

# Additions to the Orchid Flora of the Solomons.

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**ABSTRACT:** Three new taxa and one new record are proposed for the flora of the Solomon Islands. The new taxa are *Dendrobium isabelense*, *D. mohlianum* ssp. *kolombangaricum* and *Goodyera stenopetala* ssp. *rendovana*. *Liparis pedicellaris* is recorded from Guadalcanal for the first time

The orchids of the Solomon Islands were last treated by Lewis & Cribb (1991), they recorded 277 species (28 endemic) for the Solomons and Bougainville. Since the publication of their book there has been ongoing research (e.g. Ormerod 1995; 2009 and references therein) that has added to our knowledge of the flora of these islands. The new taxa described below were discovered as the result of herbarium studies undertaken at Harvard, Honiara and Kew.

## *Dendrobium* Swartz

This is the largest genus in the Solomon Archipelago and it has about 51 species (nine endemic). Five of the endemic taxa belong to section *Grastidium* (Blume) Blume, the largest and most diverse group in the genus and well represented in nearby New Guinea. Identification of material from the Solomon Archipelago referable to section *Grastidium* is currently difficult, I think in part due to a number of unidentified and undescribed taxa that have been mixed up with previously described species. I describe below one of these plants.

## *Dendrobium isabelense* Ormerod, sp. nov.

Type: Solomon Islands – Santa Isabel, Sigana, 100 m, 11 January 1933, L.J. Brass 3452 (Holotype: A!; Isotype: GH!). *Species nova subsimilis D. salomonense* Schltr. sed *caulibus longioribus* (3 vs. 1.5 m), *sepalis ligulato-lanceolatis* (non oblongis), *carinis labello crasse*

*lamellatis* (non lato carinatis) et *epichilovatis* (non deltatis) differt.

Epiphytic herb. Roots terete, to 1.5 mm thick. Rhizome very short. Stems pendulous, slender, subterete, leafy, to 3 m long, 0.30-0.35 cm thick.

Leaves lanceolate, thinly coriaceous, apex inequally subacutely bilobed, 7.30-11.45 cm long, 1.25-1.85 cm wide; leaf sheaths tubular, smoothly striate, truncate to obliquely truncate, 1.7-2.5 cm long. Inflorescence short, biflorous; inner spathe ca. 1 mm tall, 4 mm wide. Pedicellate ovary thickly clavate, glabrous, 5 mm long.

Flowers dull yellowish-brown, "pleasantly perfumed".

