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New or noteworthy Andean species of the genus *Symplocos* (Symplocaceae)

BERTIL STÅHL

RESÚMEN

STÅHL, B. (1995). Nuevas o notables especies andinas del género *Symplocos* (Symplocaceae). *Candollea* 50: 445-452. En inglés, resúmenes en español y en inglés.

Se describen y ilustran tres especies nuevas para la ciencia, a saber *Symplocos badia* B. Ståhl y *S. blancae* B. Ståhl del Ecuador y *S. neei* B. Ståhl de Bolivia. Además se presentan nuevas colecciones de *Symplocos nana* Brand (Bolivia) y *S. sandemanii* B. Ståhl (Peru).

ABSTRACT

STÅHL, B. (1995). New or noteworthy Andean species of the genus *Symplocos* (Symplocaceae). *Candollea* 50: 445-452. In English, Spanish and English abstracts.

Three new species of *Symplocos* are described and illustrated, viz. *S. badia* B. Ståhl and *S. blancae* B. Ståhl from Ecuador and *S. neei* B. Ståhl from Bolivia. New records of *Symplocos nana* Brand from Bolivia and *S. sandemanii* B. Ståhl from Peru are presented.

KEY-WORDS: *Symplocos* — SYMPLOCACEAE — Andes — Taxonomy.

1. *Symplocos badia* B. Ståhl, spec. nov.

Type: Ecuador, Prov. Loja: Cerro Villonaco, 20 km W of Loja on road to La Toma, 2200-2400 m, 14 Aug 1983 (fl.), *Jaramillo & Winnerskjold 5674* (holotype, QCA; isotypes, AAU, GB, NY). (Fig. 1).

— *Symplocos coriacea* auct. non A. DC.: Ståhl, Fl. Ecuador 43: 15. 1991.

Frutex vel arbor ad 5 m alta, surculis juvenibus dense ferrugineo-tomentosis, cortice laevi. Folia subsessilia vel sessilia; lamina late elliptica, 4.5-7.5 × 2.5-5 cm, coriacea, pagina inferiore subglabra vel sparsim tomentosa, pagina superiore ad costam versus basim puberula, basi cordata vel subcordata, apice obtuso vel retuso, margine integro vel leviter crenulato, costa infra potius prominenti, supra leviter impressa, venis lateralibus potius conspicuis, venulis inconspicuis. Inflorescentiae laterales, fasciculatae, pedunculis 12-28 mm longis, dense ferrugineo-tomentosis, floribus 2-5. Bractae 4, dense strigulosae. Calyx tubo circiter 2 mm longo, lobis perlate ovatis, 3.2-4 × 3.2-3.5 mm, dense strigoso-tomentosis. Corolla alba vel violacea pallida, extus strigulosa, 4.5-5 mm longa, lobis late oblongis, 3.2-3.5 mm latis, marginibus ciliolatis. Stamina circiter 100, tri- vel quadrifaria, tubo circiter 1 mm longo, filamentis liberis papillois, 0.5-2 × 0.4 mm, antheris 0.4 × 0.4 mm. Discus annularis vel subannularis, puberulus. Stylus 1.5-2 mm longus, glaber, stigmatibus subcapitato, obscure lobato. Ovarium 3-loculare, ovulis in quoque loculo 2. Fructus late ellipsoideus vel globosus, 8-10 × 8-9 mm, plus minusve strigosus, saltem versus apicem, laevis, rubellus, in sicco ater.

