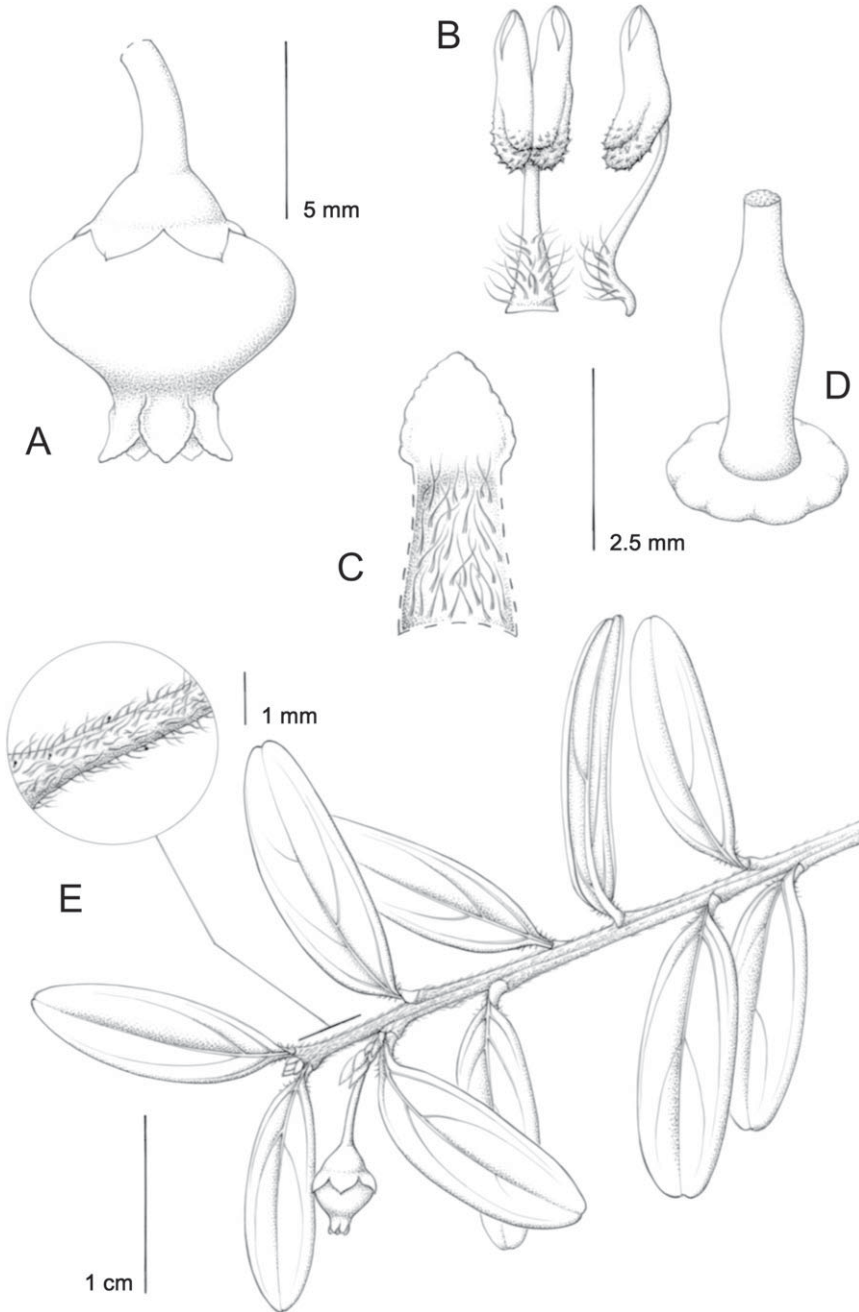


FIG. 1. *Vaccinium hansmeyeri* Argent, sp. nov. A, Flower; B, stamens (front and side views); C, corolla section; D, style with basal disc; E, habit with insertion showing hair covering. Drawn by Claire Banks.

ex Pers. and a dense ground layer of *Sphagnum* L., *Gahnia* J.R.Forst. & G.Forst. and Lycopodiaceae. At the top of a steep landslide 1800–2150 m altitude, and said to be frequent between 2100 m and the summit ridge at 2250 m altitude.

Conservation status. Known only from the poorly surveyed Hans Meyer Range in New Ireland, Papua New Guinea. It is likely to have a restricted distribution, but because there is no specific threat to the area and it is said to be frequent between 2100 m altitude and the summit ridges, it is assessed as Least Concern LC.

Etymology. This new species is named after the type locality, the Hans Meyer Range.

Additional specimen examined. PAPUA NEW GUINEA. New Ireland, Namatanai subprovince, Hans Meyer Range, approach ridges to Mt Angil, c.11 km N.W. of Taron on East coast (map distance). 4°24'S, 152°57'E, 2150 m altitude, 24 x 75, *M.J.S. Sands, G.A. Pattison, J.J. Wood & J. Croft* 2464 (E, K, LAE n.v.).