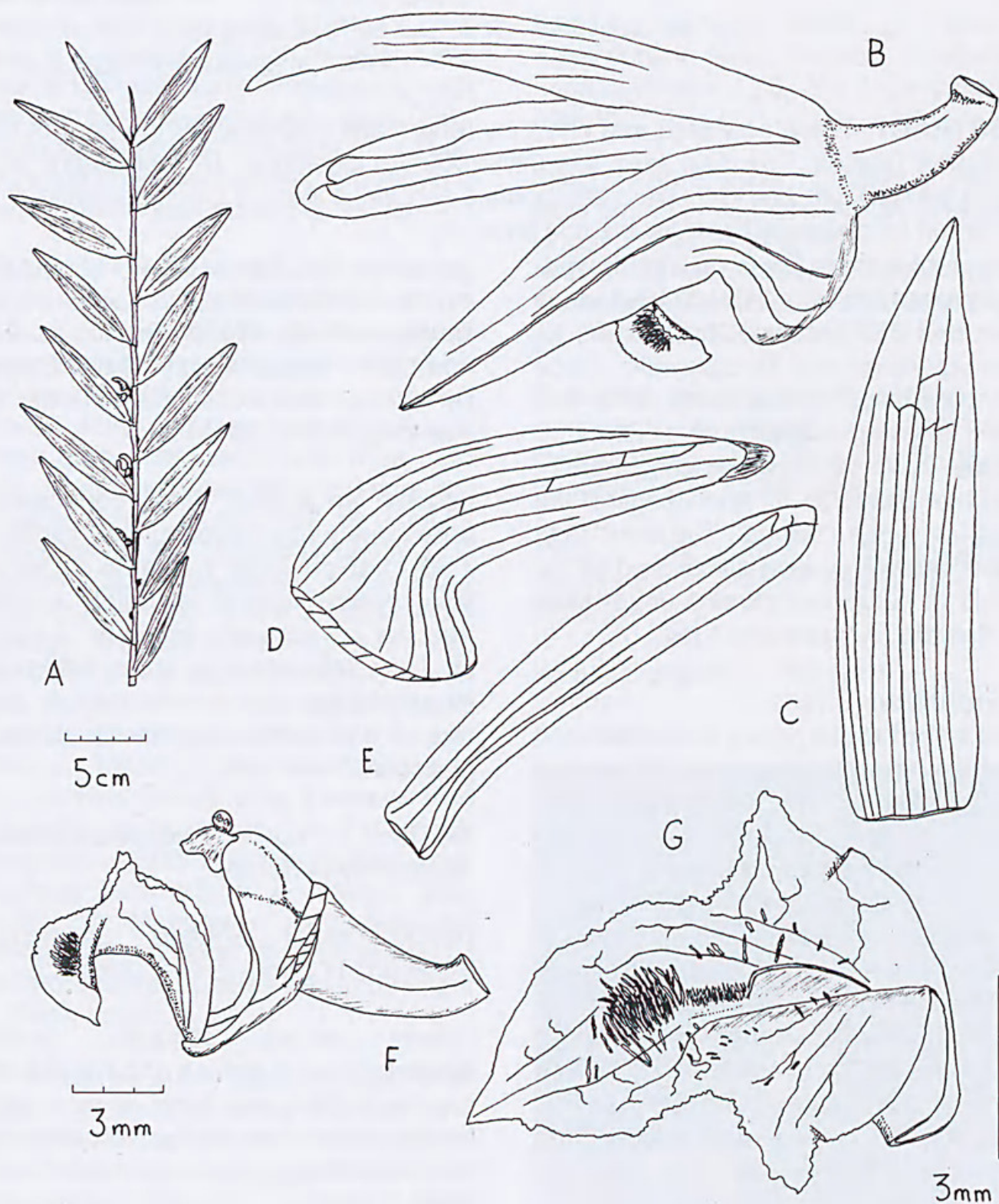
Dorsal sepal ligulate, subacute, 9-veined, 17.5 mm long, 4 mm wide.

Lateral sepals obliquely ovate-lanceolate, apex obtuse and calceolate, 9-veined, 14.9 mm long, 6 mm wide basally, 4 mm wide in arch, forming with the columnfoot a mentum 3.3-4.0 mm long.

Petals linear-ligulate, obtuse, 5-veined, 15.95 mm long, 2.5 mm wide.

Labellum trilobed, curved, 8-9 mm long, medially with a thick lamellate keel that ends at the apex of the hypochile and dissolves into a patch of trichomes on the base of the epichile; hypochile





***Dendrobium isabelense*** -- A. part of stem; B. flower; C. dorsal sepal; D. lateral sepal; E. petal; F. flower minus tepals; G. labellum. A, B-F and G to respective scales, A drawn from isotype, rest from holotype.



flabellate, inside adorned with scattered papillae and trichomes, 4.7-5.0 mm long, 6.1 mm wide, at apex sidelobes deltate, irregularly dentate, acute; epichile broadly ovate, subacuminate, margin entire but becoming irregularly dentate toward the base, 4.2 mm long, 3.2-3.3 mm wide.

Column conical, 2.9-3.0 mm long; columnfoot forming an obtuse angle with the ovary, 3.5 mm long

**Distribution:** Solomon Islands.

**Habitat:** Lowland rainforest, 100 m.

This species is perhaps most similar to *D. salomonense* Schltr. but it differs from that in having longer (3 vs. 1.5 m) stems, dark drying leaves, flowers with ligulate-lanceolate (vs. oblong) sepals, a thickly lamellate (vs. low and broad) keel on the labellum hypochile, sidelobes with scattered papillae and trichomes (vs. transverse lamellae) and an ovate (vs. broadly deltate) epichile.

***Dendrobium mohlianum*** Rchb.f. subsp. ***kolombangaricum*** Ormerod, *spp. nov.*

Type: Solomon Islands – Kolombangara, Mt. Kolombangara summit, 1065-1370 m, 31 August 1965, *P.F. Hunt RSS 2478* (Holotype: K!; Isotypes: AMES!, BSIP!). *Dendrobium mohlianum* auct. non Rchb.f.: Lewis & Cribb, Orch. Solomon Isl. & Boug.:158, 160 p.p., f.35:A-L, 1991.

