

JOURNAL of the ADELAIDE BOTANIC GARDENS

AN OPEN ACCESS JOURNAL FOR AUSTRALIAN SYSTEMATIC BOTANY

flora.sa.gov.au/jabg

Published by the

STATE HERBARIUM OF SOUTH AUSTRALIA

on behalf of the

BOARD OF THE BOTANIC GARDENS AND STATE HERBARIUM

© Board of the Botanic Gardens and State Herbarium,
Adelaide, South Australia

© Department of Environment, Water and Natural Resources,
Government of South Australia

All rights reserved

State Herbarium of South Australia
PO Box 2732
Kent Town SA 5071
Australia



Board of the
Botanic Gardens and
State Herbarium



PLANT PORTRAITS

From time to time as suitable material becomes available for illustration, hitherto poorly figured, or poorly documented species will be featured to assist identification, or to provide records in cases where taxa may be threatened with extinction. The descriptions will be based on living material which should be a help where herbarium specimens have formed the basis for description of the type. The following orchids have, for example, had only their flowers illustrated in the past.

This series may also provide an opportunity for the skills of Australian and other botanical artists to be brought together for their own intrinsic value, and to allow comparison and a record of different styles of execution.

The editors will be glad to receive line drawings of appropriate quality and text arranged in the following format, particularly from workers specialising in groups for which there is a poor iconography or poor documentation. The formal description and illustration of new species and notable cultivars may also be submitted, as may comparative drawings and descriptions which assist with the identification of critical botanical and horticultural groups of vascular plants.

1. *Bulbophyllum formosum* Schltr. (Orchidaceae)

Bulbophyllum formosum Schltr., *Repert. Spec. Nov. Regni Veg. Beih.*, Bd. 1, Heft 9, 712 (1912); ic. *Repert. Spec. Nov. Regni Veg. Beih.*, Bd. 21, Figuren-Atlas zu den Orchidaceen von Deutsch-Neu-Guinea, Tafel ccxxxi, Nr. 878 (1923-28), flower with dissection only.

Flowered Adelaide Botanic Garden on April 7, 1976, accession number 202-73, collected from Kassam Pass, Morobe Province, Papua New Guinea by collector for the National Herbarium and Botanic Garden, Papua New Guinea, alt. c. 1000 m. Herbarium voucher AD Herb. Pl. Cult. 6522.

Plant c. 18 cm tall, rhizome short with filiform roots, *pseudobulbs* conical, c. 3 cm long and 1 cm diameter at widest part, with two dark brown papery sheaths, single leaved, *leaves* erect but also recurving, c. 13 cm long and 2-2.5 cm wide at widest part, oblanceolate-ligulate, shortly apiculate, cuneate into petiole, petiole c. 1.5 cm long, channelled above, paler green than lamina, lamina with shallowly grooved midrib above and three obscure veins on either side, glabrous, coriaceous, deep green, beneath paler green and minutely mottled grey, only midrib conspicuous: *scapes* basal, erect, slender, single flowered, sheaths two, each about 7 cm long, obscurely purple mottled above, bracts linear-lanceolate, green tipped, free part c. 5 mm long: *flowers* erect in bud, buds acute, c. 2 mm diameter and 2.5 cm long, obscurely veined purple, opening erect, showy, *outer tepals* first reflexed later directed forward, lanceolate, long acuminate, *laterals* c. 6.2 cm long and c. 5 mm wide at base with inside three unequal claret stripes on white ground, tips creamy white, glossy, glabrous, outside white with claret suffusion of interior stripes, *dorsal tepal* c. 6.2 cm long and c. 4 mm wide at base with inside three equal claret stripes on white ground, tip creamy white, *inner tepals* erect, *laterals* c. 1 mm long, inconspicuous, transparent with claret mark on one lobule, falcate, acuminate cusped, *lip* c. 6 cm long, with two auricles at junction with column and conspicuously convex above, with two obscure carinae below, lip lanceolate, minutely and densely claret papillose in irregular pattern on white ground, suffused yellow above, tip long acuminate and creamy white, *column* slender, transparent, curved, with four acuminate tips all edged claret, and a ventral suture, *pollinia* not seen, *ovary* slender, pale green below, suffused purple at junction with tepals, c. 3 cm long, thickened above, *fruits* not seen.