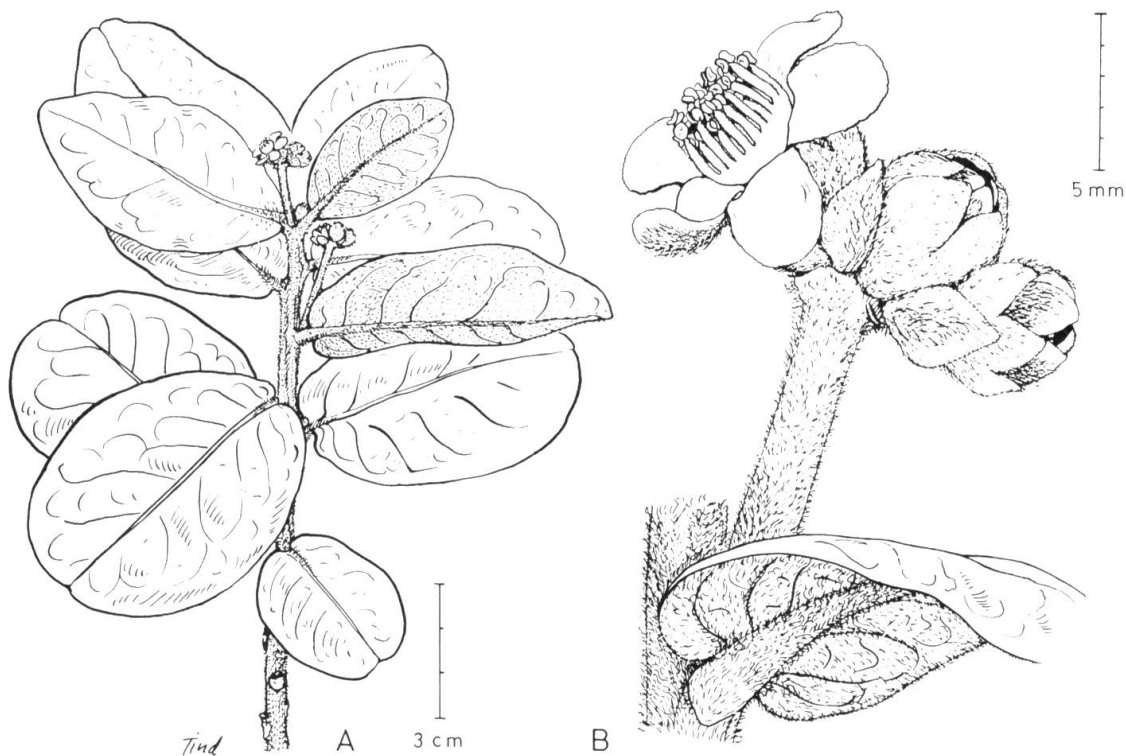


Fig. 1. — *Symplocos badia* B. Ståhl
 A, flowering branch; B, inflorescence. Øllgaard & Balslev 9749. From Fl. Ecuador 43: 16. 1991.

Shrub or tree to 5 m high; young shoots and branchlets densely tomentose of reddish brown hairs, the bark smooth. Leaves subsessile or sessile, brownish when dried; blade broadly elliptic, 4.5-7.5 × 2.5-5 cm, coriaceous, subglabrous to sparsely tomentose beneath, puberulous on midvein towards base above, base cordate or subcordate, apex obtuse or retuse, margins entire or vaguely crenulate, glands inconspicuous, midvein rather prominent beneath, slightly impressed at base above, lateral veins rather conspicuous, veinlets inconspicuous. Inflorescences lateral, fasciculate, pedunculate, the peduncles 12-28 mm long, densely tomentose of reddish brown hairs. Flowers 2-5, bracts 4, densely strigulose. Calyx tube ca. 2 mm long, lobes very broadly ovate, 3.2-4 × 3.2-3.5 mm, densely strigose-tomentose. Corolla white or pale violet, strigulose on the outside, 4.5-5 mm long, lobes broadly oblong, 3.2-3.5 mm wide, margins ciliolate. Stamens ca. 100 in 3 or 4 whorls, tube ca. 1 mm long, free filaments papillose, 0.5-2 × 0.4 mm; anthers 0.4 × 0.4 mm. Disc annular or almost so, puberulous; style 1.5-2 mm long, glabrous, stigma subcapitate, obscurely lobed; ovary 3-locular with 2 ovules in each locule. Fruits broadly ellipsoid to globose, 8-10 × 8-9 mm, ± strigose, at least towards apex, smooth, reddish when mature, black when dry.