*A D. mohliano* Rchb.f. *ssp. mohliano mento floribus brevioribus* (6.5-7.0 vs. 10-20 mm) *differt.*

Epiphytic, rarely terrestrial herb. Stems caespitose, terete, leafy in upper half, 29.0-65.2 cm long, 0.3-0.4 cm thick; internodes to 3.5 cm long. Leaves

ligulate-lanceolate, acute, thin, 7.0-12.5 cm long, 0.90-1.55 cm wide.

Inflorescences axillary on upper half of leafless stems, 4-6-flowered, 0.5-1.0 cm long; floral bracts broadly ovate, acute, 5-7 mm long, 4-5 mm wide. Pedicellate narrowly clavate, shallowly ribbed in upper half, 15-16 mm long.

Flowers orange, rich orange, red or orange-red, lip orange with violet or crimson, anther cap white. Dorsal sepal oblong-elliptic, subacute to obtuse, 11 mm long, 6 mm wide.

Lateral sepals obliquely ovate-elliptic, subacute, 11 mm long, 8 mm wide, forming with the columnfoot a mentum 6.5-7.0 mm long.

Petals obovate to elliptic, obtuse, 10 mm long, 5 mm wide.

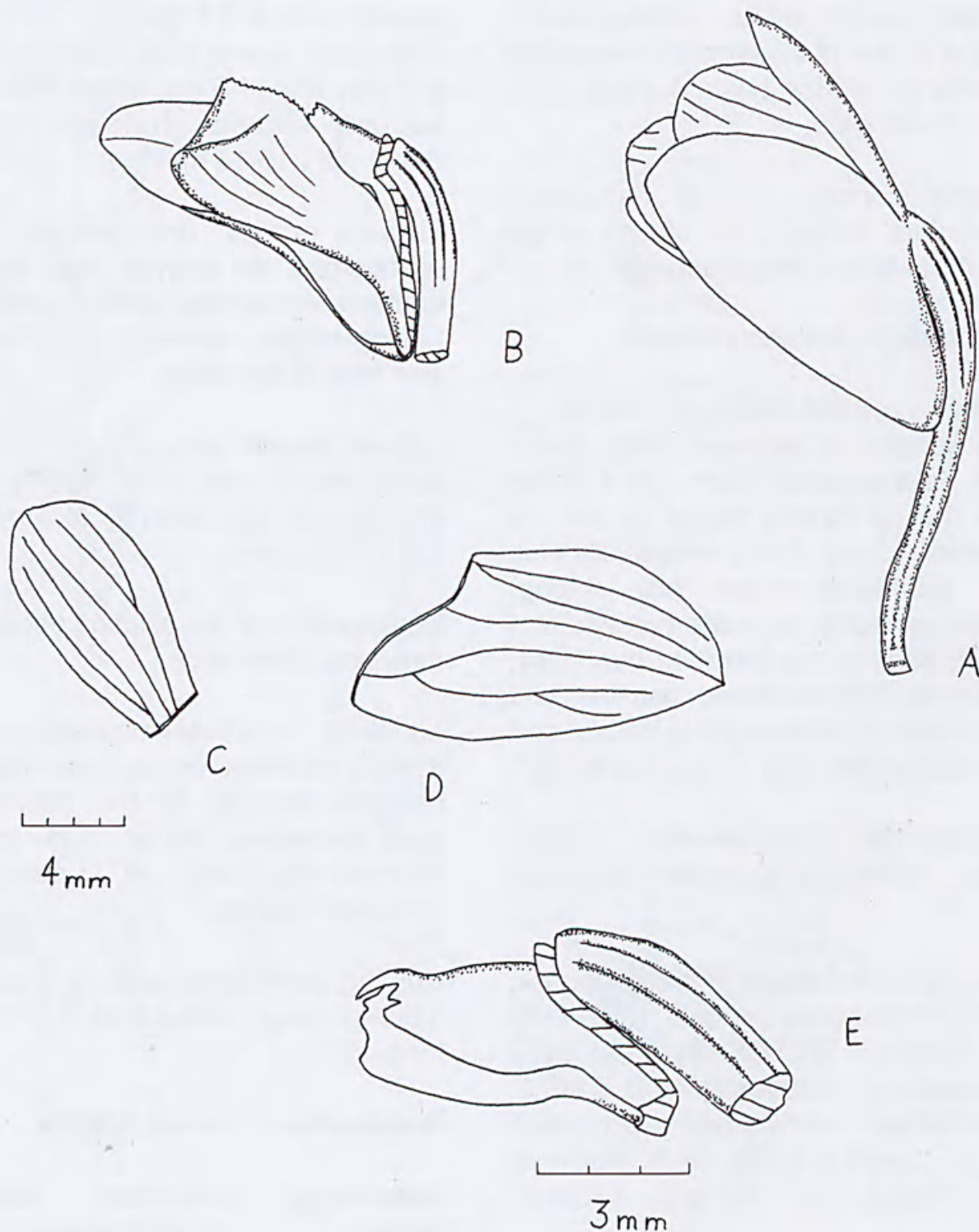
Labellum obovate-cucullate, upper margin shallowly erose, lower half with margins connate to the columnfoot, apex exceeding the tip of the column (minus anther) by 3 mm, 11 mm long, 4 mm wide laterally,

