

TWO NEW SPECIES OF *CODONANTHE* (GESNERIACEAE)*Hans Wiehler**

The pair of species described below belongs to the type section of the epiphytic ant-garden genus *Codonanthe* (Mart.) Hanst. All species in this section are native to southeastern Brazil, have bright orange berries, and lack the extra-floral nectaries located in the sinuses of the calyx lobes and on the abaxial surface of the leaves, features typical in other species of the genus. Orange-colored berries are characteristic of all species of *Codonanthe* from southeastern Brazil known in cultivation [*C. gracilis* (Mart.) Hanst., the type of the genus, *C. carnosae* (Gardner) Hanst., and *C. devosiana* Lem.], but this color pattern does not occur in the species outside this area. The berries of *Codonanthe* in the rest of tropical America are pink, red, or deep purple.

The origin of one of the new species below, *C. digna*, is unknown as yet, but when all factors presently known about the properties and distribution of the nearly 20 species of *Codonanthe* are considered, some place in southeastern Brazil appears to be the most likely home of this species. Both new species are known so far only from plants in cultivation. The description of all material cited below is based on live plants grown at the SEL greenhouses.

Codonanthe digna Wiehler, sp. nov.

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Ex affinitate *C. carnosae* (Gardner) Hanst., sed differt caulibus angustioribus et pendentibus, caulibus foliisque sericeis, calicibus viridibus, corollis parvioribus, et antherarum thecis violaceis.

Perennial, epiphytic herb with thin, pendent, creeping, or climbing stems, to ca. 35 cm long, sparsely branching, rooting by the nodes, with the internodes 0.8-2.2 mm long, ca. 1.1 mm in diam., the mature stems brown, sericeous. Leaves opposite-decussate, subequal, sericeous, the petiole 4-6 mm long, green, the lamina ovate to broadly ovate, obtuse, subentire (with 4-5 obscure teeth on each side), the base rounded, succulent, bluish green above, pale yellow-green or flushed with pink below, the secondary pairs of veins 1-2 (visible abaxially), without extra-floral nectaries on the abaxial surface. Inflorescence a reduced axillary cyme of 1 flower, the peduncle and prophylls absent, the pedicel ca. 5 mm long, light green, sericeous and short-pilose, interspersed with capitate-glandular hairs; calyx ca. 7 mm long, the lobes unequal (the ventral and lateral lobes 4-5 mm long, the dorsal lobe ca. 3 mm long), filiform, light green or flushed with maroon, short-pilose and sericeous, the sinuses of the lobes without extra-floral nectary glands; corolla oblique in the calyx, campanulate, ca. 1.7 cm long, white, hirsute, the minute spur sometimes flushed or streaked with pink, the tube slightly curved and inflated, the limb oblique and spreading, the lobes unequal and entire (the 2 dorsal lobes 4 × 4 mm, the 2 laterals 5 × 4 mm, the ventral lobe 6 × 6 mm), the tube inside with long, capitate-glandular hairs, and with a ventral nectar guide of 2 or 3 lines of wine-red dots; stamens 4, included, the filaments ca. 7 mm long, white, glabrous, adnate to the base of the corolla tube for 2 mm, the anthers syngenesous into a rectangle, 0.5 × 1.0 mm, white, the thecae prominently marked with a violet ring, dehiscing by a central pore; ovary superior, cone-shaped, 2.5 mm long, white, hirsute, the style ca. 5 mm long, white, glabrous, the stigma stomatomorphic, covered

*Marie Selby Botanical Gardens, 800 South Palm Avenue, Sarasota, Florida 33577 U.S.A.

with short glandular hairs; nectary a double-connate, dorsal gland, 0.8×1.3 mm, white, glabrous. Fruit a subglobose, orange, pubescent berry, ca. 6-9 mm in diam.; seeds elliptic, striate, brown, 1.2 mm long, enveloped by a fleshy funicle.

ETYMOLOGY. From the Latin *dignus* = dainty, worthy, in reference to the dainty habit of this species and its horticultural value as a hanging basket plant.

TYPE: Cultivated plants of unknown origin, raised from mixed *Begonia* seed of unknown origin by Mr. David Allen of San Francisco in 1970, and widely distributed by Mrs. Frances Batcheller of Durham, New Hampshire, U.S.A. Cultivated at the greenhouses of the University of Miami and at SEL under acc. no. W-1139, 6 Sept. 1973, *H. Wiehler 7330* (HOLOTYPE: SEL); ISOTYPES: F, HB, K, MO, NY, R, RB, SP, US).

ADDITIONAL MATERIAL EXAMINED: Cult. Hort. Bot. Reg. Kew, April 1910, collector unknown, s.n. (K). Origin not cited.

DISTRIBUTION: Unknown; probably native to southeastern Brazil. All material in cultivation is of the same origin cited above.

Codonanthe digna is probably the most popular species of its kind in cultivation. It has been grown and offered in the trade under the cultivar name *Codonanthe* sp. 'Frances Batcheller,' pending publication of a specific epithet. This species was illustrated in *Baileya* 19:14-15, 1973 as *Codonanthe carnosa* (Gardner) Hanstein (cf. *Selbyana* 1:162-164, 1975).

Codonanthe paula Wiehler, sp. nov.