***Vaccinium hopei* Argent, sp. nov.**

This species is placed in *Vaccinium* sect. *Orianthe*. It keys to *Vaccinium culminicola* Wernham (*V. culmicolum* in Sleumer, 1966–1967), but the hairs on the stems are much longer, the corolla is glabrous inside, it has glabrous filaments, the anthers are twice as long and the disc is glabrous. – Type: Indonesia, Papua, Kemabu plateau, c.10 km north of Mt Jaya (Carstensz mountains), 3600 m altitude, 8 ii 1972, *G.S. Hope* ANU 16054 (holo CANB). **Fig. 2.**

Epiphyte, to 20 cm tall. *Twigs* rounded, subdensely covered with long irregularly appressed and spreading white hairs to c.0.6 mm (1 mm on younger parts), and shorter inconspicuous brown glandular hairs, leaves densely arranged; lateral buds up to 0.5 mm, conical, indistinct. *Leaves:* petiole 0.8–1.5 × 0.4 mm, with a similar indumentum to that on stem, slightly grooved; blade 4–7 × 2–2.5 mm, predominately ovate, occasionally elliptic, often concave otherwise flat, spreading, base rounded, apex broadly pointed or rounded, margin entire, cartilaginous, slightly revolute, ciliate when young, marginal glands lacking, coriaceous, pale and glabrous above, darker and laxly glandular hairy below, midvein and lateral veins totally obscure above, only faintly visible below as a slightly raised ridge, lateral veins totally obscure. *Inflorescence* 1-flowered, sparse, axillary; peduncle to c.1.5 mm, covered in slender scales; pedicel c.4–10 mm, laxly hairy with long spreading hairs. *Flowers:* calyx tube c.2 × 2 mm, cup-shaped, laxly long hairy, limb spreading, lobes triangular, 1.5–2 mm, laxly hairy outside or almost glabrous and with a fringe of long white hairs; corolla urceolate-tubular, open, 4–5 × 2.5 mm, colour not recorded, glabrous on both sides, lobes c.1.5 × 1.3 mm, triangular, glabrous, reflexed, margin with a thick cartilaginous border, distinctly but minutely erose; stamens 10, filaments c.2.4 mm, filiform, glabrous, anther cells c.2 mm, oblongoid, not spurred, echinulate proximally, smooth distally, tubules c.0.7 mm, same width as cells, dehiscing by oblique pores; disc glabrous; style c.4 mm, cylindrical, glabrous. *Fruit* not seen.

Distribution. Known only from the type locality.

Ecology. Lower subalpine forest.

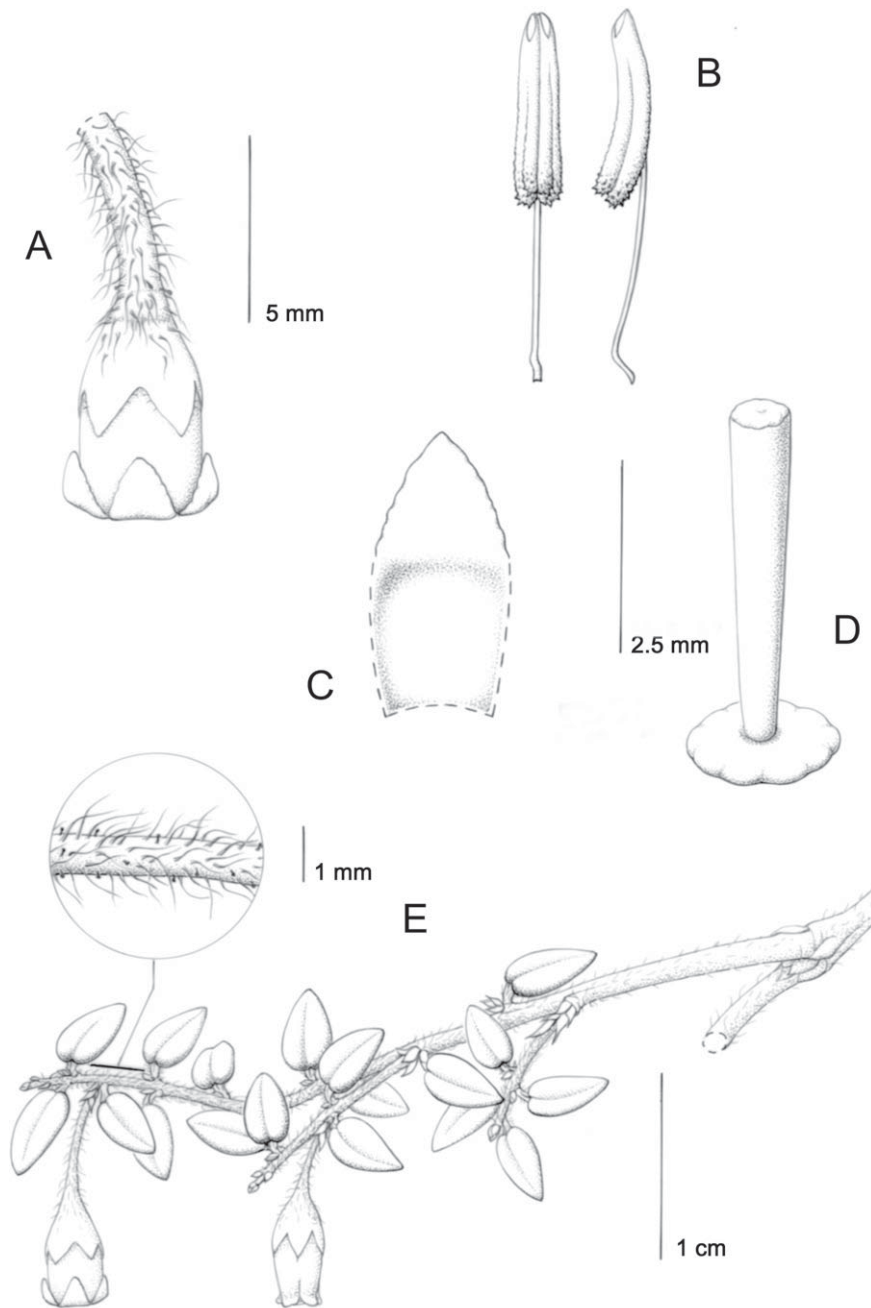


FIG. 2. *Vaccinium hopei* Argent, sp. nov. A, Flower; B, stamens (front and side views); C, corolla section; D, style with basal disc; E, habit with insertion showing hair covering. Drawn by Claire Banks.

