

NEW SPECIES OF *DRESSLERIA* (ORCHIDACEAE: CATASETINAE) FROM CENTRAL AND SOUTH AMERICA¹

HAROLD G. HILLS

DNA Sequencing Facility, Iowa State University, Ames, Iowa 50011-3260, USA

ABSTRACT: Three new species of *Dressleria* Dodson (Orchidaceae: Catasetinae) from South and Central America are described: *D. allenii* H.Hills, *D. kalbreyeri* H.Hills, and *D. kerryae* H.Hills.

THE GENUS *Dressleria* was established by Dodson (1975) for a group of species previously included in a broadly defined *Catasetum* L.C.Rich. *Dressleria* is distinguished from *Catasetum* by having consistently bisexual flowers, a stipe not under pressure, persistent leaves, and large inflorescence bracts. *Dressleria* differs from *Clowesia* Lindl., a second segregate from *Catasetum* with bisexual flowers, by having fleshy flowers with the labelum adnate to the column. Plants of *Dressleria* are characteristically pale green and bear white to greenish flowers noted for their strong fragrances.

Critical studies reveal additional species based on floral morphology and distinct in their floral fragrances from the others. Four species have been described recently: *D. severiniana* H.Hills from Panama (Hills, 1993), *D. aurorae* H.Hills & D.E.Benn., *D. bennettii* H.Hills & Christenson from Peru (Bennett and Christenson, 1995), and *D. fragrans* Dodson from Ecuador (Dodson, 1998). In establishing *Dressleria* (Dodson, 1973), an illustration was published as *D. helleri* that does not agree with the type specimen of that species. To clarify that illustration and several others existing illustrations, three new species of *Dressleria* are described here.

***Dressleria allenii* H.Hills, sp. nov.** TYPE: PANAMA: without specific locality, N. H. Wil-

liams field collection, ex hort Selby Gardens living accession 76-56-19, 18 Sept. 1978, *J. Ackerman* 1336 (holotype: SEL!). Fig. 1A–B.

Flores *Dressleria eburnea similis*, sed parvior et petaliis non valde reflexis.

Epiphytes with basal, thickly vermiform roots. **Pseudobulbs** fusiform-cylindric, 5–10 cm tall, 2–3 cm wide, fleshy, concealed by persistent leaf bases. **Leaves** oblong-lanceolate, acute, persistent, alternate, distichous, prominently veined abaxially, to 35 cm × 5 cm. **Inflorescence** a basal, arching, loosely flowered raceme to 25 cm long with prominent, inflated bracts appearing when the plant is in full leaf. **Peduncle** to 12 cm long. **Flowers** white to greenish white, rigid-fleshy, fragrant, similar to those of *D. eburnea* but smaller. Sepals reflexed, petals spreading. **Sepals** subsimilar, linear-lanceolate to elliptic, 18 mm long, 9 mm wide. **Petals** elliptic-ovate, lightly concave, 15 mm long, 11 mm wide. **Lip** unlobed, saccate, basally adnate to the column, rounded at the apex, not beaked, 1.7 cm long, 1.1 cm wide, the opening to the sac cordate, callus thin, not prominent. **Column** small, rounded, 7 mm long, 6 mm wide at the base. **Pollinia** two, borne on a common stipe and viscidium. **Pedicel** 2.6–3.0 cm long. **Capsule** not seen.

ILLUSTRATIONS: Allen (1949, 1953) as *Catasetum eburneum*; Teuscher (1972) as *Catasetum dilectum* var. *suave*.

DISTRIBUTION: Endemic to Panama.

ETYMOLOGY: Named in honor of Paul H. Allen (1911–1963), co-author of the *Orchidaceae* for the *Flora of Panama*, who had a long-time interest in Catasetinae.

FRAGRANCE: mainly eugenol and methyl salicylate.

¹ I wish to thank the curators of CA, F, FLAS, K, MO, NCU, NY, and SEL for loans of specimens. In addition, facilities were graciously provided during visits to AMES, MO, NY, SEL, and US. The illustrations for *Dressleria allenii* and *D. kerryae* were prepared by Omar Rocha G. Valuable comments on an early draft were made by Eric Christenson. I give special thanks to Gustavo Romero for bringing the Kalbreyer specimen that was on loan from W to my attention and for permission to reproduce the Dunsterville illustration for *D. kalbreyeri*.

