

NEW SPECIES IN THE URTICACEAE AND SAPINDACEAE
FROM THE RIO PALENQUE SCIENCE CENTER, ECUADOR

C. H. Dodson* and A. H. Gentry**

Pilea riopalenquensis A. Gentry & Dodson, sp. nov. (Plate 18:B).

Pilea costaricensis Donn. Smith affinis, sed foliis laterioribus et trinervi-
bus supra basim differt.

Terrestrial rather succulent herb, stems quadrangular. Leaves elliptic, acute to acuminate, acute at base, margin serrate, above with numerous prominent linear cystoliths, below with trichomes scattered along veins, 3-veined from above base, the two leaves of each pair very unequal in size on mature (fertile) plants, the larger to 13 by 7 cm with petioles 1.5-6 cm long; the leaves of a pair subequal in juvenile plants; stipules persistent, 3-5 mm long. Inflorescence sessile, axillary, many-flowered, ca. 1 cm across, the flowers minute, ca. 0.5 mm long, the perianth covered with linear cystoliths.

ETYMOLOGY: Named for the Río Palenque Science Center.

TYPE: *ECUADOR*: LOS RÍOS: Río Palenque Science Center, km 56, Quevedo-Santo Domingo, alt. 150-220 m; cultivated at Marie Selby Botanical Gardens, Nov. 1976, *Dodson & Gentry 6605* (HOLOTYPE: MO, ISOTYPE: SEL).

ADDITIONAL MATERIAL EXAMINED: *ECUADOR*: LOS RÍOS: Río Palenque Science Center, Aug. 1976, *Dodson 6211* (MO, Rio Palenque Science Center).

This is most like *Pilea costaricensis* Donn. Smith of Costa Rica and Panama in its sessile inflorescence and anisophyllous leaves and we were originally inclined to treat it as a form of that species. However *P. costaricensis* has somewhat narrower leaves which are always 3-veined from the base, the latter difference a definitive one according to Burger (pers. comm.). We find no similar species at MO or F which shares the combination of anisophylly, a sessile inflorescence, and leaves 3-veined from above base. The closest species to this character combination at F is *P. rhombifolia* Killip from Santa Marta, Colombia, which has the leaves much smaller and the inflorescence only subsessile. In Killip's (Contr. U. S. Nat. Herb. 26: 367-394, 1936) key, *P. riopalenquensis* belongs to the *Flexuosae* group but it is clearly neither of the species included in this group by Killip.

We have not observed this species to flower in the wild but it produced flowers readily when brought into cultivation at Selby Botanical Gardens.

Pilea selbyanorum Dodson & A. Gentry, sp. nov. (Plate 18:C).

Species haec foliis peltatis, caulibus quadratis alatisque, et inflorescentiae longipedunculatae a congeneribus differt.

Succulent herb to 60 cm tall, terrestrial, or rarely epiphytic. Stems to 2 cm thick, quadrangular, the angles with sharp wings to 3 mm wide. Leaves in pairs of equal size, 7-10 cm long, 5.5-9 cm wide, broadly ovate, peltate, acuminate at the apex, subcordate at the base, the margin crenate, glabrous, 5-veined from the junction of petiole, bullate between the tertiary veins, with reddish, terete petioles 8-11 cm long; stipules persistent, cordate 1.5 cm long, 2 cm wide, connivent on the margins on each side of the stems. Inflo-

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rescence long-pedunculate, to 10 cm long, axillary, many-flowered, about 4 cm across, the flowers minute, ca. 2 mm long, greenish-white.

ETYMOLOGY: Named for the Marie Selby Botanical Garden from which the species was introduced to the nursery trade.

TYPE: *ECUADOR*: LOS RÍOS: Río Palenque Science Center, km 56 Quevedo-Santo Domingo Road, alt. 150-220 m, *Dodson 5140* (HOLOTYPE: SEL, ISOTYPE: MO).

ADDITIONAL MATERIAL EXAMINED: *ECUADOR*: LOS RÍOS: Río Palenque Science Center, *Dodson & Vriese 4254* (SEL, US, F, RPSC, QCA), *A. Gentry 17997* (MO).

This species is unlike any known *Pilea* and was first determined as "*Begonia*, sterile." Dr. William Burger of the Field Museum assures us that it is not a known species (pers. comm.). The peltate leaves, square, winged stems, and long-pedunculate inflorescences are distinctive features.

DISTRIBUTION: Western Ecuador.

Cupania riopalenquensis Dodson & A. Gentry, sp. nov. (Plate 18:D).

Cupaniae sylvaticae Seem. similis, sed statura multo majore, fructibus extus glabris et intus septis sericeis differt.

Large tree to 35 m tall, DBH to 1 m; bark rough, dark red-grey outside, the inner bark red; young branches puberulent, sulcate. Petioles 4-5 cm long; leaflets 6-7, short-petiolate, the petiolules swollen, the leaflets alternate, elliptical, entire, acute at the base, acuminate at the apex, 8-22 cm long, 4-7.5 cm wide, glabrous, apapillose. Panicles of the inflorescence shorter than the leaves, to 2.5 cm long, laxly branched, tomentulose; pedicels 1 mm long; sepals ovate, free to the base, 2.5 mm long, tomentulose, pale brown; petals clawed basally, ovate, white, long-sericeous, 4 mm long; petal scales equalling the petal, bifid, long-sericeous; disc tomentulose; stamens 3 mm long. Capsule obovate-trigonous, shortly stiped, glabrous outside, red-brown, glabrous inside except for dense, long-sericeous hairs on the septa.

ETYMOLOGY: Named for the Río Palenque Science Center.

TYPE: *ECUADOR*: LOS RÍOS: Río Palenque Science Center, km 56, Quevedo-Santo Domingo, alt. 220 m, fruiting in Oct., *C. H. Dodson & A. H. Gentry 6563* (HOLOTYPE: SEL, ISOTYPES: MO, RPSC, QCA).

ADDITIONAL MATERIAL EXAMINED: *ECUADOR*: LOS RÍOS: Same locality. Flowering in Aug., *C. H. Dodson 6153* (SEL, MO, RPSC). Same locality, fruiting in Oct., *C. H. Dodson & A. H. Gentry 6442* (SEL, MO, RPSC).

DISTRIBUTION: Western Ecuador, known only from the Río Palenque Science Center.

COMMON NAME: Sabroso.

This species is one of the large canopy trees at Rio Palenque. It flowers very heavily in early August for a period of 5-6 days. The flowers fall in such abundance that the forest floor under the tree becomes covered to a depth of 1 cm with tiny, snow-white blossoms. Fruits ripen and fall in December.