Column semiterete, stelidia bidentate, 3.5 mm long; columnfoot 6.5-7.0 mm long.

**Distribution:** Solomon Islands.

**Specimens examined:** Solomon Islands – Kolombangara, Mt. Kolombangara, Vanga to summit track, 1000-1600 m, 3 November 1984, *P.J. Cribb & J. Campbell 5132* (K); summit Mt. Kolombangara, 1525 m, 31 August 1965, *P.F. Hunt RSS 2474* (K); Vanga Point track, 1400-1700 m, 31 October 1986, *S. Wickison 70* (K); above Vanga Mission Station, 1300 m, 1985, *G.*





***Dendrobium mohlianum*** Rchb.f. subsp. ***kolombangaricum***  
 -- A. flower; B. flower minus tepals (except one lateral sepal); C. petal; D. lateral sepal; E. column. A-D and E to respective scales. Drawn from holotype..



Chaplin 825 (K); Rana Ridge, 1500-1700 m, 15 October 1986, Mitchell 13 (K); Mt. Veve, Poitete track, 1300 m, 16 September 1991, B.A. Lewis 57 (BSIP, K); W coast inland from Iri Iri Village at Meruso Cove, 915-1065 m, 27 September 1963, T.C. Whitmore BSIP 2081 (BSIP, K).

This subspecies differs from typical *D. mohlianum* Rchb.f. in its flowers having a conspicuously shorter (6.5-7.0 vs. 10-20 mm) mentum. It is restricted to the island of Kolombangara. Typical *D. mohlianum* occurs further south in the Solomons on Guadalcanal and Makira.

### **Goodyera** R.Br.

At least four species are known to occur in the Solomon Islands, these are *G. erythrodoides* Schltr., possibly the Vanuatu plant *G. inmeghema* Ormerod (sterile specimens from the Santa Cruz Islands), *G. rubicunda* (Blume) Lindl. and *G. viridiflora* (Blume) Lindl. ex D. Dietr. The fifth entity described below appears to be a subspecies of *G. stenopetala* Schltr., a taxon that occurs in Papua New Guinea, Bougainville and probably New Ireland.

### **Goodyera stenopetala** Schltr. subsp. *rendovana* Ormerod, ssp. nov.

Type: Solomon Islands – Rendova, track from Ughele Village to Rendova Peak, 550 m, 12 September 1991, B.A. Lewis 26 (Holotype: K!).

*A G. stenopetala* Schltr. ssp. *stenopetala petalis floribus oblongis (non ligulatis) et labello nudo (non glandulifero) differt.*

Erect terrestrial herb. Rhizome creeping, terete, rooting at nodes. Stem terete, laxly 6-leaved, 12 cm long, 0.2-0.3 cm thick; internodes 1.7-2.3 cm long. Leaves obliquely ovate, acute, green with a white stripe down the midvein, also with some obscure rather broad whitish reticulation, 2.25-3.20 cm long, 1.30-