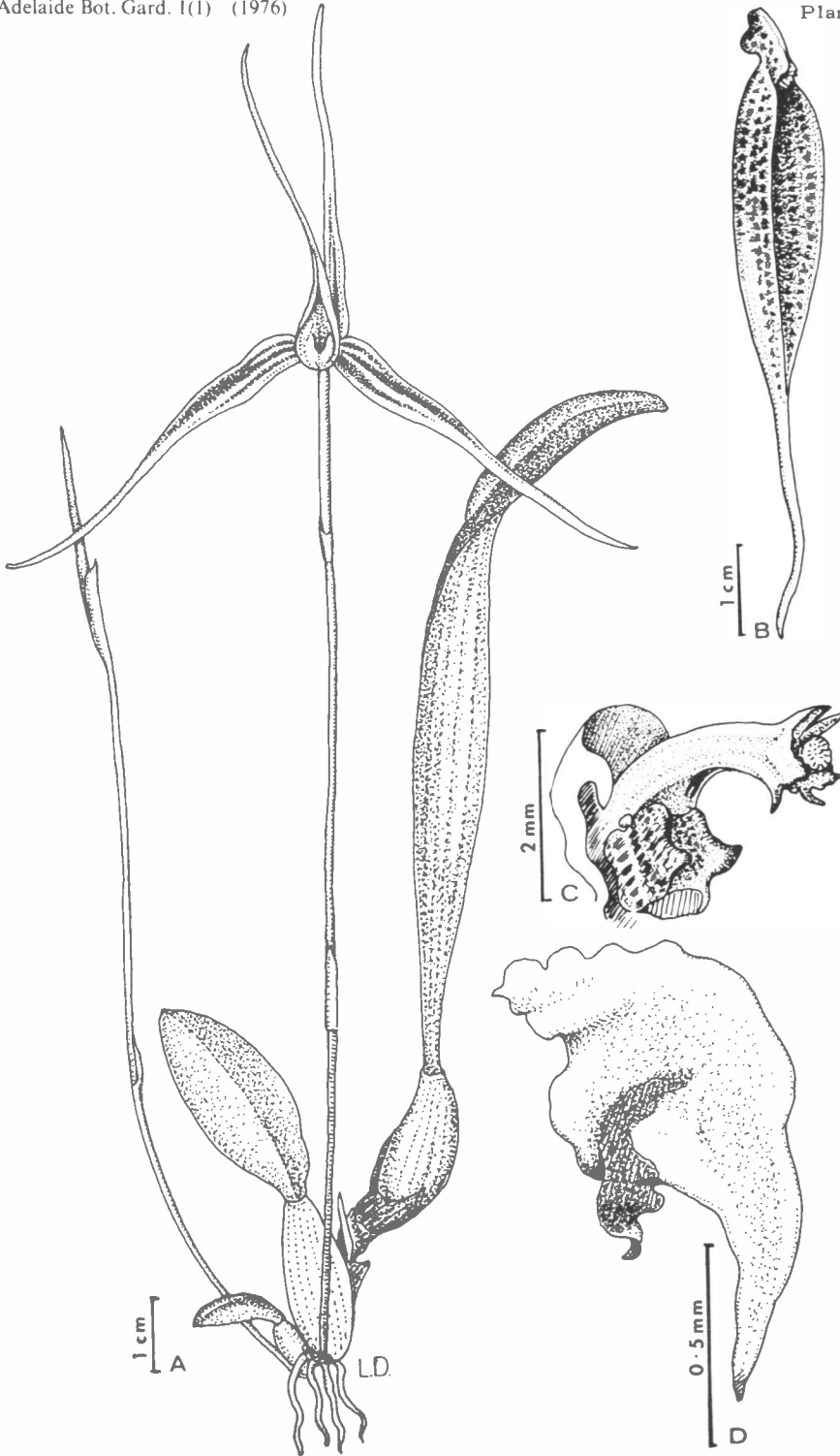
The plant in cultivation agrees well with the type description and with the published illustration of a flower and its parts. Allied species which have been illustrated include *B. pulchrum* Schltr. (Tafel ccxxxi nr. 876), and *B. nitidum* Schltr. (nr. 877), both in the same work, and both with differently shaped inner tepals and floral dimensions. Also related is *B. quadricaudatum* J.J.Sm., illustrated in Smith (1911), but this species has long acuminate inner lateral tepals.