Conservation status. This species is known from only a single collection with no records from the comparatively well-collected nearby area of the main divide of New Guinea, suggesting that the extent of occurrence is less than 5000 km². The area is subject to both natural fires and fires lit by local people during hunting, which results in considerable destruction of the subalpine vegetation. This is particularly the case in association with extreme El Niño events. Access to the Kemabu Plateau, due to the development of the adjacent mine site, has increased, as has the frequency of burning in the subalpine and alpine grasslands of the area (Paton & Johns, 2004). The reduction in time between fires is likely to be a threat to the flora. This species is assessed as Endangered EN B1a,b(ii,iv).

Etymology. This species is named after the collector of the type specimen, G. S. Hope, formerly of the Department of Biogeography and Geomorphology, Australian National University.

The pedicel in *Vaccinium hopei* is extremely variable in length and would appear to elongate with age.

***Vaccinium onimense* Argent, sp. nov.**

This species is placed in *Vaccinium* sect. *Orianthe*. It keys out to *Vaccinium sparsicapillum* Sleumer in Sleumer (1966–1967) but has larger leaves and smaller flower parts and dehisces by transverse pores. *Vaccinium sandsii* Argent also keys out to *V. sparsicapillum* (for differences between species, see diagnosis for *V. sandsii* below). – Type: Papua New Guinea, Southern Highlands, Mendi subdistrict, Mt Giluwe timber area, Onim, 6°10'S, 143°57'E, 2500 m altitude, 19 v 1975, G. Argent 12/19 (holo E).

Fig. 3.

Spreading erect shrub to 2.5 m tall. *Twigs* rounded, sparsely covered with simple white, more or less patent hairs to c.0.3 mm, glandular hairs lacking, leaves densely arranged; lateral buds acicular, to c.1 mm, indistinct. *Leaves*: petiole 1.6–2 × c.0.6 mm, hairy especially along margins, grooved, arising from slightly prominent stem cushion; blade 10–12 × 5–7 mm, elliptic to obovate, slightly convex, semi-erect to spreading, base broadly cuneate to almost rounded, apex rounded to very broadly obtuse, a few simple hairs near apex when young, margin entire, not cartilaginous, strongly revolute in proximal 2/3, less so distally, two small and impressed marginal glands c.0.6 mm from petiole, coriaceous, glabrous above, with a few glandular hairs below but quickly glabrescent, midvein narrowly impressed above, raised below, lateral veins 1 or 2 on each side, arising at c.30° from midvein, the proximal one from near base, the second from around mid-leaf. *Inflorescence* 1-flowered, axillary; peduncle c.0.6 mm, covered in white hairs; pedicel c.1 mm, glabrous, covered at base with a small cluster of triangular scales with ciliate margins. *Flowers*: calyx tube c.1.5 × 1.5 mm, obconical, glabrous, limb spreading, lobes triangular, 1.2 × 2 mm, glabrous except for sparse marginal hairs, with a prominent midrib; corolla urceolate, slightly open, c.3 × 2.5 mm, pink, glabrous outside, with a few hairs in distal half inside, lobes c.0.5 × 0.5 mm, glabrous, obtuse, not reflexed; stamens 10, filaments c.0.6 mm, slender, glabrous, anther cells c.0.6 mm, oblongoid, not spurred, finely papillose, tubules c.0.1 mm, much narrower than cells, dehiscing by transverse pores; disc