Specimens examined. — **Ecuador, Loja:** 5-10 km ENE of Amaluza, 2400-2700 m, 79°23'W, 04°34'S, 23 Sep 1976 (fl.), Øllgaard & Balslev 9749 (AAU). Between Loja and La Toma, new road at "La Virgen", 2500 m, 79°17'W, 3°57'S, 22 Jul 1990 (fr.), Jørgensen & al. 92044A (AAU).

Symplocos badia is a narrow endemic, confined to the floristically very rich, montane forests of southern Ecuador. It is very similar to *S. coriacea* A. DC., particularly in leaf shape, but differs from that species in several, mainly reproductive characters, such as larger flowers and fruits, strigulose corolla, and long-pedunculate, few-flowered inflorescences. In addition, the dense brownish indumentum on shoots and inflorescences are not met with in *S. coriacea*.

The name *Symplocos coriacea* was misapplied in my treatment of *Symplocaceae* for the "Flora of Ecuador" (STÅHL, 1991); two of the collections here included in *S. badia* were treated under *S. coriacea*. A new collection, Jørgensen & al. 92044A, has been added since then.

2. *Symplocos blancae* B. Ståhl, *spec. nov.*

Type: Ecuador, Prov. Azuay: Las Cajas National Park, Llaviuco, ca. 79°20'W, 2°50'S, 3300 m, 8 Jan 1991 (fl.), *Blanca León & al. 2506* (holotype, QCA; isotypes, AAU, QCNE, not seen). (Fig. 2).

Arbor ad 13 m alta, surculis juvenibus striguloso-tumentulosis, aliquantum verrucosis, brunneis. Folia petiolis 0.8-1 cm longis; lamina obovata vel elliptica, 2.5-4 × 1.2-2.2 cm, coriacea, basi angustata, apice rotundato vel obtuso, margine revoluto, dense glanduloso-denticulato, glandibus utroque latere 15-20, pagina inferiore dense tomentoso-strigosa, pagina superiore glabra vel ad costam versus basim puberula, costa infra prominenti, nonnihil verrucosa, supra nonnihil impressa, venis lateralibus satis conspicuis, deplanatis, venulis inconspicuis. Inflorescentiae laterales, plus minusve fasciculatae vel interdum floribus solitariis, pedunculis 3-8 mm longis, strigulosi, plus minusve verruculosi, floribus plerumque 4-8. Bractea 3, caducae, late ovatae, 1.5 × 1-1.7 mm, strigulosae, saltem ad costam. Calyx glaber, tubo 1 mm longo, lobis perlate ovatis, 1.5 × 1.2-1.8 mm, marginibus ciliatis. Corolla albida vel viridi-alba, glabra, lobis subliberis, circiter 2.5 × 2 mm, marginibus sparsim ciliolatis. Stamina 35-40, tri- vel quadrifaria, filamentis liberis laevibus, 0.3-0.4 mm latis, antheris 0.3 × 0.4 mm. Discus annularis, puberulus vel strigosus. Stylus 0.7 mm longus, glaber, stigmatibus subcapitato, trilobato. Ovarium triloculare, ovulis in quoque loculo 3. Fructus ignotus.