The plant of *B. formosum* is grown in pine bark in a pot in an orchid house, and makes a small but attractive subject with its velvety, claret-mottled lip and claret striped outer lateral tepals.

Smith, J. J. (1911). Resultats de l'expédition scientifique Neerlandaisé a la Nouvelle-Guinee en 1907 & 1909. *Nova Guinea* 8(1): t. 104.

B. Morley

a. flowering plant, b. lip, c. column, d. inner lateral tepal.



2. *Diplocaulobium dichrotropis* (Schltr.) A. D. Hawkes (Orchidaceae)
Diplocaulobium dichrotropis (Schltr.) A. D. Hawkes, *Lloydia*, 20:128 (1957).

Basionym: *Dendrobium dichroptropis* Schltr. *Repert. Spec. Nov. Regni Veg. Beih.*, Bd. 1, Heft 6, 462 (1912); *ic. Repert. Spec. Nov. Regni Veg. Beih.*, Bd. 21, Figuren-Atlas zu den Orchidaceen von Deutsch-Neu-Guinea, Tafel clv, Nr. 582, (1923-28), flower with dissection only.

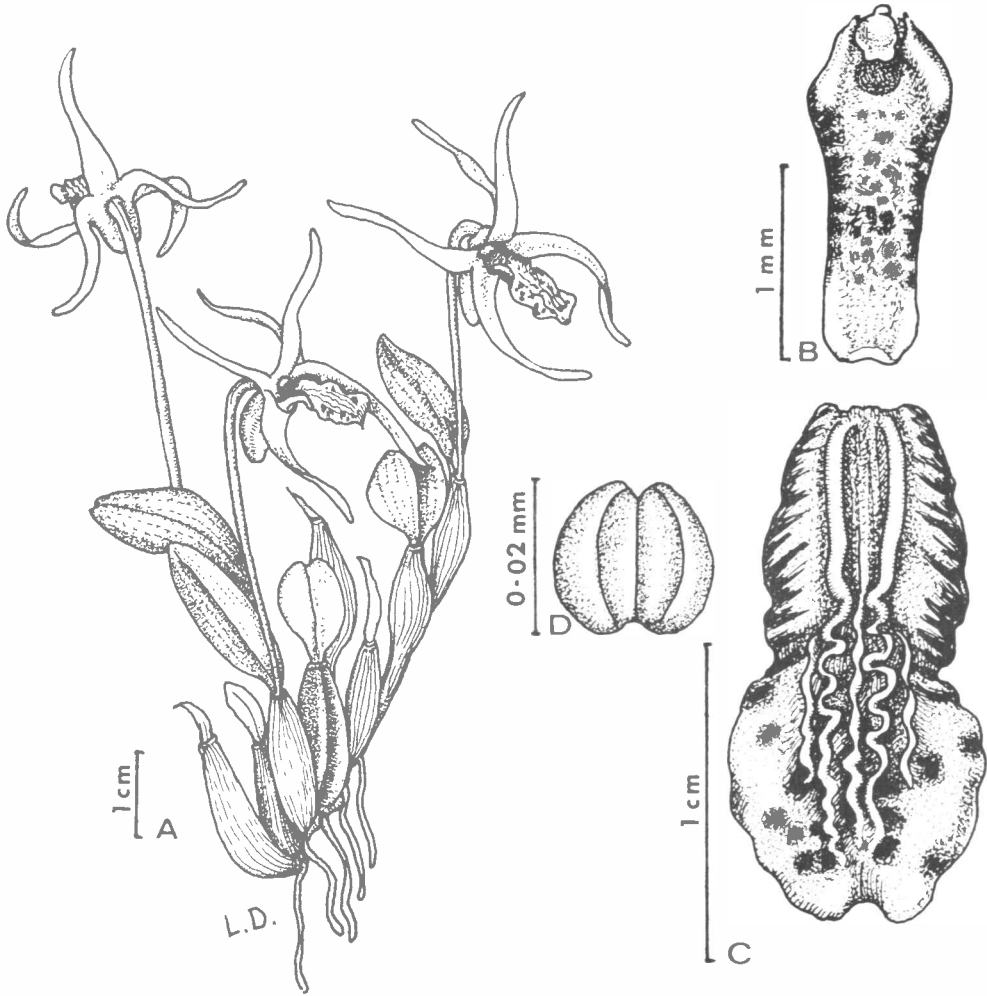
Flowered Adelaide Botanic Garden on April 15, 1976, accession number 317-69, collected from Daulo Pass, c. 2800 m, Papua New Guinea by collector of the Department of Forests, Lae. Herbarium voucher AD Herb. Pl. Cult. 6562.