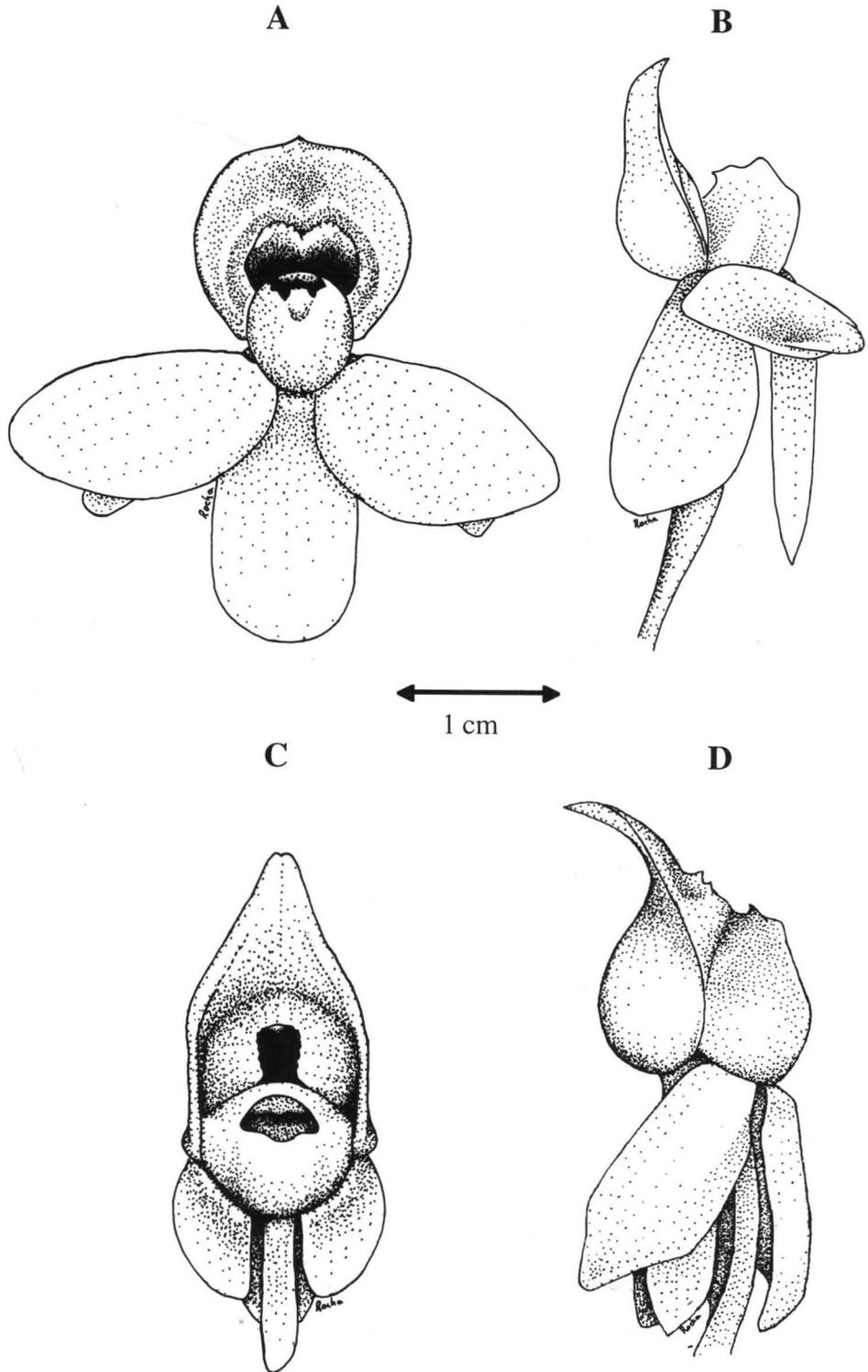


Fig. 1. **A.** *Dressleria allenii* H.Hills (drawn from Hills 87183), front view. **B.** *D. allenii*, side view. **C.** *D. kerryae* H.Hills (drawn from Hills 68101), front view. **D.** *D. kerryae*, side view. Drawings by Omar Rocha G.

