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**New Species of *Cyrtandra* (Gesneriaceae) from the
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The genus *Cyrtandra*, a very large one, is characteristic of the tropical Pacific islands and is present on most of the high islands from Sumatra to the Marquesas and Hawaii. The species are all endemics, mostly to a single island or to a single mountain or valley on that island.

During the Bishop Museum Mangarevan Expedition of 1934, which explored eastern groups of the Polynesian islands, *Cyrtandra* was found in small remnants of the native forest on two of the Austral Islands. This is a new southeastern limit for the occurrence of the genus. Many species of *Cyrtandra* are attractive, but these two are outstanding in attractiveness, in size, form, and fragrance of the blossoms. They are the two most beautiful plants that the writer, long a student of the genus, has discovered in an active botanical lifetime. Their names are selected for sentimental reasons.

***Cyrtandra Marthae*, sp. nov. (§ Polynesieae). (See figure 1.)**

Diagnosis holotypi: Frutex 3-5 m. alta rotundata sparse ramosa, caule 8 cm. diametro, cortice brunneo, ramulis tetragonis 6-10 mm. diametro subcarnosis quando siccis longiter sulcatis, cortice fusco deinde glabrato, cicatricibus 5-7 mm. altis cordatis distinctis, fasciculis 9 vel 11, ramulis foliosis 4-7 mm. diametro tetragonis dense brunneo-villosis, novellis dense brunneo-villosis obscuratis, internodiis 13-42 sed plerumque 22 mm. longis, foliis oppositis inaequalibus una folia

¹ Mangarevan Expedition publication 42. This is the fourteenth in a series of papers designed to present descriptions, revisions, and records of Pacific island plants. The preceding papers were published as B. P. Bishop Mus., Occ. Papers 17 (7): 79-84, 1942; 17 (13): 177-182, 1943; 18 (5): 77-93, 1945; Am. Fern Jour. 35: 87-89, 1945; Torrey Bot. Club. Bull. 73: 588, 1946; Pacific Science 1 (2): 116, 1947; 2 (2): 96-113, 1948; 2 (4): 272-273, 1948; 5 (3): 279-286, 1951; 6(2) 145-150, 1952; Webbia 8: 225-228, 1951; Pacific Science 7 (2): 165-168, 1953; and the thirteenth is in press.