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Codonanthe dignae Wiehler affinis, a quo caulibus et foliis puberulo-hirsutis, foliis orbicularis, foliorum nervis lateralibus axialiter invisibilibus, calicibus marroninis, corollarum lobis roseis, antherarum thecis albis, et ovarii roseo-marroninis differt; a *C. carnosa* (Gardner) Hanst. foliis floribusque parvioribus et corallarum forma recedit.

Perennial, epiphytic herb with thin, pendent, creeping, or climbing stems, to ca. 45 cm long, sparsely branching, rooting by the nodes, with the internodes 1.5-2.5 cm long, ca. 1.2 mm in diam., the mature stems brown, puberulous-hirsute. Leaves opposite-decussate, subequal, puberulous-hirsute, the petiole 4-5 mm long, green, the lamina nearly orbicular, subentire (with 2-3 obscure teeth on each side), succulent, blue-green above, pale green and flushed with wine-red below, the secondary pairs of veins invisible, without extra-floral nectaries on the abaxial surface. Inflorescence a reduced axillary cyme of 1 flower, the peduncle and prophylls absent, the pedicel ca. 8 mm long, maroon, puberulous-hirsute; calyx ca. 4 mm long, the lobes subequal, 2-3.5 mm long, filiform, maroon, puberulous-hirsute, the sinuses of the lobes without extra-floral nectary glands; corolla oblique in the calyx, campanulate, ca. 1.7 cm long, white, hirsute, with a short spur, the tube curved and inflated, the limb oblique and spreading, flushed with pink on both sides, the lobes unequal and entire (the 2 dorsal lobes 5×5 mm, the 2 lateral lobes 5×6 mm, the ventral lobe 6×9 mm), the tube inside with long and short capitate-glandular hairs, and deep inside with a ventral and dorsal nectar guide of wine-red dots and lines; stamens 4, included, the filaments ca. 8 mm long, white, glabrous, adnate to the base of the corolla tube for 1.5 mm, the anthers syngenesous into a rectangle or grouped into pairs, 0.8×1.5 mm, completely white, the thecae dehiscent by a central pore; ovary superior, cone-shaped, 2.5 mm long, pink-maroon, hirsute, the style ca. 5 mm long,

white, glabrous, the stigma stomatomorphic, covered with short glandular hairs; nectary a double-connate, dorsal gland, 1.0×1.3 mm, white, glabrous. Fruit a cone-shaped berry, ca. 1.3×0.8 cm, orange, pubescent; seed elliptic, 1.5 mm long, striate, light brown, enveloped by a fleshy funicle.

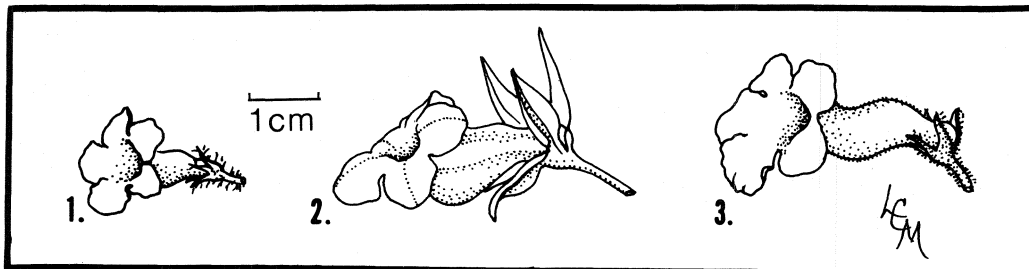
ETYMOLOGY: From the Latin *paulus* = little, referring to the small size of the plants as well as to their place of origin, Sao Paulo.

TYPE: BRAZIL: SAO PAULO: Plants obtained in a nursery outside of Sao Paulo (but thought to be native to the vicinity) by Mrs. Jean Hurlbut of Miami in 1976, and later distributed by Mrs. Pat Matthews of Miami. Cultivated at SEL under acc. no. W-2386, 8 Aug. 1979, H. Wiehler 79360 (HOLOTYPE: SEL, ISOTYPES: F, HB, K, MO, NY, R, RB, SP, US).

Codonanthe paula is as yet hardly known in cultivation. It may soon rival *C. digna* in popularity.

KEY TO THE SPECIES OF *CODONANTHE* FROM SOUTHEASTERN BRAZIL
CULTIVATED IN NORTH AMERICA

1. Anther cells violet-banded.
(Stems and leaves sericeous, leaves \pm ovate, lateral veins on abaxial leaf surface visible, corolla ca. 1.7 cm long.) *C. digna*
1. Anther cells white 2
2. Corollas less than 2 cm long 3
2. Corollas more than 2 cm long 4
3. Stems and leaves puberulous.
(Leaves \pm orbicular, lateral veins invisible, calyx maroon, corolla ca. 1.7 cm long, ovary rose-maroon.) *C. paula*
3. Stems and leaves sericeous or pilose.
(Leaves ovate, lateral veins \pm visible, calyx green, corolla ca. 1.4 cm long, ovary white.) *C. devosiana*
4. Stems and leaves glabrous.
(Leaves elliptic or lanceolate, lateral veins invisible, calyx green with maroon tips, corolla ca. 2.6 cm long, ovary maroon *C. gracilis*
4. Stems and leaves puberulous.
(Leaves ovate-elliptic, lateral veins invisible, calyx maroon, corolla ca. 3 cm long, ovary maroon.) *C. carnososa*



Figures 1-3: Flowers of brazilian species of *Codonanthe*; 1. *C. devosiana*; 2. *gracilis*; 3. *C. carnososa*.