PARATYPES: PANAMA: Province of Coclé, Cerro Campana, *Allen 4559* (AMES spirit P2722); without specific locality, *ex hort. Teuscher s.n.* (AMES spirit P3258). All of the following collections are from the N. H. Williams' field collection of 1976, *ex hort.* Selby Gardens living accession SEL 76-56-19, the same plant as the holotype: Aug 1985, *Christenson s.n.* (SEL); 13 Aug. 1987, *Hills 87183* (Hills spirit); 15 Aug. 1989, *Hills 89031* (Hills spirit); 31 Aug. 1990, *Hills 90024* (K spirit), 14 Sept. 1991, *Hills 91023* (NCU); 30 July 1991, *Ingram 1082* (NCU); 19 Aug. 1994, *Whitten 94068* (FLAS).

Dressleria allenii is most similar to *D. eburnea* (Rolfe) Dodson. Allen (1949) correctly noted that the flowers agreed in nearly every detail with the description of *Catasetum eburneum* except they were smaller. A reliable field character is that the sepals and petals of *D. eburnea* reflex fully along the ovary. Only the sepals of *D. allenii* reflex against the pedicel, whereas the petals are in the same plane as the labellum. This can be clearly seen in the Teuscher (1972) photograph. The Allen (1949; 1953) illustration appears to have been drawn from a partially open flower and does not show reflexed sepals.

***Dressleria kalbreyeri* H.Hills, sp. nov.** TYPE: COLOMBIA: Norte de Santander, vicinity of Ocaña, Jan. 1878, *Kalbreyer 504* (holotype: W!; isotype: AMES!). Fig. 2.

Sepala et petala valde reflexa. Labellum cras-sum, carnosum, saccatum, circa 1.6 cm longum et 1.1 cm latum, margines cavitatis elevati leviter. Ostium saccili semioccultum, rima similis. Columna crassissima, circa 6 mm longa et lata. Labellii basi tertius columnae adnatus.

Epiphytes with basal, thickly vermiform roots. **Pseudobulbs** fusiform-cylindric, 6–12 cm tall, 2–3 cm wide, fleshy, concealed by persistent leaf bases. **Leaves** oblong-lanceolate, acute, persistent, alternate, distichous, prominently veined abaxially to 45 cm × 6 cm. **Inflorescence** a basal, arching raceme to 30 cm long, appearing when the plant is in full leaf. **Peduncle** to 12 cm long. **Flowers** creamy white, nonresupinate. Sepals and petals strongly reflexed along the pedicel. **Sepals** 18 mm long, 5.5 mm wide. **Petals** 17 mm long, 10 mm wide. **Lip** longer than broad, 1.5 cm × 1.0 cm, top half of the lip flat or slightly reflexed, base of the lip saccate with opening to the sac a slit partially hidden behind the column, slit 3.5

mm wide at the base of column, 7 mm wide at the top, 2 mm high; callus not well defined, a low mound; lip adnate to the bottom third of the column. **Column** 6 mm long. **Pollinia** two, borne on a common stipe and viscidium. **Pedicel** 2.5–3.0 cm long. **Capsule** not seen.

ILLUSTRATIONS: Dunsterville and Garay (1976, 1979) as *Dressleria dilecta* and Garay (1969) as *Catasetum dilectum*.

DISTRIBUTION: Eastern Colombia and western Venezuela.

FRAGRANCE: Unknown. No living material has been available for study.

ETYMOLOGY: The species is named for the collector, Wilhelm (Guillermo) Kalbreyer (1847–1912).

PARATYPES: COLOMBIA: Dept. of Meta: vicinity of Villa Vicencio, *G. Escobar 496* (AMES); same data, *G. Escobar 532* (AMES). These specimens represent single flowers that were sent to AMES for identification.

Dressleria kalbreyeri is distinctive and unlikely to be confused with other species. The extremely narrow transverse opening to the sac, partially concealed by the column, is unique in the genus.

The account from *Hortus Veitchii* (Veitch, 1906) stated that Kalbreyer left England in October 1877, collected in the eastern cordillera of Colombia near Ocaña, La Cruz, and Sierra Palado, and left Ocaña in February 1878 to return to England. The Ocaña area is close to Edo. Táchira, Quebrada La Blanquita, near La Fundación, Venezuela, the location for the *R. Mejía C. s.n.* collection that was the basis for the published illustration by Dunsterville. The location of this specimen from Venezuela is unknown. Gustavo Romero (pers. comm.) indicated that Dunsterville often did not keep specimens unless they represented new species.

***Dressleria kerryae* H.Hills, sp. nov.** TYPE: PANAMA: Prov. Panama: Cerro Jefe, 1968, *Dressler 3515* (holotype: FLAS!). Fig. 1C–D.

