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TOLTEC, ANOTHER NEW HORTICULTURAL VARIETY OF AVOCADO

Wilson Popenoe

IT IS COMING TO BE GENERALLY RECOGNIZED that the improvement of Central American fruit culture depends in large part upon the vegetative propagation of superior seedling trees which are to be found here and there. Up to now, vegetative propagation has been limited mainly to those species such as the banana and the pineapple, which produce suckers or are otherwise propagated by divisions. The species of *Spondias* grow so readily from cuttings that when sections of large branches are used for fence posts they take root and develop into satisfactory trees.

In some parts of Central America grafting has in recent years become the accepted means of propagating numerous imported fruit varieties, such as those of the family Rosaceae, the citrus fruits, the mango and the avocado. But there is still a vast field awaiting us, in the selection and vegetative propagation of many fine tropical fruits such as the anonas, the sapotes, and the guavas.

While vegetative propagation is the basis of this work we must devote more attention to the selection of the best seedling forms of local origin. To make these known, to classify them, and to put on record accurate details regarding their qualities, good and bad, we must have recourse to systematic pomology. This is a subject which seems almost to have escaped attention in Central America. So far as I can recall, I have never seen a pomological description of a new fruit variety prepared in Central America — if we except the description of *Aztec*, a new horticultural variety of avocado, published recently in *Ceiba*.

In future issues of this journal, we propose to devote more attention to systematic pomology and its application to

the development of scientific fruit culture in these regions. Special techniques must be worked out for the description of many fruits which have been neglected by horticultural science. I endeavored to bring this matter to the attention of tropical horticulturists by publishing in "Tropical Agriculture" (Trinidad), vol. XVIII, N° 2, 1941, a brief paper entitled "The Mango: a Study in Systematic Pomology". In this I set forth the method which has been developed in Asia, and later in the United States, for the accurate description of named varieties of this popular fruit.

The description of avocado varieties has received much attention in the United State ever since avocados were first grafted commercially by George B. Cellon in Florida, back in 1901. William A. Taylor published during the early years of this century what were probably the first good descriptions of avocado varieties in the Yearbooks of the United States Department of Agriculture. No one was better prepared to set the standards for future workers in this particular field.

I now desire to place on record the description of a new avocado variety, one of the 1947 introductions from the Rodiles grove in Atlixco, state of Puebla, Mexico. The history of these introductions is adequately set forth in connection with the description of *Aztec*, referred to above. It should be mentioned that the present variety, when the parent tree was examined in the Rodiles grove, did not meet with approval on the part of several members of our party, because of the large size of the seed. In its favor was the tremendous crop it was carrying, the relatively small size of the fruit (now considered to be commercially a desideratum in California), and its brilliant, glossy green color. Budwood was brought to the Escuela Agrícola Panamericana, where several trees, both original buddings and several others propagated from them, came into bearing in 1950. The quality of the fruit has proved to be so excellent that it is considered worth while to name and describe the variety. It may prove to be highly desirable for the home garden, even if not acceptable for extensive commercial use. So far as concerns such regions as California and Florida, much will of course depend upon its resistance to frost, a feature which cannot be determined here. Though probably of hybrid origin, it leans strongly toward the Mexican race in characteristics of foliage and fruit, which gives rise to the hope that it may prove to be reasonably hardy.

PERSEA AMERICANA var. **Toltec**, *hort. var. nov.*

Originated as a seedling of unknown provenance in the Rodiles orchard, Atlixco, Puebla, Mexico, N° 13522. Age of tree unknown, but probably 25 years or more. First propagated vegetatively in October 1947. To be known as "Toltec".

FRUIT broadly ovoid to obovoid, occasionally almost round and occasionally tending toward broadly pyriform; size small; weight 6 to 8 ounces; surface smooth, glossy moss green with abundant small yellowish lenticels; skin thin, about like that of many varieties of the Mexican race; flesh cream-yellow near the seed, changing to yellowish green near the skin, texture smooth, no conspicuous fiber streaks; fat content not yet determined but probably rather high; flavor rich and nutty as is commonly the case in the Mexican race; quality excellent; seed medium large to large, round or broadly ovoid, tight in the cavity; season November to January at Escuela Agrícola Panamericana, Tegucigalpa, Honduras, (elevation 2600 feet).

TREE erect, well-branched, with rather small and stiff leaves, the anise-like odor not as strong as in many varieties of the Mexican race. The parent tree bore a tremendous crop in 1947 in Atlixco; budded trees did not produce any fruit in 1949 at Escuela Agrícola Panamericana but bore excellent crops in 1950. The tendency to alternate bearing cannot be determined as yet.

TWO NEW SPECIES OF PLEUROTHALLIS FROM HAITI

Louis O. Williams

A PECULIAR circumstance is to be noticed in West Indian orchids of several genera, apparently not common elsewhere or at least not common enough to impress itself on the observer. This is the dentate or denticulate margins of the leaves in a large number of species. This characteristic is to be noticed on both of the species described here. It is found on other species of the same genus and on species of *Oncidium* particularly.