1.65 cm wide. Inflorescence pubescent, 9.5 cm long; peduncle 5.5 cm long; sheathing bracts 1-2, 1.1-1.3 cm; rachis laxly 10 or more flowered, 4 cm long; floral bracts lanceolate, acute, to 7.5 mm long, 2 mm wide. Pedicellate ovary cylindric-subfusiform, pubescent, to 8.2 mm long. Flowers externally pubescent, white, probably self-pollinating. Dorsal sepal ovate, acute, 4.3 mm long, 2 mm wide. Lateral sepals obliquely ovate, subacute, 4 mm long, ca. 1.8 mm wide. Petals oblong, subacute, 4 mm long, 1.0-1.1 mm wide. Labellum broadly ovate-elliptic, subacute, shallowly saccate, without internal appendages, 4 mm long, 2 mm wide. Column 1.8-2.0 mm long to tips of brachia, 2.5 mm long to tip of anther cap.

**Distribution:** Solomon Islands.

**Habitat:** Secondary forest, 550 m.

This apparent subspecies of *G. stenopetala* Schltr. differs from the typical entity in having oblong (not ligulate) petals and a shallowly saccate, eglandulate (not deeply saccate, glandiferous) labellum. It is possible that when further collections become available of subspecies *rendovana* that it will shown to be a semipeloric form of *G. stenopetala*.

### **Liparis** L.C. Rich.

Only seven species are recorded from the Solomon Islands and none of these are endemic. Five of these taxa are epiphytic plants whilst two are rainforest floor terrestrials. The taxon reported on below belongs to the terrestrial group and had previously been misidentified as *L. chlorantha* Schltr.

**Liparis pedicellaris** Schltr., Repert. Sp. Nov. Regni Veg., Beih. 1:191, 1911.  
*Cestichis pedicellaris* (Schltr.) M.A.



Clements & D.L. Jones, *Orchadian* 15, 1:39, 2005.

Type: Papua New Guinea – Mt. Gomadjidji, Waria River, 450 m, June 1909, *R. Schlechter* 19913 (Holotype: B, destroyed).

*Liparis pullei* auct. non J.J. Sm.: Lewis & Cribb, *Orch. Vanuatu*:66, 1989.

*Liparis orbiculata* auct. non L.O. Wms.: Kores, *Allertonia* 5, 1:64 p.p., 1989; in A.C. Smith, *Fl. Vitiensis Nova* 5:394 p.p., 1991.

*Liparis chlorantha* auct. non Schltr.: Lewis & Cribb, *Orch. Solomon Isl. & Boug.*:96, 1991.

**Distribution:** Papua New Guinea; Solomon Islands; Vanuatu.

**Specimens examined:** Papua New Guinea – West Sepik Prov., Lumi District, Torricelli Mts., Lipan Pass, 800 m, 6 August 1981, *T.M. Reeve* 4091 (K); Madang Prov., Karkar Island, 610-760 m, 15 January 1968, *C.E. Ridsdale* 33971 (K).

Solomon Islands – Guadalcanal, Gold Ridge, on track to Mt. Chaunopaho, 1000 m, 26 October 1984, *P. Cribb, G.C. Dennis & J. Campbell* 5096 (K); Gold Ridge, 650 m, cult. in Honiara, 12 February 1994, *G.C. Dennis s.n.* (K).

Vanuatu – Aneityum, behind Anelghawhat, track to Nwutia River, 100 m, 14 November 1989, *B.A. Lewis & J. McDonagh* 195 (K); *sine loc.*, 210 m, 19 February 1990, *J. Wheatley* 804 (K). Tanna, June 1978, *P. Morat* 6034 (P n.v., photocopy/sketch K). Vanua Lava, Toulap Mt., above Sola, 540 m, 13 July 1989, *J. Wheatley* 491 (K); Mt. Wensaoro, 400 m, 26 October 1989, *B.A. Lewis & J. Mc Donagh* 119 (K). Examination of material identified as

*L. chlorantha* by Lewis & Cribb (1991) shows the specimens cited to represent *L. pedicellaris*. The latter species was to be expected in the Solomons since it was also recorded (Yukawa & Hashimoto 1989) from Vanuatu where it had been confused with *L. orbiculata* L.O. Wms. and *L. pullei* J.J. Sm. These two entities have leaves articulated with the sheath whilst *L. pedicellaris* does not, although the flowers are superficially similar. Furthermore *L. pullei* is still only known from Indonesian Papua and *L. orbiculata* is so far only found on Makira in the Solomons and Fiji (it is not yet found in Vanuatu).