Sepala et petala valde reflexa. Labellum cras-sum, carnosum, saccatum circa 2 cm longum et 1 cm latum, margines cavitatis elevati. Ostium saccili rectangulatum, parvissimum, circa 2 mm longum et latum. Columna crassissima, circa 8 mm longa et lata. Labellum columnae adnatum.

Epiphytes with basal, thickly vermiform roots. **Pseudobulbs** fusiform-cylindric, 6–12 cm tall, 2–3 cm wide, fleshy, concealed by persistent leaf ba-

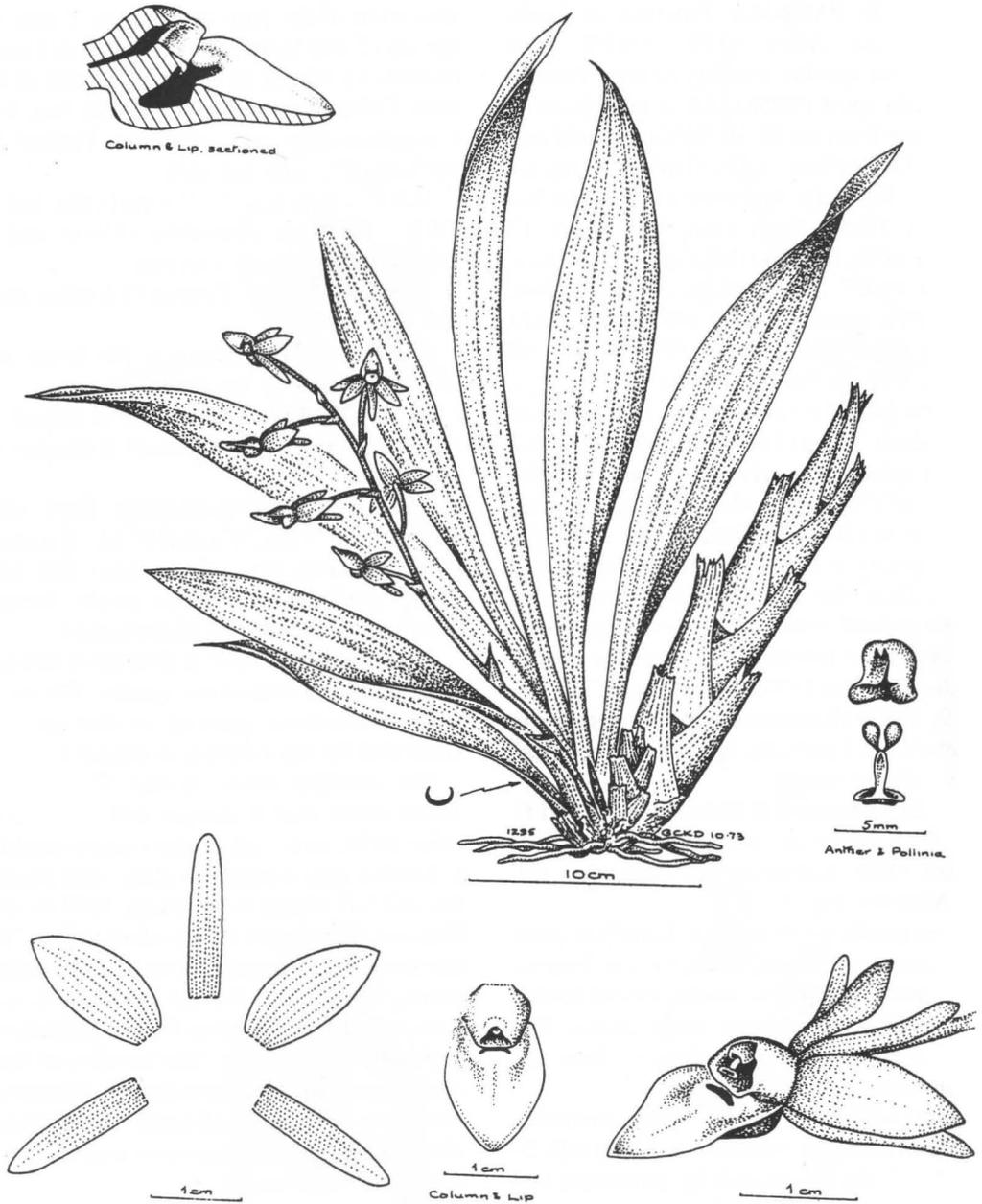


Fig. 2. *Dressleria kalbreyeri* H.Hills (drawn from R. Mejía C. s.n.). Drawing by G.C.K. Dunsterville.

