

Two New Species of *Earina*, Orchidaceae from Vanuatu

by

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橋本 保*: バヌアツ産 *Earina* 属 (ラン科) の 2 新種

The genus *Earina* Lindl. consists of less than 10 species, in New Caledonia to Tahiti and to New Zealand. The single species reported from Vanuatu (Lewis and Cribb 1989) is *E. valida* Reichb. f. The present new species are collected in western slope of Mt. Tabwemasana, Espiritu Santo.

Earina sigmoidea T. Hashimoto, sp. nov. (Figs. 1~2).

Difert a *E. valida* pseudobulbi non evoluto; labello integro et sigmoideol; ovario profunde sulcato.

Plant epiphytic, to ca. 60 cm high. Rhizome much abbreviated. Pseudobulb obscure or not developed. Leaves distichous, subcoriaceous, articulate; leaf-base equitant, persistent, 6~8 cm long; blade lanceolate-linear, unequally and obtusely bilobed at the apex, to 60 cm long, 0.7~2 cm broad. Inflorescence terminal, erect, 40~60 cm high; raceme congested or somewhat congested, 6~11 cm long, forming oblong to narrowly plane, with distichous short branches; each branch 2~5 mm long, bearing a bract, 4 (~5) flowered; bract narrowly triangular, becomes bristles in flowering after the mesophyll crumbling, ca. 7 mm long. Bracteoles imbricate, transversely ovate-conduplicate, ca. 2 mm long. Flowers white, resupinate, 4~5 mm across in natural position; dorsal sepal oblong, obtusely and minutely acute at the apex, 5-nerved, ca. 4.5 mm long, ca. 2 mm broad; lateral sepals obliquely ovate-oblong, slightly larger and broader than the dorsal sepal, subacute with an acumen at the apex, 5-nerved; petals obliquely elliptic, obtuse, slightly narrower than the dorsal sepal, 3-nerved; lip oblong when spread out, entire, obtuse, sigmoid from side, somewhat constricted medially, canaliculate at the posterior half, saccate at the base, 7-nerved, 5.3 mm long, 2.5 mm broad when spread out; column semi-terete with an apical pair of obtusely triangular wings, ca. 5 mm long; ovary cylindrical with prominent 6-grooves, 6~7 mm long.

ESPIRITU SANTO. Palitaliefu near Nokovula, ca. 1200 m alt., Nov. 6, 1996, coll. by T. Hashimoto (No. 111) - holotype in TNS.

This new species is related to *E. valida* Reichb. f., originally described from New Caledonia, but differs from it by its undeveloped pseudobulb, entire lip and deeply grooved ovary. The description of the Fijian *E. valida* (Kores 1991) is suspicious that including this new species by its entire lip. Although *E. valida* from Vanuatu was described as "lip trilobed" (Lewis and Cribb 1989), there to be needed to reappraise, because the specific characters are usually difficult to examine on dried specimens.

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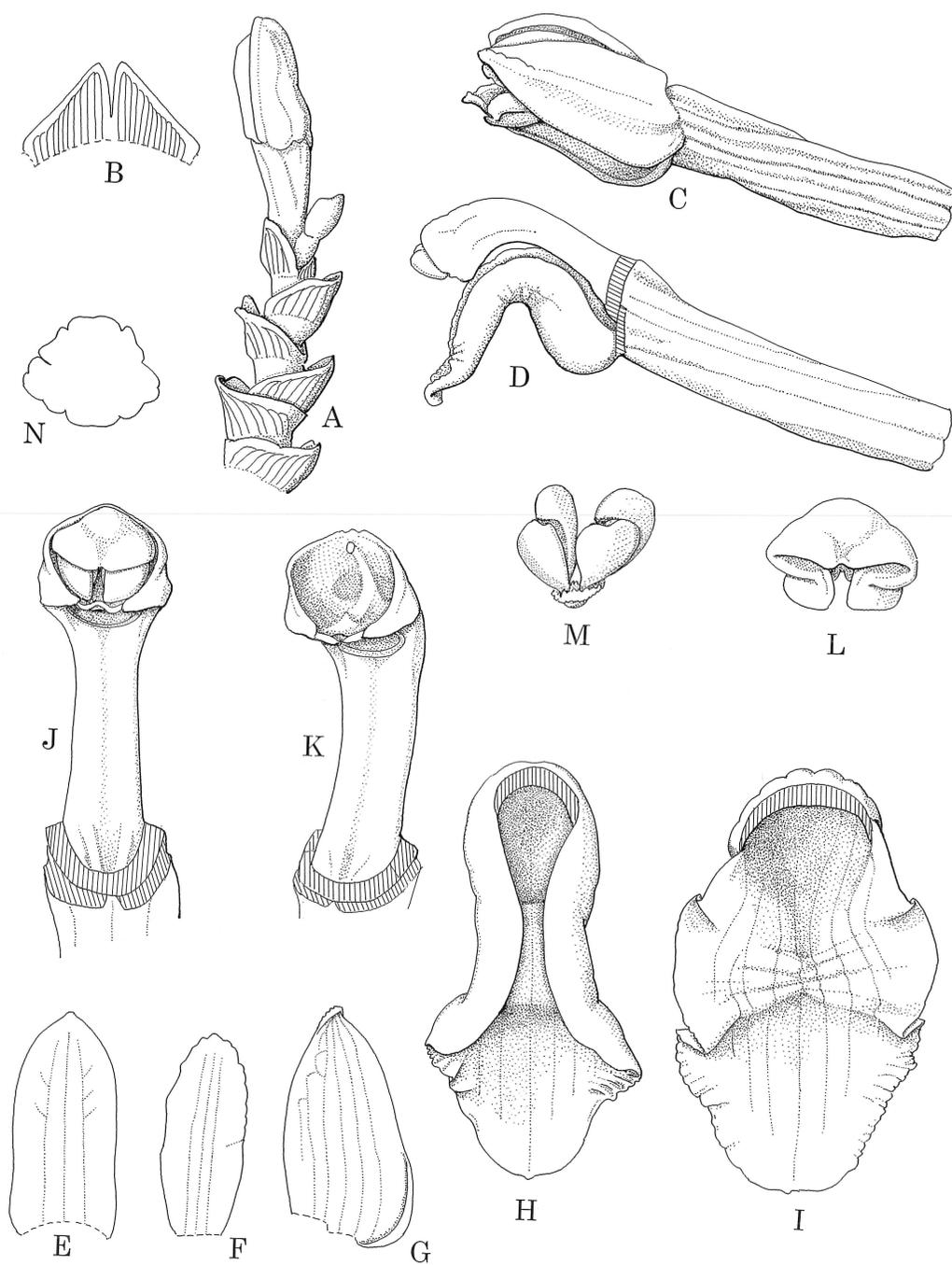