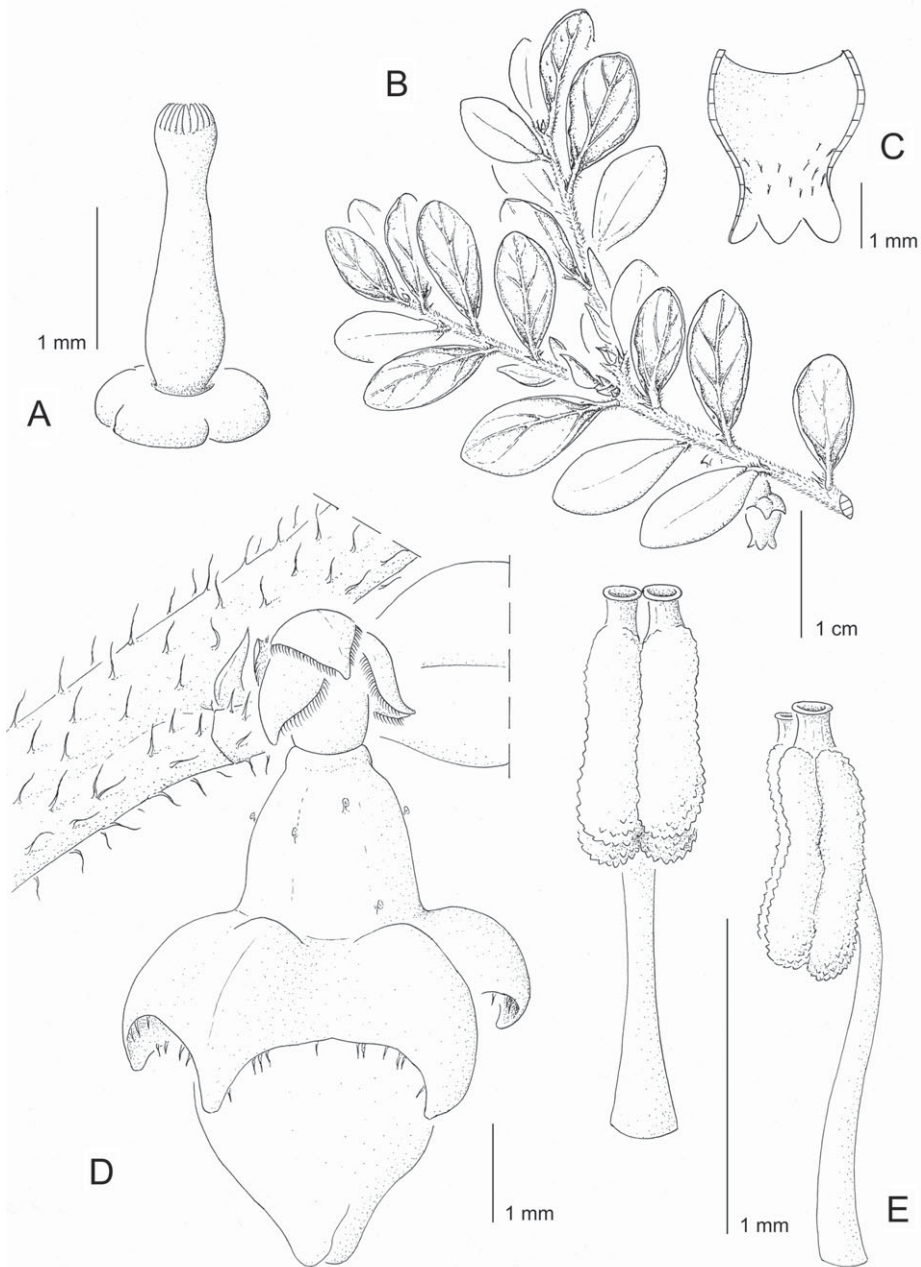


FIG. 3. *Vaccinium onimense* Argent, sp. nov. A, Style with basal disc; B, habit; C, corolla section; D, flower; E, stamens (front and side views). Drawn by Rebecca Camfield.

glabrous; style c.2 mm, cylindrical, slightly expanded just under style, glabrous. *Fruit* reported to ripen almost black.

Distribution. Known only from Onim, Mt Giluwe area, in Papua New Guinea.

Ecology. Lower montane forest, swamp.

Conservation status. This species is recorded from only two collections, one made in 1973 and the other (the type specimen) in 1975. No specific threats to the vegetation around Mt Giluwe have been found, but it is said to be in a timber area, which implies a threat from land degradation by logging activities. Because of its probable restricted range and habitat (swamp areas), and the threat from logging activities, it is provisionally assessed as Vulnerable VUD2.

Etymology. This new species is named after the type locality, Onim in Papua New Guinea.

Additional specimen examined. PAPUA NEW GUINEA. Southern Highlands, Mendi subdistrict, Lake Onim South slope to Mt Giluwe, saturated swamp margin to lake, 6°10'S, 143°59'E, 2100 m altitude, 27 xii 1973, *J. Croft* et al. LAE 60783 (E).

Vaccinium paddywoodsii Argent, *sp. nov.*

This species is included in *Vaccinium* sect. *Orianthe* due to its very short peduncle. It is distinct in this section by the prominent glandular hairs on the stamens, the large leaves with glands all around the margin, and the exceptionally long pedicel. – Type: Papua New Guinea, Milne Bay District, Rabaraba subdivision, Daga, Mt Simpson area, Birat to Nepesip, Wayat, 1500–1600 m altitude, 10 vii 1968, *Woods & Cruttwell* et al. 2301 (holo E). **Fig. 4.**

Tree to 7 m tall. *Twigs* terete, glabrous. *Leaves* laxly arranged becoming denser towards tips of twigs; lateral buds c.1 × 1 mm, ovate to spherical, indistinct; petiole 1–2 × 1–2 mm, glabrous, grooved; blade 35–55 × 30 mm, elliptic, flat, spreading, base tapering, long decurrent into petiole, apex acute, shortly acuminate (to c.5 mm), margin laxly crenulate with impressed marginal glands, not cartilaginous, narrowly revolute, with shallowly depressed dark marginal glands all the way round the margin, coriaceous, glabrous above, with dark glandular hairs below when young leaving prominent dark spots, midvein distinctly but narrowly impressed above, almost to the apex, shallowly raised below, lateral veins 1 or 2 on each side, arising at c.30° from midvein, high arching from near base and with one or two shorter veins arising distally, slightly raised above, more distinctly so below. *Inflorescences* 1- to 3-flowered, sparse, axillary from well below terminal growth; peduncle c.1–1.5 mm, with a few short semicircular scales with entire margins at base; pedicel up to 18 mm, minutely hairy; bracteoles 2, opposite or subopposite, triangular, c.1 mm long, within 2–3 mm of the base, glabrous. *Flowers:* calyx tube 1 × 2 mm, broadly saucer-shaped, sparsely hairy proximally near junction with petiole, otherwise glabrous, limb spreading, lobes broadly ovate, 1.5 × 1 mm, glabrous outside but shortly ciliate along margins and with a tuft of more conspicuous hairs on apices, with a faint midvein; corolla pyramidal (unopened), c.4 × 2.3 mm, white, glabrous outside, densely hairy in proximal part