Studies of the specimens cited above show the labellum to be slightly variable in shape and size.

### Acknowledgements.

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### Literature Cited.

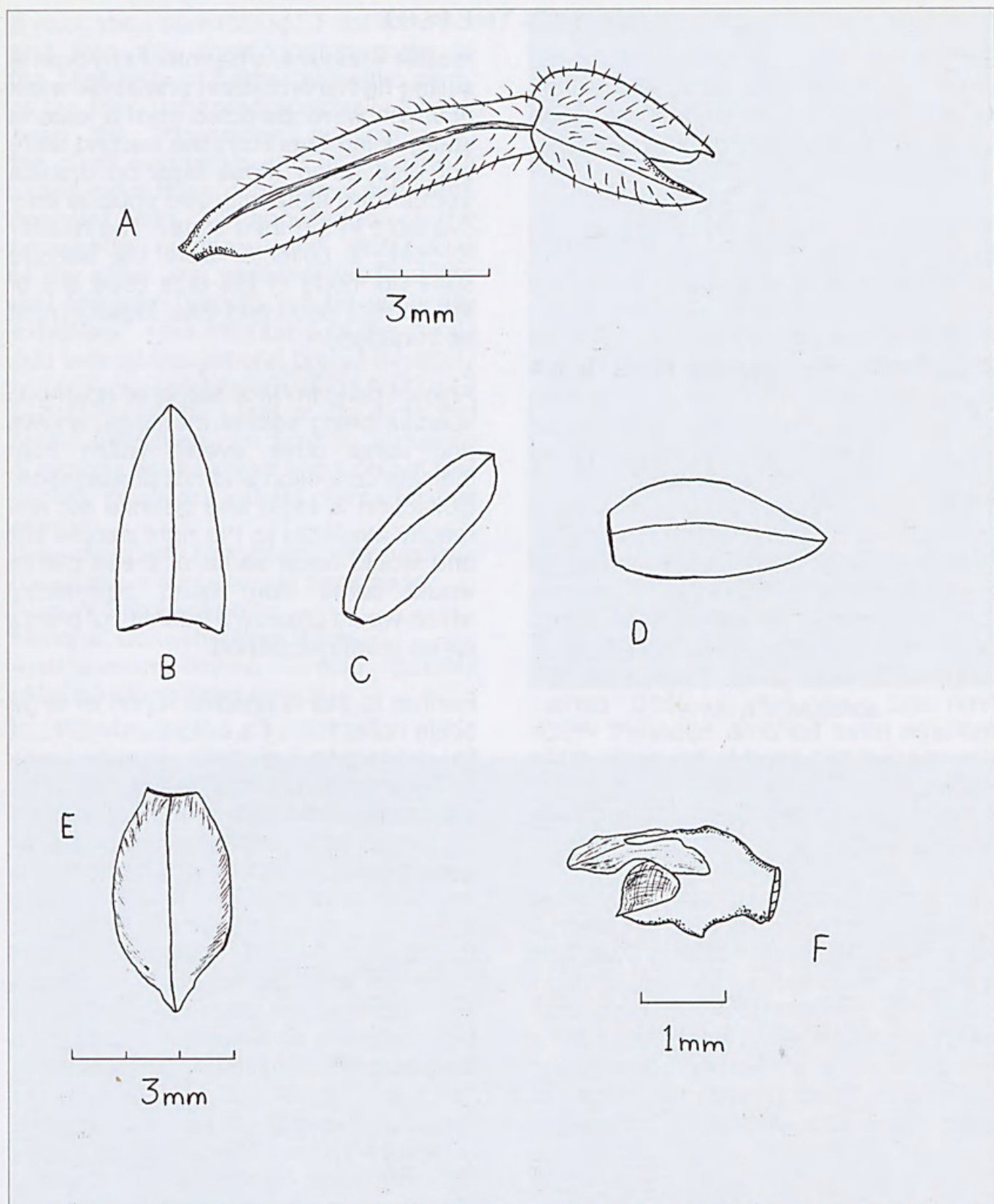
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***Goodyera stenopetala*** Schltr. subsp. ***rendovana*** -- A. flower; B. Dorsal sepal; C. petal; D. lateral sepal; E. labellum. A, B-E and F to respective scales. Drawn from holotype..



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