Fig. 1. *Earina sigmoidea*.

A, flower from below, $\times 6$. B, flower from side, $\times 7$. C, flower from side, sepals and petals removed, $\times 6$. D, dorsal sepal, spread out, $\times 7$. E, petal, spread out, $\times 7$. F, lateral sepal, spread out, $\times 7$. G, lip from above, epichile spread out, $\times 12$. H, lip, spread out, $\times 12$. I, column, ventral view, $\times 9$. J, column from side, $\times 9$. K, cross section of ovary, \times ca. 10.



Fig. 2. *Earina sigmoidea* in habitat.



Fig. 3. *Earina santoensis*, plant on the tree in habitat.

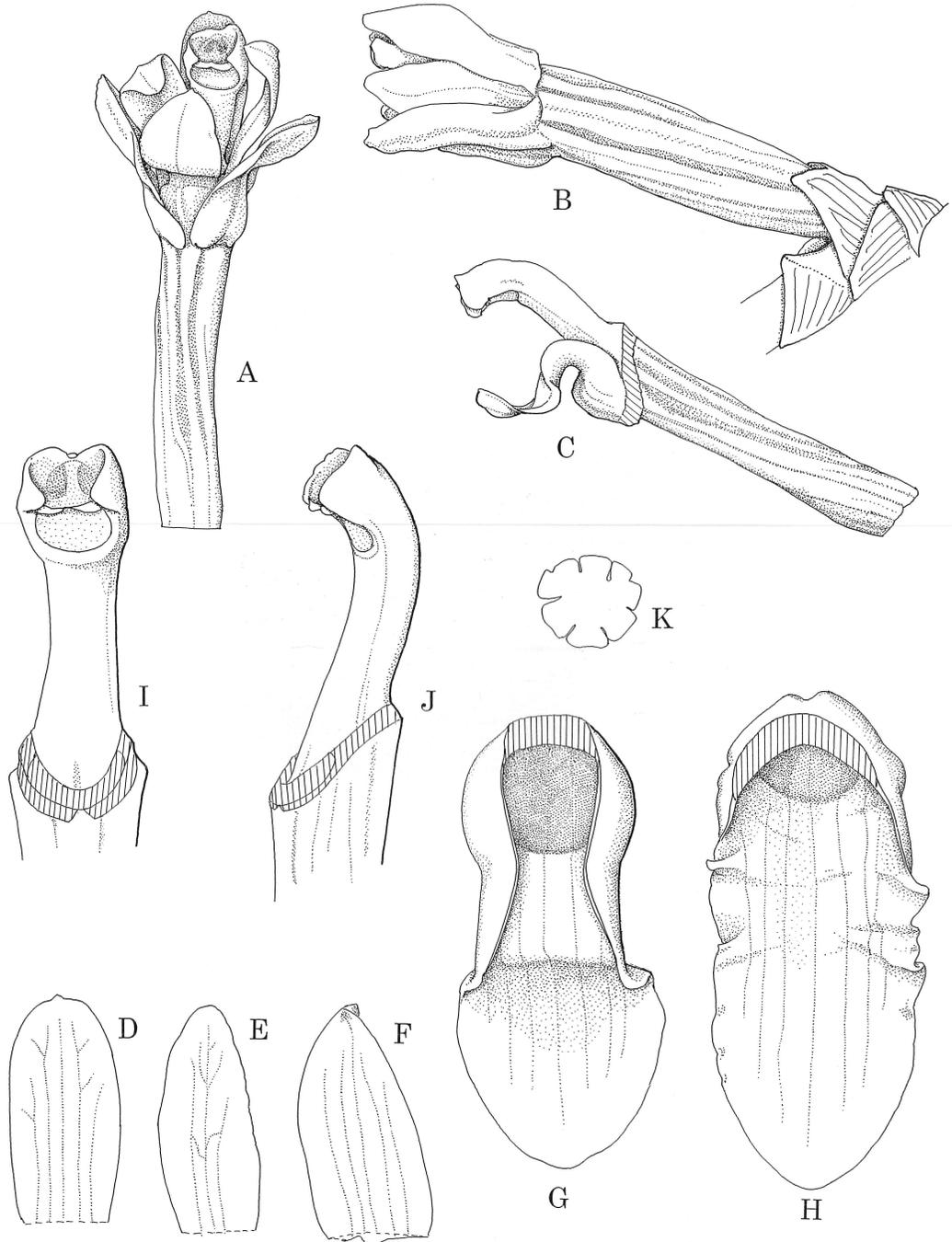


Fig. 4. *Earina santoensis*.

A, branch of inflorescence, $\times 5$. B, brateole, expanded, tip cracked, $\times 5$. C, flower from side, $\times 7$. D, flower from side, sepals and petals removed, $\times 7$. E, dorsal sepal, spread out, $\times 7$. F, petal, spread out, $\times 7$. G, lateral sepal, spread out, $\times 7$. H, lip from above, natural position, $\times 12$. I, lip, spread out, $\times 12$. J, column, ventral view, $\times 14$. K, column, quarter view, $\times 14$. L, anther cap, $\times 16$. M, pollinia, $\times 16$. N, cross section of ovary, \times ca. 10.

Earina santoensis T. Hashimoto, sp. Nov. (Figs. 3~4).

Differto a *E. sigmoidea* inflorescentis anguste triangulari; floribus multioribus et minoribus; sepalo dorsali trinervi; positione labelli brevioris; ovario non profunde sulcato.

Plant epiphytic, to 55 cm high. Rhizome much abbreviated. Pseudobulb small, obscure, concealed by leaf-bases. Leaves distichous, subcoriaceous, articulate; leaf-base equitant, persistent, 3.5~6 cm long; blade lanceolate-linear, unequally and obtusely bilobed at the apex, to 38 cm long, 0.8~1.5 cm broad. Inflorescence terminal, erect, 28~55 cm high; raceme