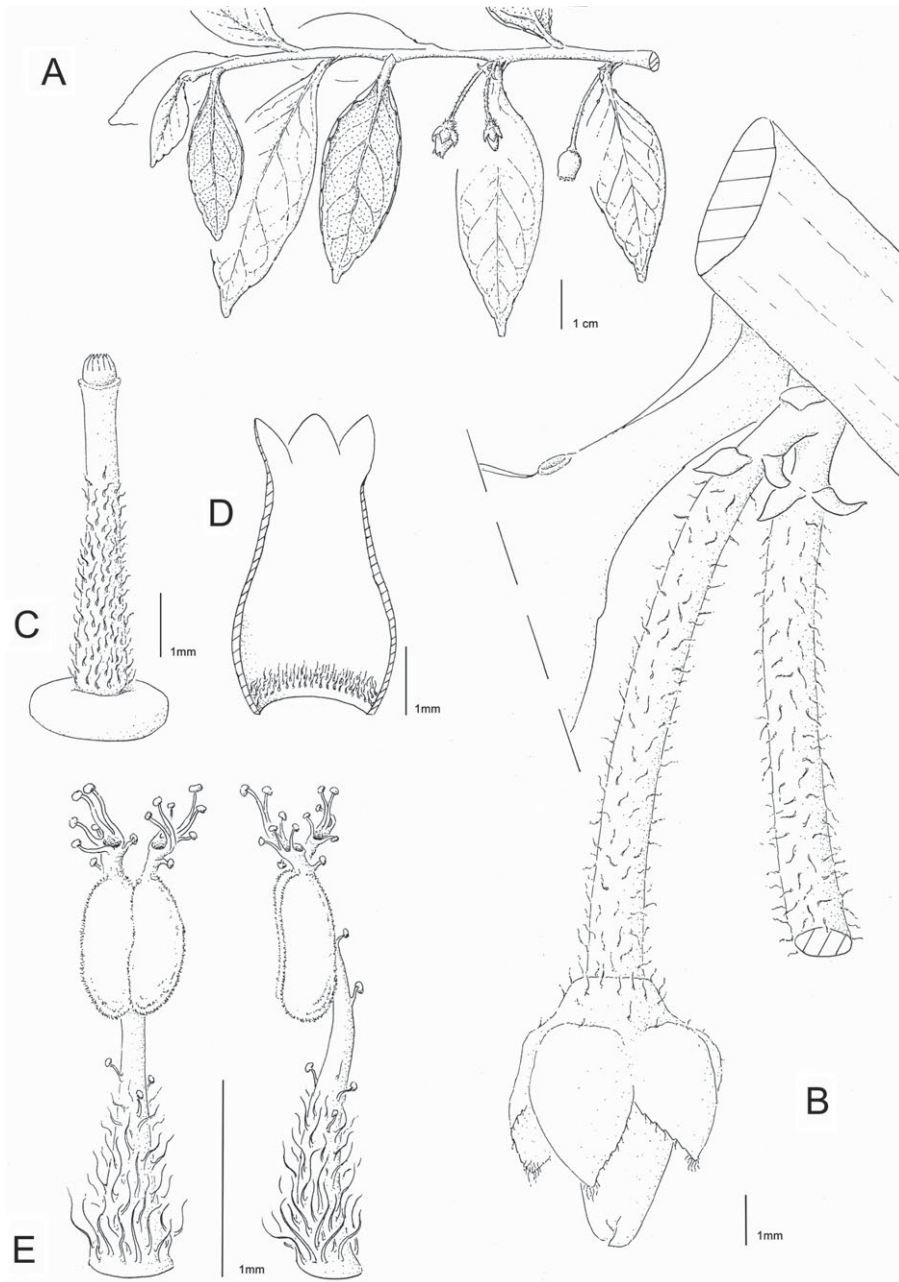


FIG. 4. *Vaccinium paddywoodsii* Argent, sp. nov. A, Habit; B, inflorescence; C, style with basal disc; D, corolla section; E, stamens (front and side views). Drawn by Rebecca Camfield.

inside, glabrous distally, lobes $c.1 \times 0.7$ mm, glabrous, triangular, nearly erect, not reflexed; stamens 10, filaments 1.2–1.3 mm, filiform but broadly expanded at base, densely white hairy just above broad base to about halfway, then glabrous although with occasional long gland-tipped hair similar to those on tubules, anther cells $c.0.8$ mm, oblongoid, not spurred, finely echinulate, tubules $c.0.3$ mm, much narrower than cells, covered with long stalked glandular hairs, dehiscing by oblique pores; disc glabrous; style 5 mm, cylindrical, covered on proximal $2/3$ with long appressed white hairs, papillose in distal glabrous $1/3$. *Fruit* not seen.