Tree to 13 m high, stem ca. 30 cm diam.; young shoots and branchlets strigulose-tomentulose, the bark somewhat verrucose, brown. Leaves petiolate, brownish green when dried; blade obovate to elliptic, 2.5-4 × 1.2-2.2 cm, coriaceous, densely tomentose-strigose beneath, glabrous above, or puberulous on midvein towards base, base attenuate, apex rounded or obtuse, margins revolute, densely glandular-denticulate, the glands 15-20 on each side; midvein prominent and slightly verrucose beneath, somewhat impressed above, lateral veins rather conspicuous, in level with surfaces, veinlets inconspicuous; petiole 0.8-1 cm long, subcanaliculate, densely strigulose beneath. Inflorescences lateral, borne among the foliage, fasciculate or in ± condensed heads, or sometimes with flowers solitary, pedunculate; peduncle 3-8 mm long, strigulose and ± verruculose. Flowers (1-)4-8, each flower with 3 bracts inserted just beneath calyx; bracts rather early caducous, broadly ovate, 1.5 × 1-1.7 mm, strigulose, at least on midvein. Calyx glabrous, tube 1 mm long, lobes very broadly ovate, 1.5 × 1.2-1.8 mm, margins ciliate. Corolla whitish or greenish white, glabrous, lobes free almost to base, ca. 2.5 × 2 mm, margins sparsely ciliolate. Stamens 35-40 in 3 or 4 rows; free filaments 0.3-0.4 mm wide, smooth; anthers 0.3 × 0.4 mm. Disc annular, puberulous or strigose, style 0.7 mm long, glabrous, stigma subcapitate, 3-lobed; ovary 3-locular with 3 ovules in each locule. Fruits not seen.

This new species is readily distinguished by its minute flowers arranged in pedunculate fascicles, small but comparatively long-petiolate leaves, and dense pubescence on leaves and young shoots. It is possibly related to *S. apiciflora* B. Ståhl, a poorly known species of southern Ecuador and Peru with small, elliptic leaves and small flowers arranged in more or less the same way as those of *S. blancae* (STÄHL, 1991, 1993). However, *S. apiciflora* differs from *S. blancae* in somewhat larger flowers, fewer stamens, papillose filaments, and usually short-petiolate or even sessile leaves. In addition, *S. apiciflora* has not the dense pubescence of *S. blancae*. In vestiture and leaf size it is also somewhat reminiscent of *S. quitensis* Brand, the most commonly collected species in Ecuador (STÄHL, 1991, 1994). *Symplocos blancae* differs from *S. quitensis* inter alia in floral arrangement and by having considerably smaller flowers.

Symplocos blancae is known from a single collection made in upper montane forest in south-central Ecuador, where it was growing together with species of e.g., *Hedyosmum*, *Gynoxis*, *Miconia*, *Piper*, and *Oreopanax*.



Fig. 2. — *Symplocos blancae* B. Ståhl
Herbarium specimen, to the right with inflorescences and leaves enlarged. León & al. 2506 (QCA, holotype).

3. *Symplocos nana* Brand, Pflanzenr. IV.242: 76. 1901; Ståhl, Fl. Ecuador 43: 44, fig. 20E, F. 1991.

Type: Bolivia: Puitar, 3950 m, Feb 1867, *Pearce s.n.* (K, holotype).

Revising material of *Symplocaceae* on loan from the Natural History Museum, London, I recently encountered a sterile Bolivian collection of *Symplocos nana*. This species was in Bolivia previously known solely from the type collected near the Peruvian border (STÄHL, 1994), a record which also constituted its southernmost locality. The material cited here now moves the southern range of this species well into central Bolivia.

Collection examined. — **Bolivia, Dept. Santa Cruz:** Comarapa, S side of Cerro San Mateo, 3400 m, 25 Okt 1928 (ster.), *Steinbach, J. 8534* (BM).

4. *Symplocos neei* B. Ståhl, spec. nov.

Type: Bolivia, Dept. Santa Cruz: Prov. Vallegrande, ca. 6 km S of Abra Tablas on road to Los Sitanos, ca. 1 km N of Lagunillas and 5 km N of Khasa Monte, 64°02'W, 18°39'S, 2425 m, 26 Dec 1989 (fl.), *Nee 38403* (holotype, NY; isotype, S). (Fig. 3).