Plant c. 9 cm tall, rhizome spreading and ascending with filiform roots, rhizome c. 1 mm diameter, *pseudobulbs* quadrangular, somewhat winged, c. 1.7 cm long and 5 mm wide at widest part, invested in transparent papery sheath with conspicuous grey nerves, single leaved, *leaves* erect, obliquely twisted, c. 2.6 cm long and 1 cm wide at widest part, ovate, tip notched, notch c. 0.75 mm deep, leaf base cuneate, sessile, lamina with grooved midrib above and two obscure pale grey lateral veins on either side, glabrous, coriaceous, deep green, below paler green, minutely mottled with stomates, midrib noticeable beneath with three less conspicuous darker green lateral veins on either side: *scape* erect, terminal, c. 1 mm diameter, single flowered, pale green with obscure purple mottling above, sheaths two, c. 9 mm long each, transparent and papery with netted veins, egg yellow towards base, lanceolate: *flowers* erect, showy, *outer tepals* pointing forward, falcate, lanceolate and acuminate, *laterals* c. 2 cm long and c. 5 mm wide at base, creamy white with once twisted primrose-yellow tips, glabrous, *mentum* c. 7 mm long and 4 mm wide, creamy white flushed with purple, *dorsal tepal* erect, sigmoid in posture, c. 2 cm long and 3.5 mm wide at base, colour as laterals, *inner tepals* reflexed, *laterals* c. 1.8 cm long and c. 1.5 mm wide at base, colour as outer tepals, linear, acuminate, *lip* c. 1.4 cm long, ligulate, with two straight and prominent basal cream carinae c. 5 mm long, then continuing for 7 mm as two sinuous yellow lamellae with three more sinuous yellow lamellae also appearing towards the tip, lamellae not confluent with margin, lip apex acute, reflexed, ground colour of lip cream, spotted purple at apex, edged purple within mentum, *column* robust, clavate, curving with 3 obtuse tips, cream with purple blotches at base, greenish yellow at tip, *pollinia* four, yellow, *ovary* slender and bent at 90 degrees at junction with tepals, minutely ridged where bent and ridges purple, *scape* c. 4 cm long including ovary, *fruits* not seen.