ses. **Leaves** oblong-lanceolate, acute, persistent, alternate, distichous, prominently veined abaxially to 45 cm × 6 cm. **Inflorescence** a basal raceme to 35 cm long. **Peduncle** to 12 cm long. **Flowers** greenish white, non-resupinate. Sepals and petals strongly reflexed against the pedicel. **Sepals** 21 mm long, 6 mm wide. **Petals** 17 mm long, 10 mm wide. **Lip** longer than broad, 1.7 cm × 1.0 cm;

top half of the lip flat or slightly reflexed; callus of the lip elevated 3–4 mm to make the lip entirely adnate to the column; opening to the sac is small and nearly rectangular, 2.0 mm high × 1.5 mm wide; margin of the opening a thin flap of tissue. **Column** 8 mm long, 8 mm wide at the base. **Pollinia** two, borne on a common stipe and viscidium. **Pedicel** 4.0–4.5 cm long. **Capsule** not seen.

ILLUSTRATION: Dodson (1975) as *Dressleria helleri*.

DISTRIBUTION: Endemic to Panama.

ETYMOLOGY: It is an honor to name this species after Kerry Dressler, whose superb photographs of orchids have been a valuable contribution to the orchid world.

FRAGRANCE: Medicinal smell of 1,8-cineole.

PARATYPES: PANAMA: Prov. Panama, Cerro Jefe, 1968, collected by Dodson and Dressler, ex hort. UM 12-68-1, 11 June 1968, *Hills 68101* (spirit AMES, K, SEL); collected from the same population as the holotype; El Llano-Cartí road, 1976, *N.H. Williams s.n.* (SEL # 028153); El Llano-Cartí road, 1976, *N.H. Williams s.n.* ex hort. Selby Gardens living accession 76-56-8, 10 May 1978, *A. Pridgeon s.n.* (SEL # 019113); 10 km north of Margarita, on road to Madroño, 550 m, 31 Jan. 1979, *B. Hammel 6017* (MO).

Dressleria kerryae has been confused with *D. helleri* (e.g., the illustration in Dodson, 1975, is *D. kerryae*) but differs from the latter by having an entire opening to the labellum unlike the erose margin of *D. helleri*. *Dressleria kerryae* is most similar to *D. severiniana* (Hills, 1993) and differs by the shape of the labellum opening. In *D. kerryae* the opening is elongate and nearly twice as

long as broad. In *D. severiniana*, on the other hand, the opening is nearly square.

A correct illustration for *D. helleri* is Hamer (1982), which was redrawn from the Heller illustration included with the type specimen.

LITERATURE CITED

- Allen, P. H. 1949. *Catasetum*. *Ann. Missouri Bot. Gard.* 36: 22–32.
- . 1953. The orchids of Panama: Annotated check-list of genera and species. *Orchid J.* 2: 181–185.
- Bennett, D. E., Jr. and E. A. Christenson. 1995. New species of Peruvian Orchidaceae III. *Brittonia* 47: 182–209.
- Dodson, C. H. 1975. *Dressleria* and *Clowesia*: a new genus and an old one revived in the Catasetinae (Orchidaceae). *Selbyana* 1: 130–137.
- . 1998. New orchid species and combinations from Ecuador. Fascicle 6. *Orquideología* 21: 3–60.
- Dunsterville, G. C. K. and L. A. Garay. 1976. *Venezuelan Orchids Illustrated*. Vol. VI. Andre Deutsch, Ltd., London.
- and ———. 1979. *Orchids of Venezuela: An Illustrated Field Guide*. Botanical Museum Harvard University, Cambridge, Massachusetts.
- Garay, L. A. 1969. Orquídeas Colombianas nuevas o críticas, decena III. *Orquideología* 4: 153–163.
- Hamer, F. 1982. *Dressleria helleri* Dodson. *Icon. Pl. Trop. ser. I*: pl. 667. Marie Selby Botanical Gardens, Sarasota, Florida.
- Hills, H. G. 1993. A new species of *Dressleria*. *Amer. Orchid Soc. Bull.* 62: 616–617.
- Teuscher, H. 1972. *Catasetum atratum* and *C. dilectum* with its var. *suave*. *Amer. Orchid Soc. Bull.* 41: 1081–1085.
- Veitch, J. H. 1906. *Hortus Veitchii*. James Veitch & Sons Ltd., London.