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BOTANY.—*The North American species of Agonandra.* PAUL C. STANDLEY, U. S. National Museum.¹

While working with the woody plants of Mexico, the writer has segregated from time to time from the undetermined Mexican plants in the National Herbarium a rather large number of sheets which evidently belonged to one genus. The specimens come from many widely separated localities, and although of rather characteristic general appearance, it is remarkable to find that none has ever been named generically or even referred to a family. Recently the writer determined that one of the forms had been named by DeCandolle, who applied the name *Schaefferia racemosa*, basing his description upon one of Sessé and Mociño's sketches of Mexican plants. It was evident, however, that the plant had nothing in common with the genus *Schaefferia*, which belongs to the family Celastraceae.

Careful examination of the Mexican material and comparison with the herbarium specimens available show that the former belong to the genus *Agonandra*, a member of the family Opiliaceae. Neither the genus nor the family has been reported heretofore from North America. Only one species of *Agonandra* has been described, a native of Brazil and Colombia, and it has been the only known American representative of the family, the other

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genera of the small group being restricted to Africa, Asia, Australia, and the East Indies. The occurrence of the genus in Mexico is a matter of considerable interest, and it is still more interesting in view of the fact that three species, apparently, are represented in Mexico. These are described below.

Agonandra Miers (Ann. Nat. Hist. II, 8: 172, nomen nudum. 1851); Benth. & Hook. Gen. Pl. 1: 349. 1862.

Shrubs or small trees, glabrous or pubescent; leaves alternate, petiolate, estipulate, entire, somewhat succulent, with inconspicuous venation; flowers very small, green, usually dioecious, racemose; calyx minute, cupular, obscurely 4 or 5 lobate; petals 4 or 5 in the staminate flower, narrow, the stamens 4 or 5, opposite the petals, alternating with conspicuous scalelike glands of the disk; petals none in the pistillate flower, the disk urceolate, surrounding the ovary; fruit a drupe, the seed erect.

KEY TO SPECIES

- Leaves acute or acuminate at apex, or sometimes obtuse and abruptly pointed; young branches glabrous.....1. *A. racemosa*.
 Leaves rounded or obtuse at apex; young branches finely puberulent.
 Fruit 8 mm. long.....2. *A. obtusifolia*.
 Fruit 15 mm. long.....3. *A. conzattii*.

1. *Agonandra racemosa* (DC.) Standl.

Schaefferia racemosa DC. Prodr. 2: 41. 1825.

Shrub or small tree, 4 or 5 meters high, glabrous throughout, the branches very slender, green when young; petioles 4 to 9 mm. long; leaf blades lanceolate to broadly elliptic-ovate or even rounded, 4 to 7.5 cm. long, 1 to 4.5 cm. wide, cuneate to broadly rounded at base, pale beneath; racemes longer or shorter than the leaves, the flowers pedicellate; bracts acute or acuminate, covering the buds but caducous in anthesis; petals about 2.5 mm. long; fruit subglobose, about 8 mm. long.

SPECIMENS EXAMINED:

SONORA: Sierra de Alamos, 1890, *Palmer* 298.

SINALOA: La Rastra, alt. 600 meters, 1899, *Goldman* 361. Along road from Culiacán to Las Flechas, 1899, *Goldman* 313.

TEPIC: María Madre Island, May 11, 1897, *Maltby*.

COLIMA: Manzanillo, 1890, *Palmer* 1009.

MICHOACÁN or GUERRERO: Sierra Madre, alt. 480 meters, in granitic soil, *Langlassé* 860. San Marcos to Copala (Guerrero), alt. 60 to 150 meters, *Nelson* 2290.

Langlassé's specimen is remarkable for its narrow leaves; the vernacular name is given as "palo de golpe." One of Goldman's specimens (no. 313) bears fruit and staminate flowers upon the same branch, but all the other specimens of the genus examined are from dioecious plants, so far as the specimens show.

Some of the specimens agree excellently with Sessé and Mociño's plate,² upon which the species was based. This is far superior to many of the plates of the series, and shows plainly the scalelike glands of the disk in the staminate flower.

Agonandra racemosa is more nearly like *A. brasiliensis*, the type of the genus, than is either of the following species. In *A. brasiliensis* the staminate flowers are densely glandular-puberulent rather than glabrous.