The plant in cultivation is allied to *D. dichrotropis* but Schlechter gives larger dimensions for vegetative parts and smaller dimensions for outer tepals; the lip is about the same length in the cultivated plant as in the type description and also has the five apical lamellae on the lip. Such differences may be due to cultivation. These lamellae distinguish the taxon from the related *Diplocaulobium tropidophorum* (Schltr.) A. D. Hawkes (Tafel clv, nr. 580), and *D. jadunae* (Schltr.) A. D. Hawkes (nr. 583), in the same work, both of which have three lamellae on the apical part of the lip. *Diplocaulobium minjemense* (Schltr.) A. D. Hawkes (Tafel clvi, nr. 584) differs from *D. dichrotropis* in having two lateral lobes on either side midway down the lip, but both taxa have five lamellae on the lip. The Australian *D. masonii* (Rupp) Dockr. is also allied to *D. dichrotropis* but has three instead of five lamellae on the apical part of the lip.

The plant at Adelaide makes a small but attractive subject with a spreading habit, flowering synchronously and grown in a pot in pine bark over a water-tank in an orchid house.

B. Morley



a. flowering plant, b. column, c. lip, d. pollinia.

3. *Ceratostylis acutifolia* Schltr. (Orchidaceae)

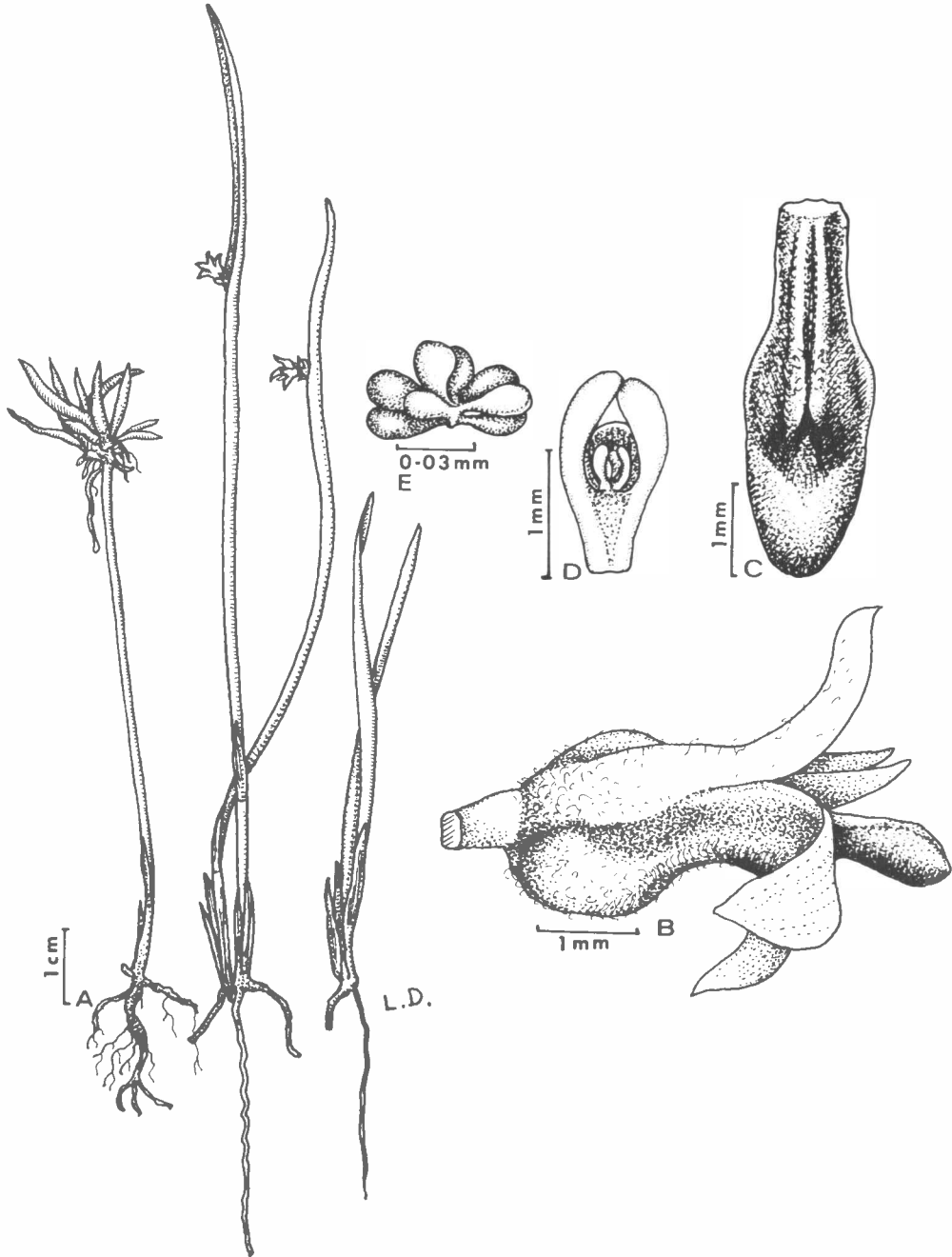
Ceratostylis acutifolia Schltr. *Repert. Spec. Nov. Regni Veg. Beih.*, Bd. 1, Heft 4, 254 (1912); ic. *Repert. Spec. Nov. Regni Veg. Beih.*, Bd. 21, Figuren-Atlas zu den Orchidaceen von Deutsch-Neu-Guinea, Tafel lxxxxiii, nr. 344 (1923-28), flower with dissection only.