Distribution. Known only from the type locality.

Ecology. Vegetation not recorded.

Conservation status. This species is recorded from a single collection made in 1968. No specific threats to the vegetation on Mt Simpson have been found, although there is a potential future threat from continuing loss of forest habitat by an increase in the human population density of the area. However, because of its altitudinal range (above 1500 m) and no known specific threat it is provisionally assessed as Least Concern LC.

Etymology. This new species is named in honour of one of the collectors, Patrick James Blythe Woods, known as Paddy Woods – a great plantsman and wonderful companion to the first author.

Although this species is included in *Vaccinium* sect. *Orianthe*, in its very short peduncle it would otherwise fit more readily in *Vaccinium* sect. *Bracteata* Nakai (sensu Sleumer, 1966–1967). It is one of the species that bridges the gap between these two sections, the boundaries of which will only be clarified by molecular work. The petioles appear longer than as described due to the long narrowly decurrent leaf bases.

***Vaccinium sandsii* Argent, sp. nov.**

This species is included in *Vaccinium* sect. *Orianthe*. In Sleumer (1966–1967) it keys out to *Vaccinium sparsicapillum* Sleumer but occurs at lower altitude, has hairy filaments (versus glabrous), glandular hairs on the corolla outside (versus glabrous), anther tubules much shorter (0.2–0.3 mm versus 0.8 mm), different indumentum on the stems, and the leaves are much larger. It differs from *Vaccinium onimense* Argent (which also keys out to *V. sparsicapillum*) in its petiole length 1–1.5 mm, blade 12–18 mm long, hairy pedicel, corolla densely to sparsely glandular hairy on the outside, anther tubules same width as cells and dehiscing by oblique pores (in *V. onimense*: petiole length 1.6–2 mm, blade 10–12 mm long, glabrous pedicel, corolla glabrous outside, anther tubules much narrower than cells and dehiscing by transverse pores). – Type: Indonesia, Papua, Mimika Regency, PT-Freeport Indonesia concession area, near mile post 54 on main road, 22.2 km S of Tembagapura, $4^{\circ}15'S$, $137^{\circ}01'E$, 1540 m altitude, 14 viii 1998, *M.J.S. Sands* 7182 (holo E). **Fig. 5.**

Spreading erect shrub to 1 m tall. *Twigs* rounded, subvillous with patent glandular hairs and a few simple white hairs, leaves laxly arranged becoming denser towards tips of twigs; lateral buds up to 0.5 mm, acute, indistinct. *Leaves*: petiole $1-1.5 \times c.0.5-0.7$ mm, hairy,