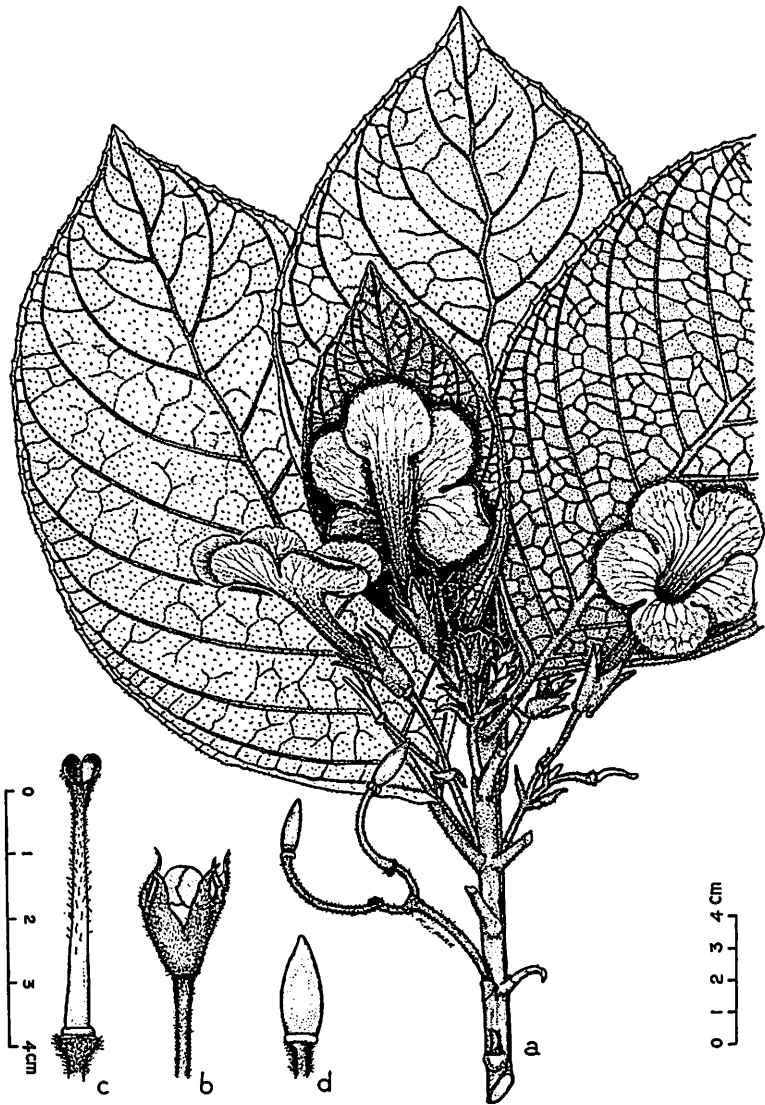


FIGURE 1.—*Cyrtandra Marthae*, from holotype: a, habit, $\times \frac{1}{2}$; b, bud, $\times 1$; c, pistil, $\times 1$; d, fruit, $\times 1$.

1/5 minora, in 4-5 nodis superioribus productis adscendentibus aggregatis, petiolis 8-35 mm. longis validis et brunneo-villosis, laminis 13-33 cm. longis, 7.2-20.7 cm. latis firme crasse chartaceis, ovatis ad late ovato-ellipticis apice breve acutis basi cuneata et breve decurrenta supra subnigro-viridibus ab initio sparse pilosis sed pilis intervallorum caducis, infra pallide viridibus et sparse pilosis costa et nervis secundariis prominente divergente pilosis marginibus in exteriore $\frac{3}{4}$ parte breve calloso-denticulatis, nervis secundariis in uno latere 10-12 adscendente arcuatis integratis et in dentibus excurrentibus; cymis 3 (-5)-floriferis axillaribus in 45° adscendentibus valde brunneo-villosis, pedunculis 12-42 mm. longis, pedicellis 15-31 mm. longis, bracteis 11-19 mm. longis, oppositis in uno latere $\frac{1}{2}$ connatis lanceo-ovatis foliaceis, alabastris anguste campanulatis lobis calycis adscendentibus, calycibus in flore 20-24 mm. longis (in sicco) anguste campanulatis viridibus firmis exteriore ad basim dense villosis aliter sparse villosis intra subglabris sinibus 11-13 mm. longis intra labiis, labia superiori trilobata lobis 11-13 mm. longis, 3.8-4 mm. latis partitis 5-11 mm. oblique lanceolatis acuminatis diminuendis ad apicem subobtusis, labia inferiora bilobata lobis 10-13 mm. longis 4.5-5.5 mm. latis oblique lanceolatis, calyce ab flora matura cadau, floribus divergentibus albis valde suave odoratis limbo subplanato protruso, tubis 40-47 mm. longis subcylindraceis subrectis extra sparse villosis intra glabris sed in orifice capitato-glanduloso-puberulis ad basim 7 mm. diametro in medio 6 mm. diametro ad apicem aggrandescentibus et 10-12 mm. diametro, limbis bilabiatis 5-lobatis, lobis inter labiis 20-25 mm. longis partitis, lobis superioribus binis 14-20 mm. longis 18-27 mm. latis ovato- vel oblato-suborbicularibus marginibus subplicato-crenatis intra ad orificem capitato-glanduloso-puberulis, labia inferiora trilobata in pilis similaribus lobis lateralibus 21-27 mm. longis, 19-27 mm. latis oblique late ovatis, loba inferiore 21-25 mm. longa 23-27 mm. lata oblato-suborbiculari ad basim auriculata et impensa, staminibus binis inferioribus in tubo corollae ad 12 mm. orifice adnatis parte libera 4 mm. longa crasse ligulata incurvata, antheris 3 mm. longis 2.2 mm. latis paene asymmetrico-ovatis, stylo 25-30 mm. longo capitato-glanduloso-piloso, lobis stigmatum binis 6 mm. longis, 3 mm. latis ellipticis exteriore capitato-glanduloso-pilosulis $\frac{1}{2}$ connatis, ovario 11-13 mm. longo lineari-lanceoloideo glabro ad basim cum disco 1 mm. alto cupulato cincto, baccis aurantiacis vel luteis 14 mm. longis 8 mm. diametro lanceo-ellipsoideis glabris; seminibus 0.61-0.69 mm. longis 0.19-0.26 mm. diametro recte vel oblique anguste ellipsoideis melle-coloratis reticulatis divisionibus $\frac{1}{2}$ longo seminarum.