Flowered Adelaide Botanic Garden on April 29, 1976, accession number 202-73, collected from Kassam Pass, Morobe Province, Papua New Guinea by collector for the National Herbarium and Botanic Garden, Papua New Guinea, alt. c. 1000 m. Herbarium voucher AD Herb. Pl. Cult. 6470.

Plant c. 16 cm tall, caespitose, rhizome short and ascending, roots filiform, *pseudobulbs* slender, culm-like and terete, c. 11 cm long and 2 mm diameter at widest part, with several dark brown papery sheaths c. 1 cm long, single leaved, *leaves* erect, to 4 cm long and 3 mm wide at widest part, linear-lanceolate, acute, with 0.5 mm wide basal annulus, channelled above, veins not evident, rounded beneath, glabrous, coriaceous, greyish-green: *flowers* in sessile several-flowered heads, opening successively, terminal on pseudobulb, bracts ovate, apiculate, one green bract at base but brown nearer tip, c. 3 mm long, other bracts chaffy and c. 1 mm long, flower buds c. 2 mm long and 1 mm wide, dull pink, opening erect, inconspicuous, c. 4 mm long, *outer lateral tepals* reflexed, *dorsal* directed forward, all ovate-lanceolate, c. 3.5 mm long and 1 mm wide, dull pink, *inner tepals* erect, *laterals* c. 3 mm long and 0.5 mm wide, small, transparent, *lip* narrowed at base, ligulate in profile, especially fleshy at tip, dull pink, paler at tip, c. 4 mm long, *mentum* glabrous or with minute adpressed hairs like tepals, c. 1.5 mm long, *column* 1.5 mm long, white, with two oblong processes at apex, glabrous, anther white, reniform, *pollinia* eight, yellow, shortly clavate, *ovary* cylindrical, c. 1 mm long, green, sheathed by two pink bracts c. 2 mm long with apiculate tips, *fruit* not seen.

The type description of this taxon states that the flowers "sind rotbraun mit vorn gelbem Labellum", and also gives floral dimensions which are larger by about 50% than those of the cultivated plants. However, the shape of floral parts, mentum and other characters seem to relate to *C. acutifolia*. Not mentioned by Schlechter is the tendency for the old inflorescence clusters to proliferate new plantlets with roots, affording a means of vegetative propagation for this plant with a remarkably cyperaceous appearance when not in flower. The proliferation may be stimulated by the humidity of our orchid house. It has more botanical interest than beauty.

B. Morley



a. flowering and proliferating plants, b. flower, c. lip, d. column from beneath showing pollinia in situ, e. pollinia.