Arbor saltem ad 5 alta, surculis juvenibus glabris vel sparsim strigulosis, cortice laevi, cinereo. Folia in sicco viridi-fusca, petiolis 0.4-0.8 cm longis; lamina elliptica vel oblanceolata, 4.5-9 × 1.7-3.4 cm, membranacea vel subcoriacea, basi angustata, apice breviter obtuso-acuminato, acumine ad 0.7 cm longo, margine crenulato-crenato, glandibus inconspicuis, pagina inferiore ubique glabra vel costa sparsim strigosa, pagina superiore ubique glabra vel costa versus basim interdum puberula; costa infra prominenti, supra deplanata vel nonnihil impressa, venis lateralibus venulisque satis inconspicuis. Inflorescentiae laterales vel subterminales, fasciculatae, sessiles vel pedunculis strigulosis 1-4 mm longis, floribus 2-4, interdum solitariis. Bractae 3, strigulosae. Calyx glaber, tubo circiter 1.5 mm longo, lobis 1.2-1.5 × 1.5 mm, marginibus ciliatis. Corolla alba, glabra, 4-4.5 mm longa, lobis late oblongis, 2-2.5 mm latis, marginibus integris. Stamina 45-50, trifaria, tubo 1-1.2 mm longo, filamentis liberis 0.5-1.8 × 0.4-0.5 mm, papillois, antheris 0.5 × 0.4 mm. Discus annularis, glaber. Stylus 1.5 mm longus, glaber, stigmatibus capitato, 3-lobato. Ovarium 3(4)-loculare, ovulis in quoque loculo 3. Fructus ellipsoideus, 10-12 × 6-8 mm, glaber, laevis.

Tree to at least 5 m high; young shoots and branchlets glabrous or sparsely strigulose, the bark smooth, grey. Leaves petiolate, greenish brown when dried; blade elliptic to narrowly elliptic or oblanceolate, 4.5-9 × 1.7-3.4 cm, membranaceous to subcoriaceous, the lower side glabrous throughout or sparsely strigose on midvein, the upper side glabrous throughout or sometimes puberulous on midvein towards base, base attenuate, apex shortly obtuse-acuminate, the acumen to 0.7 cm, margins crenulate-crenate, glands inconspicuous; midvein prominent beneath, in level with surface or slightly impressed above, lateral veins and veinlets rather inconspicuous; petiole 0.4-0.8 cm long, plane or somewhat subcanaliculate, strigulose. Flowers arranged in short axillary clusters of 2-4, sometimes solitary, sessile or often with a short peduncle 1-4 mm long, bracts 3, inserted just beneath the calyx, peduncle and bracts strigulose. Calyx glabrous, tube ca. 1.5 mm long, lobes 1.2-1.5 × 1.5 mm, margins ciliate. Corolla white, glabrous, 4-4.5 mm long, lobes broadly oblong, 2-2.5 mm wide, margins entire. Stamens 45-50 in 3 rows, filament tube 1-1.2 mm long, free filaments 0.5-1.8 × 0.4-0.5 mm, papillose; anthers 0.5 × 0.4 mm. Disc annular, glabrous; style 1.5 mm long, glabrous, stigma capitate, 3-lobed. Ovary 3(4)-locular with 3 ovules in each locule. Fruits ellipsoid, 10-12 × 6-8 mm, glabrous, smooth.

This species appeared unnamed in my treatment of the *Symplocaceae* in Bolivia (STÄHL, 1994). The sparse material available at that time was in that work compared with *S. hiemalis* Lingelsh. mainly because of its similarities with that species in vegetative features. Having received flowering and fruiting material it is now evident that *S. neei* is more closely related to *S. mapiriensis*