Description of all specimens: Shrub 3-5 m. tall, loosely branched, round-topped; stem 8 cm. in diameter at base; bark brown; sapwood white; branches 4-sided, 6-10 mm. or more in diameter, the branches fleshy and on drying shrinking to form many longitudinal furrows and ridges; the bark pale yellowish brown, at length glabrate, leaf scars 5-7 mm. high, cordate, separate; bundle scars 9 or 11; leafy branchlets 4-7 mm. in diameter, 4-sided, densely brownish villous; young shoots obscured by dense brown villosity; internodes 13-42 mm., averaging 22 mm. long; leaves opposite, unequal, one of a pair about 1/5 the smaller, borne at the 4-5 upper nodes, ascending crowded; petioles 8-35 mm. long, stout and brown villous; blades 13-33 cm. long; 7.2-20.7 cm. wide, firm thick chartaceous, from ovate to broadly ovate-elliptic, the apex abruptly pointed, the base cuneate and short decurrent, above dark green at first sparsely pilose, but the hairs on the intervals caducous and only those on the midrib and secondaries persisting, below pale green and sparsely pilose, the midrib and laterals prominent and spreading pilose, the margins

low callous denticulate in the upper two-thirds, the secondaries 10-12 on a side, upward arcuate, the tip inarching interconnected and excurrent in the teeth; cymes axillary ascending at 45°, 3(-5)-flowered, densely brown villous, peduncles 12-42 mm. long; pedicels 15-32 mm. long; bracts 11-19 mm. long, paired, nearly separate on one side, connate $\frac{1}{2}$ way up on the other side, lance-ovate, foliaceous; buds narrowly campanulate, the calyx lobes ascending; calyx in anthesis 20-24 mm. long (when dried), narrowly campanulate, green, firm, without densely villous just at base, sparsely so elsewhere, within almost glabrous, cleft 11-13 mm. between the two lips; upper lip 3-lobed, the upper lobes 11-13 mm. long 3.8-4 mm. wide, cleft 5-11 mm. between the lobes, obliquely lanceolate, acuminate, tapering to a blunt tip; lower lip 2-lobed, the lobes 10-13 mm. long, 4.5-5.5 mm. wide, obliquely lanceolate, the calyx caducous, breaking off at base by late anthesis; flowers divergent white, with strong sweet perfume, the corolla with the limb almost flat, almost in the plane of the tube, the lobes with their margins slightly revolute, the upper lobes reflexed; corolla white, 7-8.6 cm. long (when dried), diverging at 45°, the limb almost flat and in the plane of the tube, the tube 40-47 mm. long, subcylindric almost straight, without sparsely villous, within glabrous except for the capitate glandular puberulous throat, at base 7 mm. in diameter, at the middle 6 mm. in diameter, then gradually widening to the throat, which is 10-12 mm. in diameter, without glabrous or at base sparsely pilose to glabrate, strongly many nerved, limb 2-lipped, 5-lobed, cleft 20-25 mm. between the lips; upper lobes two, 14-20 mm. long, 18-27 mm. wide, ovate- or oblate-suborbicular, the margin with low pleated scallops, within capitate glandular puberulous in and near the throat; lower lip 3-lobed, similar in pubescence and margins; lateral lobes 21-27 mm. long, 19-27 mm. wide, obliquely broad ovate, lower lobe 21-25 mm. long, 23-27 mm. wide, oblate suborbicular, at base auriculate and overlapping; two lower stamens adnate to the corolla tube to within 12 mm. of the throat, the free portion 4 mm. long, thick ligulate, spirally upcurved; the two perfect anthers 3 mm. long, 2.2 mm. wide, slightly asymmetric ovate; the two lateral staminodia adnate to the tube to within 21 mm. of the throat, their free portion a mere crest 0.5 mm. long; proximal staminodium adnate to the tube to within 20 mm. of the throat, the free portion a lanceolate obtuse flap 1.5 mm. long; style 25-30 mm. long, capitate glandular pilosulous; stigmatic lobes two, 6 mm. long, 3 mm. wide, elliptic, on the back capitate glandular pilosulous, connate $\frac{1}{2}$ way up the proximal side; ovary 11-13 mm. long linear-lanceoloid, glabrous, the base surrounded by a cupulate disk 1 mm. high; berries orange or yellowish 14-20 mm. long, 8-10 mm. in diameter, lance-ellipsoid to lanceoloid glabrous; seeds 0.61-0.69 mm. long, 0.19-0.26 mm. in diameter, narrowly ellipsoid or obliquely so, honey-colored with dark brown ends, the surface with heavy raised cellular reticulations, narrowly oblong, $\frac{1}{3}$ as long as the seed.