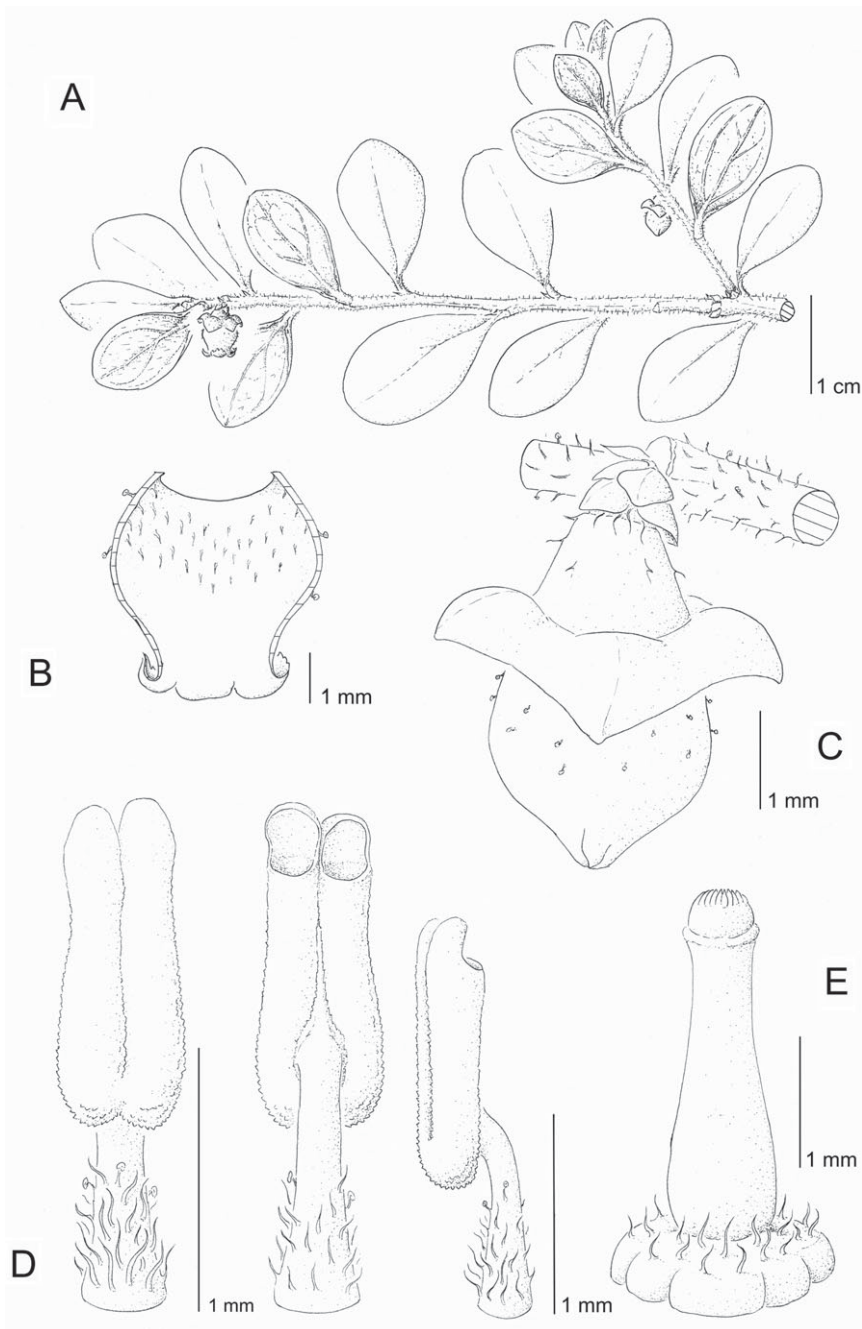


FIG. 5. *Vaccinium sandsiit* Argent, sp. nov. A, Habit; B, corolla section; C, flower; D, stamens (front, back and side views); E, style with basal disc. Drawn by Rebecca Camfield.

grooved, arising from a slightly prominent cushion, with hairs similar to those on stems; blade 12–18 × 5–10 mm, elliptic to subobovate, flat to slightly convex, spreading, base cuneate, apex rounded, or sometimes weakly retuse, margin entire, not cartilaginous, strongly revolute towards base, only weakly so distally, two small and impressed marginal glands c.1 mm from petiole, coriaceous, glabrous above, laxly glandular hairy below when young, midvein impressed above and raised below, lateral veins 1 or 2 on each side, obscure above, weakly raised below, basal ones arising at c.30° from midvein, curved, ascending almost to apex. *Inflorescence* 1-flowered, axillary; peduncle c.0.5 mm, with simple hairs; pedicel c.0.7 mm, hairy, covered at base with small sheathing scales. *Flowers*: calyx tube c.1.5 × 1.7 mm, obconical, laxly hairy, limb spreading, lobes broadly triangular, c.1 × 1.5 mm, almost glabrous, margins not fringed with hairs; corolla shortly urceolate, slightly open, c.3 × 3.5 mm, red, densely to sparsely glandular hairy outside, with simple hairs in distal half inside, lobes c.0.7 × 0.7 mm, glabrous, reflexed to horizontal, with a slightly crenulate margin; stamens 10, filaments c.0.9 × 0.5 mm, thick, tapering gradually distally, hairy throughout their length, anther cells c.1 mm, oblongoid, not spurred, finely echinulate, tubules 0.2–0.3 mm, same width as cells, dehiscing by oblique pores; disc with a few short hairs near upper margin; style c.2.5 mm, cylindrical but with a swelling just above base, glabrous. *Fruit* not seen.

Distribution. Known only from the type locality.

Ecology. Lower montane forest with *Ficus dammaropsis* Diels. On extensive level area associated with *Macaranga* Thouars species, in partial shade.

Conservation status. This species is known only from the type locality within the PT-Freeport Indonesia logging and mining area. It is likely to be restricted in its distribution and threatened by land conversion in the immediate vicinity. It is therefore assessed as Critically Endangered CR B2abii, iii.

Etymology. This new species is named after the collector of the type, botanist Martin Sands.

***Vaccinium tanjungii* Argent, sp. nov.**

This species is placed in *Vaccinium* sect. *Orianthe*. It is close to *Vaccinium oranjense* J.J.Sm., with which it shares flask-shaped flowers, but *V. tanjungii* is an erect shrub to 1.5 m tall (*V. oranjense* a creeping shrub), the pedicel is 4 mm long (versus 6–8(–9) mm), filaments 2.5–3 mm long (versus 3–4(–5) mm), it lacks a peduncle (versus peduncle 1(–3) mm long) and has a corolla with glandular hairs (outside) (versus glabrous). – Type: Indonesia, Papua, Kab. Jayawijawa, Kc. Wamena, near Pabililo village, 2600 m altitude, 7 x 1992, G. Argent & R. Tanjung 92390 (holo E). **Fig. 6.**

Erect shrub to 1.5 m tall. *Twigs* rounded, laxly covered with short simple hairs c.0.1 mm long and brown glandular hairs, leaves subdensely arranged becoming denser at tips of twigs; lateral buds up to 1.7 mm, narrowly pyramidal, distinct. *Leaves*: petiole c.1.7 × c.0.5–0.7 mm, shortly hairy, grooved, arising from slightly raised cushion; blade 10–13 × 5–7 mm, elliptic, more or less flat, at first semi-erect, later spreading, base broadly tapering to rounded, apex rounded or obtusely pointed, margin entire, cartilaginous,