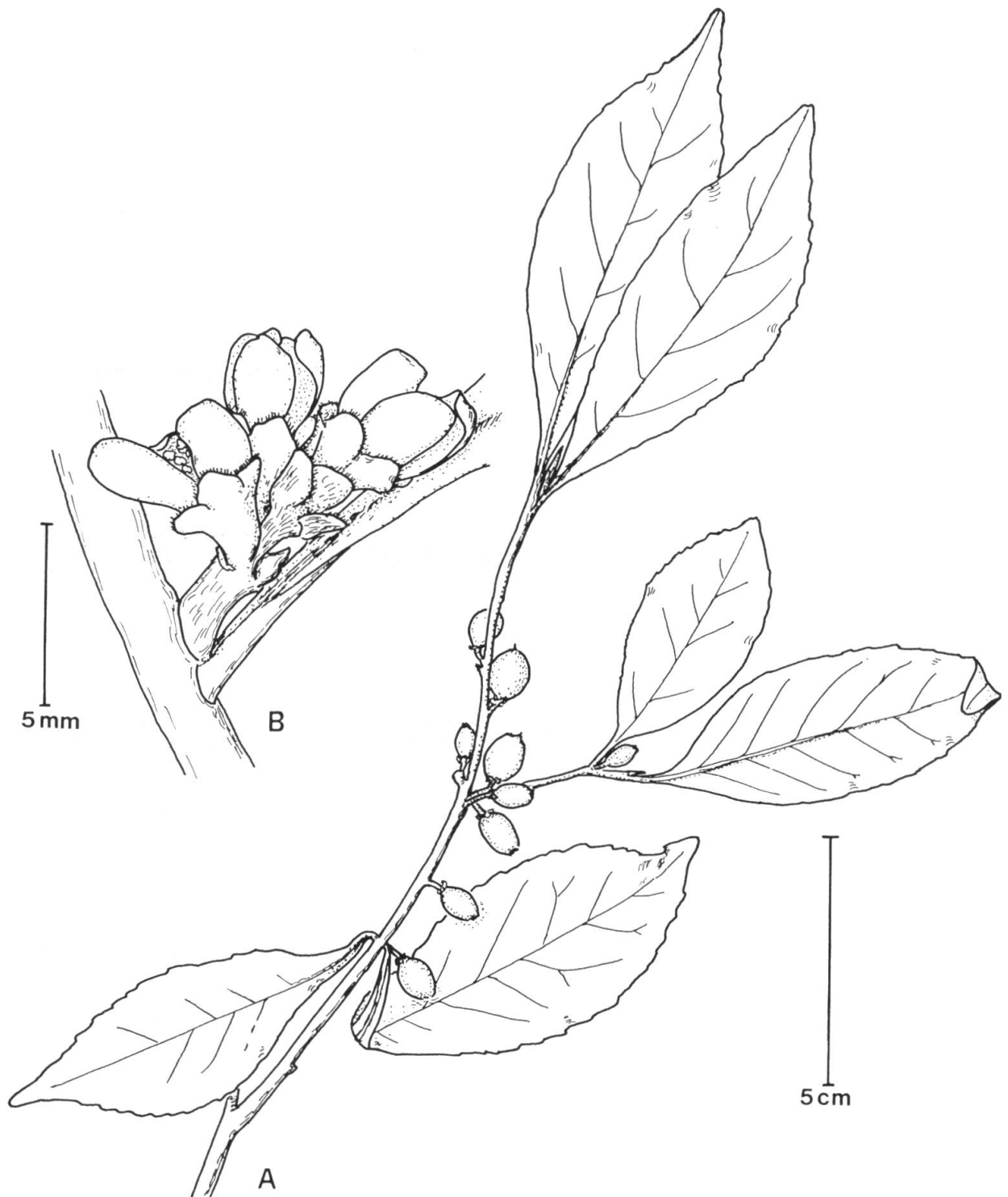


Fig. 3. — *Symplocos nei* B. Stahl
A, fruiting branchlet; B, inflorescence (A, Nee 38447; B, Nee 38403, type).