Holotype: Austral Islands, Raivavae, south side of Mount Hiro, 400 m. alt., moist upper woods of *Metrosideros*, Aug. 11, 1934, *H. St. John 16,166* (Bishop Mus.).

Specimens Examined: Austral Islands, Raivavae, southwest slope of Mount Hiro, 400 m. alt., moist woods on steep slope, shrub 3 m. high, diameter at base 2 cm., flower white, sweet; fruit reddish orange, lanceoloid, 2 cm. long, 9-10 mm. diameter; leaves firm, chartaceous,

above dark green somewhat shiny, beneath pale green; pubescence of stem and young leaves rusty, Aug. 10, 1934, *H. St. John and D. Anderson 16,078*.

The closest relative of *C. Marthae* is the new *C. Elizabethae*, from the adjacent island of Rurutu, which has the blades with midrib and laterals below appressed pilose; petioles 20-72 mm. long, appressed pilose; inflorescence 5-7-flowered; peduncles 15-95 mm. long; pedicels 25-35 mm. long, appressed brown pilose; dried calyx 2.5-4.1 cm. long, without densely appressed pilose, within pilose; and having the ovary capitate glandular pilose. *C. Marthae* has the blades below with midrib and lateral veins spreading villous; petioles 10-27 mm. long, shaggy villous; inflorescence 3-5-flowered; peduncles 12-45 mm. long; pedicels 15-32 mm. long, shaggy villous; dried calyx 1.8-2.3 cm. long, without sparsely villous, within almost glabrous; and the ovary glabrous.

Of the previously known species a close relative is *C. induta* Gray of Tahiti, a tree 8-10 m. tall, with petioles 5-7 cm. long; leaves unequal, one of a pair being one-third smaller; blades above hirsute, below softly villous; bracts of inflorescence connate, 30-40 mm. long; pedicels 0-6 mm. long; calyx 20-24 mm. long, the lobes ovate-lanceolate, two to three times shorter than the tube; corolla 4-5 cm. long, the tube puberulent; and the berries 33 mm. long, tapering at base. In contrast, *C. Marthae* is a shrub 3-5 m. tall; with petioles 8-35 mm. long; leaves unequal, one of a pair one-fifth smaller; blades above at first sparsely pilose but the hairs on the intervals caducous, below sparsely pilose; bracts of the inflorescence connate, 11-19 mm. long; pedicels 15-32 mm. long; calyx 40 mm. long, obliquely lanceolate, the lobes obliquely lanceolate, as long as or longer than the tube; corolla 7-8.6 cm. long, the tube sparsely villous; and the berries 14-20 mm. long, lance-ellipsoid.

This beautiful, fragrant flowering shrub is named in compliment to the writer's revered mother, Martha Everett St. John who admired the beauties of nature, knew much botany, helped her son in his early childhood studies of plants, and later counseled and encouraged his botanical work and explorations, even when they were hazardous.

***Cyrtandra Elizabethae*, sp. nov.** (§ Polynesiae). (See figure 2.)

Nom. Vern. "ano."

Diagnosis holotypi: Frutex 3.3 m. alta, ramis 8-12 mm. diametro subquad-rangularibus subcarnosis et in sicco sulcatis adpresse pilosis, cortice pallide brunnea, cicatricibus 7-8 mm. altis late cordatis distinctis, fasciculis 9, ramulis foliosis