2. *Agonandra obtusifolia* Standl., sp. nov.

Shrub, 1 to 3 meters high, with long stout spreading branchlets, these green, striate, and finely puberulent, the older branches gray; petioles 2 to 4 mm. long, puberulent; leaf blades narrowly oblong to oblong-ovate, 2 to 5 cm. long, 0.6 to 1.5 cm. wide, cuneate at base, glabrous; staminate racemes 1 to 2 cm. long, glabrous, borne on old wood, the flowers short-pedicellate; stamens 3 times as long as the petals; fruit subglobose, yellow.

Type in the U. S. National Herbarium, no. 572649, collected in the vicinity of Victoria, Tamaulipas, Mexico, altitude 320 meters, in 1907, by Edward Palmer (no. 421).

ADDITIONAL SPECIMENS EXAMINED:

TAMAULIPAS: Vicinity of Tampico, 1910, *Palmer* 507. Buena Vista Hacienda, June 16, 1919, *Wooton*.

VERACRUZ: Vicinity of Pueblo Viejo (near Tampico), 1910, *Palmer* 423.

Palmer gives the vernacular name as "granadillo," and Wooton as "revienta cabra." Palmer reports that the shrub grows in hedgerows or in rich wooded bottom lands; the leaves are light or dark green. The abundant fruit, he states, appears as if covered with honey dew; it has a sweet, watery flavor, but is not eaten by the natives.

Agonandra obtusifolia is easily distinguished from *A. racemosa* by the characters given in the key. The leaves average much smaller and narrower than in the latter species, and the petioles are relatively much shorter. The coarse, stiff branches indicate a different habit of growth.

² A.DC. Calq. Dess. Fl. Mex. pl. 169, pl. V, B.

3. *Agonandra konzattii* Standl., sp. nov.

Branches stiff, the young ones green, striate, minutely puberulent, the older ones grayish; petioles slender, 2 to 3 cm. long, minutely puberulent; leaf blades lance-oblong to oblong-ovate, 2 to 3 cm. long, cuneate-acuminate at base, rounded or very obtuse at apex, glabrous; fruit subglobose, 1.5 cm. long, the stout pedicels 5 to 6 mm. long.

Type in the U. S. National Herbarium, no. 1012311, collected at Portillo de Coyula, Distrito de Cuicatlán, Oaxaca, Mexico, altitude 1600 meters, April 23, 1919, by C. Konzatti (no. 3558).

A sterile specimen from Tehuacán, Puebla (*Rose & Rose* 11221), is probably the same species. Prof. Konzatti gives the vernacular name as "maromero."

Agonandra konzattii is related to *A. obtusifolia* more closely than to *A. racemosa*. It differs chiefly in the size of the fruit, which is twice as large as in *A. obtusifolia*. Several fruiting specimens of the latter species have been seen by the writer, and in all of them the fruit is very uniform in size; therefore it seems probable that the much larger fruit of the Oaxaca plant is a character of specific value.

ENTOMOLOGY.—*Notes on the Harris collection of sawflies, and the species described by Harris.* S. A. ROHWER, Bureau of Entomology.¹

Harris wrote four papers² dealing with sawflies. Two of these were mere lists of the species and published as a part of a list of the animals and plants of Massachusetts. In these lists occur a number of new names unaccompanied by descriptions which stood as *nomina nuda* for many years. Later, in 1841, Harris characterized a few of these species but many of them remained *nomina nuda* until many years later, when Norton studied the Harris collection and described the new species. The unfortunate thing about this was that in describing the species Norton accredited the species to Harris and there has

¹ Received June 8, 1920.

² *List of the insects of Massachusetts*, in Hitchcock's Rept. Geol. Mineral. Bot. and Zool. Mass., 566-595. 1833. Sawflies treated on p. 586.

Ibid., second edition, enlarged, 553-601. 1835. Sawflies treated on pp. 582-584.

A report on the insects of Massachusetts, injurious to vegetation. Cambridge, 1841. Reprinted in 1842, second edition in 1852.

Sawfly of the raspberry; Selandria (Hoplocampa) rubi, New Engl. Farmer II, 2: 33. figs. 1850.



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