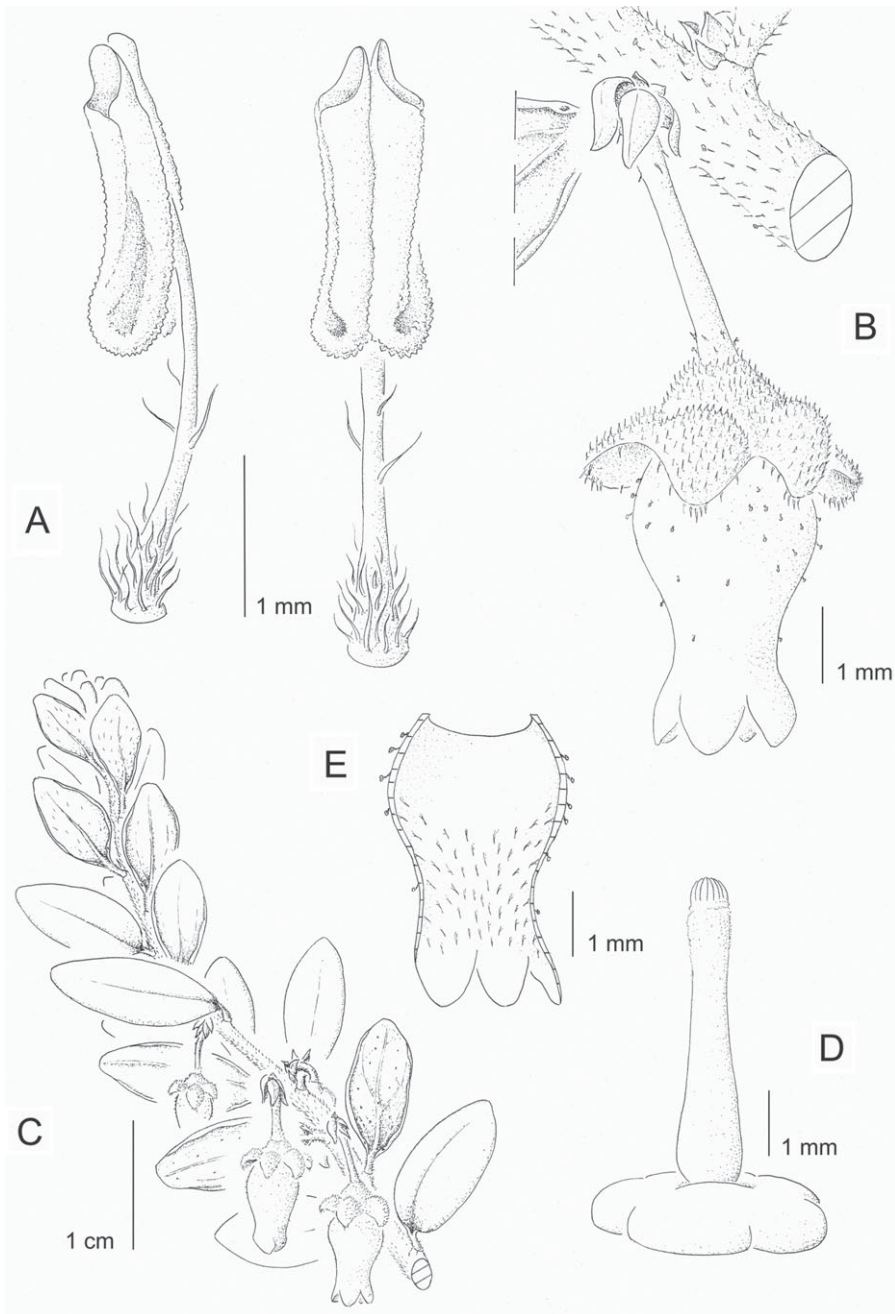


FIG. 6. *Vaccinium tanjungii* Argent, sp. nov. A, Stamens (front and side views); B, flower; C, habit; D, style with basal disc; E, corolla section. Drawn by Rebecca Camfield.

revolute especially in proximal half, with two small and impressed marginal glands c.0.5 mm from petiole, coriaceous, glabrous above, laxly glandular hairy below when young; midvein weakly impressed above and below, lateral veins obscure or with 1 or 2 visible from beneath, arising at c.30° from midvein, well above blade base, curved ascending. *Inflorescence* 1-flowered, axillary; peduncle 0; pedicel c.4 mm, glabrous except for a few glandular hairs distally, covered at base with a few short sheathing scales. *Flowers*: calyx tube c.1.5 × 2.5 mm, broadly obconical, densely covered with brown glandular hairs and with a few proximally pointing simple white hairs, limb spreading, lobes triangular, c.2 × 2 mm, with a few glandular hairs abaxially and with a marginal fringe of short white hairs, with 1–4 vertical ridges when dry; corolla flask-shaped, constricted at middle, slightly open, c.6 × 4 mm, bright glossy red, glandular hairy outside, laxly hairy in distal half inside, lobes c.1.5 × 1.5 mm, glabrous, obtuse, not reflexed; stamens 10, filaments 2.5–3 mm, slender, shortly widened at densely hairy base, glabrous distally, anther cells 1.5 mm, oblongoid, deeply grooved, not spurred, finely echinulate, tubules c.0.5 mm, same width as cells, dehiscing by oblique pores; disc glabrous; style 5 mm, cylindrical, glabrous but minutely papillose towards apex. *Fruit* not seen.

Distribution. Known only from the type locality.

Ecology. Open heath forest.

Conservation status. This species is recorded from a single collection made in 1992 from open heath forest. No specific threats to the vegetation of the area have been found, but a report on the expedition (Argent, 1994) suggests that fires caused by the local population happen at increasing frequency and are likely to reduce regeneration success, quickly putting the species at a high risk of extinction. As such, it is provisionally assessed as Vulnerable VUD2.

Etymology. This new species is named after one of the collectors of the type specimen, Rosye Hefmi Tanjung, lecturer in Biology, Universitas Cenderawasih Jayapura, Indonesia.

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