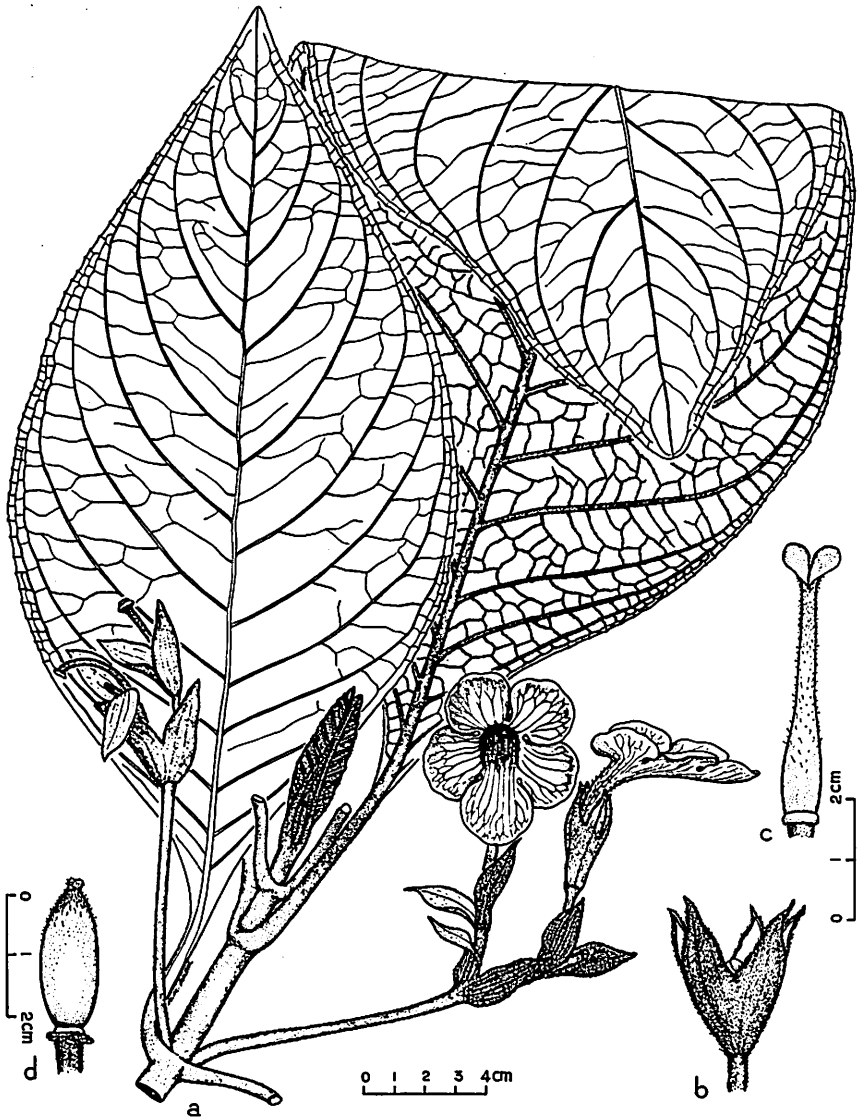


FIGURE 2.—*Cyrtandra Elizabethae*, from holotype: a, habit, $\times \frac{1}{2}$; b, bud, $\times 1$; c, pistil, $\times 1$; d, fruit, $\times 1$.