Brand, with which it agrees in several reproductive and vegetative features. *Symplocos neei* differs from that species in its distinctly greyish young shoots and branchlets, usually thinner leaves, more distinctly crenate leaf margins, shorter inflorescences, larger flowers, glabrous disc, and ellipsoid rather than globose fruits.

Symplocos neei has been collected in cloud forests at several rather nearby localities in central Bolivia, occurring together with species of *Podocarpus*, *Ceroxylon*, *Ternstroemia*, and *Weinmannia*.

Specimens examined. — **Bolivia, Santa Cruz:** Prov. Vallegrande, Aguadita, 8 km (by air) S of Khasa Monte on road to Los Sitanos, 64°2'W, 18°47'S, 2350 m, 26 Feb 1989 (immature fr.), *Nee 38443* (NY); 1 km S of Chujillas, 64°1'W, 18°48'S, 2125 m, 26 Dec 1989 (fr.), *Nee 38447* (S); 12 km (by air) SE of Valle Grande, at highest point on road from Vallegrande to Piraimiri, 64°2'W, 18°36'S, 2350 m, 31 Jan 1987 (immature fr.), *Nee & Coimbra 33910* (S); 5 km (by air) NW of Los Sitanos, 1 km N of turnoff to Sitanos Altos on road from Abra Tabla to Los Sitanos, 64°00'W, 18°50'30"S, 2025 m, 28 Dec 1989 (young fr.), *Nee 38537* (S).

5. *Symplocos sandemanii* B. Ståhl, *Candollea* 48: 366, fig. 7. 1993. **Type: Peru, Dept. Cajamarca:** La Calmena-Llama (Cutervo), 2900 m, Jul 1943 (fl.), *Sandeman 4186* (holotype, K).

Shrub or tree to 12 m high; young shoots and branchlets \pm tomentulose, the bark smooth, brown. Leaves short-petiolate or sometimes sessile, dark brown when dried; blade broadly ovate or elliptic, 4-8.5 \times 2.8-6 cm, coriaceous, brownish-tomentulose beneath, the upper side puberulous along midvein, other parts glabrous, base truncate or cordate, apex rounded or obtuse, often minutely retuse, margins vaguely crenulate, glandular, plane or slightly revolute; midvein and lateral veins prominent beneath, slightly impressed above, veinlets rather inconspicuous; petiole to 0.8 cm long, tomentulose. Inflorescences terminal or subterminal, broadly paniculate with short branches, to 5 cm long, rachis and branches densely brownish-tomentulose. Flowers aggregated at tips of panicle branches; bracts ca. 3, inserted just beneath the calyx, 3 \times 2.5 mm, densely tomentulose. Calyx densely tomentulose, tube 1-1.5 mm long, lobes very broadly ovate, ca. 2-2.5 \times 2.5-3.2 mm, margins ciliate. Corolla white, red at base, glabrous, 5-5.5 mm long, tube ca. 1 mm long, lobes broadly oblong, 3-3.5 mm wide, margins entire. Stamens 35-40 in 2 or 3 rows, tube 1-1.5 mm long, free filaments 0.5-1.7 \times 0.3-0.5 mm, papillose; anthers 0.4-0.5 \times 0.5-0.6 mm. Disc annular, densely puberulous-tomentulose; style 1 mm long, glabrous, stigma subcapitate, 3-lobed; ovary 3-locular with 2 or 3 ovules in each locule. Fruits not seen.

Symplocos sandemanii was described from a single specimen collected in north-central Peru in 1943. A new collection of this species was recently made in fragmented montane forests in the same general area. The new collection has greatly improved the understanding of *S. sandemanii* and an emended description is therefore presented here.

Specimen examined. — **Peru, Cajamarca:** Prov. Chota, near El Campamento, ca. 21 km WNW of Huambos, ca. 2800 m, 79°01'19"W, 06°24'23"S, 20 Apr 1993 (fl.), *Dillon & al. 6449* (F not seen, S).

ACKNOWLEDGEMENTS

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