with 9~47 distichous branches, forming a narrowly triangular plane; each branch 1~8 mm long, bearing a bract, 4~8 flowered; bract becomes bristles in flowering after mesophyll crumbling, 2~8 mm long. Bracteoles imbricate, transversely triangular-conduplicate, ca. 2 mm long. Flowers white, resupinate, ca. 3.5 mm long in natural position; dorsal sepal oblong, subacute, 3-nerved, ca. 4.3 mm long, 2 mm broad; lateral sepals obliquely ovate, subacute with an acumen at the apex, 5-nerved, ca. 4.6 mm long, 2.5 mm broad; petals elliptic, obtuse, minutely and bluntly erose at the margins of anterior half, ca. 3.7 mm long, 1.5 mm broad, 3-nerved; lip ovate when expanded, medially constricted in natural position, deflexed at the anterior 1/3 with minutely undulate margins, canaliculate at the posterior 2/3, obscurely saccate at the base, 7-nerved, ca. 4.6 mm long, ca. 3 mm broad when spread out; column semi-terete, decurved above with an apical pair of triangular wings, ca. 3.5 mm long; ovary cylindrical with shallow grooves, 1~8 mm long.

This entity is apparently related to *E. sigmoidea* and *E. valida*, but differs from them by having a narrowly triangular inflorescence, *i.e.*, branches are gradually shortening upwards, smaller and more flowers, 3-nerved petals and the shorter epichile of lip.

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摘 要

バヌアツ共和国（ニューヘブリデス諸島）のエスピリツ・サント島にある同国最高峰タブエマサナ山の中腹、海拔1000~2000mの雲霧林帯で採集した *Earina* 属の着生種2種を新種として発表する。同属の植物は南太平洋地域に少数種が知られており、バヌアツには *E. valida* だけが知られていた。エスピリツ・サント島からも記載されているが、本文にも記したように、他の地域の記録についても再検討の必要があると思われる。

References

- Kores, P. K., 1991. Orchidaceae, 322~575. In: Smith, A. C., Flora vitiensis nova 5, Nat. Trop. Bot. Gard., Hawaii.
Lewis, B. and P. Cribb, 1989. Orchids of Vanuatu. 164 pp. + 8 pls. Roy. Bot. Gard., Kew.