5-10 mm. diametro item novellis dense adpresse brunneo-pilosis, internodis 16-45 mm. longis, foliis oppositis aggregatis, inaequalibus una $\frac{1}{8}$ minora, 6 nodis foliiferis, petiolis 23-43 mm. longis dense adpressi-pilosis, laminis 17-35 cm. longis 8-20.5 cm. latis firme chartaceis late ellipticis, apice abrupte subacuta ad basim cuneatis et breve decurrentibus supra nigrescenti-viridibus et sparse adpressi-pilosis infra pallidi-viridibus et modice pilosis nervis principalibus dense adpresse brunneo-pilosis marginibus minute callososerrulatis nervis secundariis 9-12 in uno latere arcuatis adscendentibus apicibus in dentis excurrentibus, cymis axillaribus in 45° adscendentibus 5-7-floriferis dense brunneis adpressi-pilosis, pedunculis 15-95 mm. longis validis, pedicelis 25-35 mm. longis, bracteis infimis oppositis lanceolatis $\frac{1}{2}$ -connatis 32 mm. longis, 8-10 mm. latis superioribus 25-32 mm. longis 8-9 mm. latis lanceolatis foliaceis oppositis distinctis adpresse brunneo-pilosis, alabastris campanulatis lobis calycis adscendentibus tum minime extra curvatis, calycibus in flore 35-47 mm. longis (post bullitis) anguste campanulatis viridibus firmis extra dense brunneis adpressi-pilosis intra pilosis sinibus labiarum 11-20 mm. longis, labia superiore trilobata, lobis superioribus 11-19 mm. longis 4 mm. latis oblique lanceolatis longe acuminatis, sinibus 8-14 mm. profundis, labia inferiore bilobata lobis 11-21 mm. longis 6-7 mm. latis media inferiore oblique ovato-lanceata media superiore longe lineari-acuminata, calycibus in flore maturo caducis, floribus divergentibus, limbo corollae subplano protenso, corollis albis 7.5-9 cm. longis (post bullitis), tubo 4.7-5.4 cm. longis in basi medioque 6-7 mm. diametro in orifice 11-12 mm. diametro extra sparse pilosis, limbo bilabiato 5-lobato extra glabrato inter labias 17 mm. partito, lobis superioribus 17-18 mm. longis oblato-suborbicularibus extra glabris in basi auriculatis impensisque intra ad orificem capitato-glanduloso-puberulentis ita lobis alteris, labia inferiore trilobata, lobis lateralibus 17-19 mm. longis, 22 mm. latis oblique oblato-suborbicularibus, loba inferiore 18-21 mm. longis 22-24 mm. latis suborbicularibus, staminibus duobus inferioribus in tubo corollae adnatis in loco e orifice 11 mm. distantibus, parte libero filamentis validis incurvatis, antheris 3.2 mm. longis oblique ovatis connectivo 1.4 mm. lato anguste ovato, stylo 21 mm. longo valido tereto capitato-glanduloso-pilosulo, lobis stigmatis binis 7 mm. longis late obovatis aequaliter partitis in dorso pilosulo, ovario 18 mm. longo lineari-lanceoloideo supra sparse capitato-glanduloso-pilosulo in basi cum disco cupulato 1.3 mm. alto circumcluso, baccis 18-25 mm. longis 8-12 mm. diametro ellipsoideis rubrescentis (vel cupraceis) firmis acerbis, seminibus 0.49-0.56 mm. longis 0.18-0.24 mm. diametro oblique ellipsoideis mel-coloratis prominente reticulatis sectionis $1/7-1/10$ quam semine longis.

Description of all specimens: Shrub 3.3 m. tall; branchlets 8-12 mm. in diameter (slightly quadrangular), appressed pilose, fleshy and shrinking on drying to form longitudinal ridges; bark pale brown, leaf scars 7-8 mm. high, broadly cordate, separate; bundle scars 9; leafy branchlets 5-10 mm. in diameter densely appressed brownish pilose as are the young shoots; internodes 7-45 mm. long (averaging 15 mm. long); leaves opposite, unequal, one of a pair about one-eighth the smaller, borne at the 6 upper nodes, dense, ascending then spreading; petioles stout, 23-60 mm. long, densely appressed brownish pilose; blades 17-35 cm. long, 7-24 cm. wide, firm chartaceous, broadly elliptic, the apex abruptly subacute, the base cuneate and short decurrent, above dark green and sparsely appressed pilose, below pale green and appressed moderately pilose, and the principal veins densely appressed brown pilose, the margins almost impercep-

tibly callous serrulate, the secondaries 9-12 on a side, arched ascending, the tips salient in the teeth; cymes axillary, ascending at 45°, 5-7-flowered, densely appressed brown pilose; peduncles 15-95 mm. long, stout; pedicels 25-35 mm. long; lowest bracts lanceolate, paired, connate half their length, borne only on the distal side, 32 mm. long, each 8-10 mm. wide; the upper bracts 25-32 mm. long, 8-9 mm. wide, lanceolate, foliaceous, opposite, distinct, appressed brown pilose; buds campanulate, the calyx lobes ascending, then slightly outwardly curved; calyx in anthesis 35-47 mm. long (when boiled), narrowly campanulate, green, firm, but without densely appressed brown pilose, within pilose, cleft 11-20 mm. between the lips; upper lip 3-lobed, the upper lobes 11-19 mm. long, 4 mm. wide, cleft 8-14 mm. between the lobes, obliquely lanceolate, long acuminate; lower lip 2-lobed, the lobes 11-21 mm. long, 6-7 mm. wide, the lower part obliquely ovate-lanceolate, the upper half linear long acuminate, the calyx caducous, breaking off at base by late anthesis; flowers diverging, the corolla with the limb almost flat and with the lower lip protruding; corolla white 7.5-9 cm. long (when boiled), the tube 4.7-5.4 cm. long, at base and middle 6-7 mm. in diameter, at the throat 11-12 mm. in diameter, sparsely pilose without, but diminishing towards the glabrous throat, limb 2-lipped, 5-lobed without glabrous, cleft about 17 mm. between the lips; upper lobes two 17-18 mm. long, oblate suborbicular, auriculate and overlapping at base, glabrous without, but within capitate glandular puberulent toward the throat, as are the other lobes; lower lip 3-lobed; lateral lobes 17-19 mm. long, 22 mm. wide, obliquely oblate suborbicular; lower lobe 18-21 mm. long, 22-24 mm. wide, suborbicular; two lower stamens adnate to the tube to within 11 mm. of the throat, the free portion 4 mm. long, stout, spirally upcurved; the two perfect anthers 3.2 mm. long, obliquely ovate, the dark connective 1.4 mm. wide, narrowly ovate; the two lateral staminodia adnate to the tube to within 18 mm. of the throat, the free filament 0.5 mm. long, deltoid, inflexed, the tip 0.6 mm. subulate, translucent; style 21 mm. long, stout, terete, capitate glandular pilosulous; stigmatic lobes two 7 mm. long, broadly obovate, equally parted on both sides, the distal side similarly hairy; ovary 18 mm. long, linear-lanceoloid, the upper part sparsely capitate glandular pilosulous, the base surrounded by a cupulate disk 1.3 mm. high; berries 18-26 mm. long, 14-16 mm. in diameter, ellipsoid at the apex, short beaked, sparsely pilose toward the apex, reddish or copper-colored, acrid, firm and hard when ripe, seeds 0.49-0.56 mm. long, 0.18-0.24 mm. in diameter, obliquely or asymmetrically ellipsoid, honey-colored with dark brown ends, the surface with heavy raised broad polygonal reticulations 1/7-1/10 as long as the seed.

Holotype: Austral Islands, Rurutu, Upopepe, densely shaded, rich moist soil, 650 ft. alt., Feb. 17, 1921, *A. M. Stokes 81* (Bishop Mus.).

Specimens Examined: Austral Islands, Rurutu, 1 km. north of Avera, moist valley in woods, 275 m. alt., Aug. 24, 1934, *H. St. John and E. C. Zimmerman 16,549*; 1.5 km. north of Avera, edge of moist forest, 350 m. alt., Aug. 25, 1934, *H. St. John and D. Anderson 16,629*; northwest slope of Teape, Teti, in moist woods, 350 m. alt., Aug. 26, 1934, *H. St. John 16,671*; west side of Teape, first gulch south of Teti,

bottom of moist narrow band of woods, Aug. 31, 1934, *H. St. John* 16,749.

The closest relative of this new species is *C. Marthae* also described in this paper. Contrasting characters are stated in the treatment of that species.

The closest previously known species is *C. Lillianae* Setchell from Rarotonga, which is a shrub 0.6 m. tall and has blades 12-21 cm. long, 4-9.3 cm. wide, elliptic-oblongate or elliptic-lanceolate; cymes 1 (-2)-flowered; peduncles 5-11 mm. long; pedicels 13-27 mm. long; bracts distinct; calyx 25 mm. long, glabrous within, persistent on the young fruit, then deciduous; corolla 6.5-7.5 cm. long, the tube 3.5-4 cm. long, densely pilose without; and the berries flesh-colored. *C. Elizabethae* differs by being a shrub 2-4 m. tall; with blades 17-35 cm. long, 7-24 cm. wide, broadly elliptic or broadly elliptic-lanceolate; cymes 5-7-flowered; peduncles 15-95 mm. long; pedicels 25-35 mm. long; lowest pair of bracts connate for half their length; calyx 35-47 mm. long, pilose within, caducous in late anthesis; corolla 7.5-9 cm. long, the tube 4.7-5.4 cm. long, sparsely pilose without; and the berries reddish (or copper-colored).

This stately bush bearing large white flowers with a strong sweet perfume is named by the writer for his beloved wife, Elizabeth Chandler St. John. She has loyally shared many of the adventures of botanical explorations and much of its drudgery.