Pleurothallis (§ Lepanthisformes) ***dentifera*** *L. Wms.,*
sp. nov.

Herbae parvae epiphytiae caespitosae usque ad ca. 4 cm. longae. Folia elliptica vel obovata, acuta vel obtusa, denticulata. Sepalum dorsale late ovatum, acutum. Sepala lateralia usque ad medium connata, ovalia, acuta, cucullata, leviter arcuata. Petala linear-lanceolata vel elliptico-lanceolata, acuta. Labelllum oblongo-ovatum; lamina basi truncata vel retusa. Columna sectionis.

Small caespitose epiphytic herbs up to ca. 4 cm. long, the 3-6 sheaths with flaring, ciliate mouths. Leaves 4-13 mm. long and 1.5-5 mm. broad, elliptic to obovate, acute or obtuse, the margins denticulate and subcartilaginous. Inflorescence one or more few-flowered racemes, subequal to the leaves. Dorsal sepal ca. 1.3-1.8 mm. long and 1-1.2 mm. broad, broadly ovate, acute, 1-nerved. Lateral sepals connate to about the middle, 1.3-8 mm. long and each 0.6-0.8 mm. broad, ovate, acute, cucullate, 1-nerved, slightly arcuate. Petals 1-1.2 mm. long and ca. 0.2-0.3 mm. broad, linear-lanceolate to elliptic-lanceolate, acute, nerveless. Labellum ca. 0.8 mm. long and 0.5-0.6 mm. broad, oblong-ovate, the lamina truncate or retuse at the base, surface minutely puberulent. Column 0.5-0.7 mm. long.

HAITI: epiphytic on hardwood trunks, Guimbi, Galata, Mornes des Commissaires, altitude 1800 m., June 21, 1942, Holdridge 1296 (TYPE in The Ames Herbarium, Harvard University, Cambridge, Massachusetts).

Pleurothallis dentifera is allied to the Haitian *P. hotteana* Mansf. but is easily distinguished by the shape of the lip and by other details. The specific name is in allusion to the denticulate leaf margins.

***Pleurothallis platyglossis* L. Wms., sp. nov.**

Herbae epiphytiae caespitosae parvae usque ad ca. 11 cm. altae. Folia linear-elliptica, acuta vel obtusa, carnosa, denticulata vel serrulata. Sepalum dorsale anguste lanceolatum, acutum. Sepala lateralia usque ad medium connata, ovato-lanceolata, acuminata. Petala linear-lanceolata, acuta vel acuminata, obscure denticulata vel integra. Labellum unguiculatum; unguis perbrevis; lamina orbiculari-subquadrata, basi auriculata, discus callis duobus ornatus et margine denticulatus.

Small caespitose epiphytic herbs 4-11 cm. tall. Secondary stems 1.5-5 cm. long, slender, with 1-2 scarious sheaths below. Leaves (when mature) 1.9-3.8 cm. long and 0.3-0.5 cm.

broad, linear-elliptic, acute or obtuse, fleshy, the margins denticulate or serrulate. Inflorescence a slender, few-flowered rachis exceeding the leaves in length. Dorsal sepal 9-10 mm. long and ca. 2.5 mm. broad, narrowly lanceolate, acute, 3-nerved. Lateral sepals ca. 10 mm. long and together 4-5 mm. broad, ovate-lanceolate, acuminate, connate to about the middle or beyond. Petals 4-5 mm. long and ca. 1 mm. broad, linear-lanceolate, acute or acuminate, obscurely denticulate or entire, 1-nerved. Lip ca. 2 mm. long and 1.5 mm. broad, unguiculate; claw very short, subfiliform; lamina attenuated into a narrow claw-like base which is provided with 2 small auricles, the terminal part broad, orbicular-subquadrate and with basal auricles and 2 small calluses on the disc near the auricles, margins more or less denticulate. Column ca. 3 mm. long; the clinandrium denticulate above, with a pair of obtuse, conspicuous terminal auricles.

HAITI: small epiphyte, Guimbi Galata, Mornes des Commissaires, alt. 1800 m., sepals greenish-brown streaked with brown lines, June 21, 1942, Holdridge 1287 (TYPE in Ames Herbarium, Harvard University, Cambridge, Massachusetts).

Pleurothallis platyglossis seems to be most closely allied to the Cuban *P. trichophora* Lindl., from which it differs in several details. *Pleurothallis platyglossis* is a much more delicate plant than *P. trichophora*, has the lateral sepals connate to the middle or beyond, not free, and different in shape, has a pair of small auricles at the much contracted base of the lip.

The lip of this species reminds one of the lip of *Masdevallia simula* Reichb. f.

A NEW TILLANDSIA FROM HONDURAS

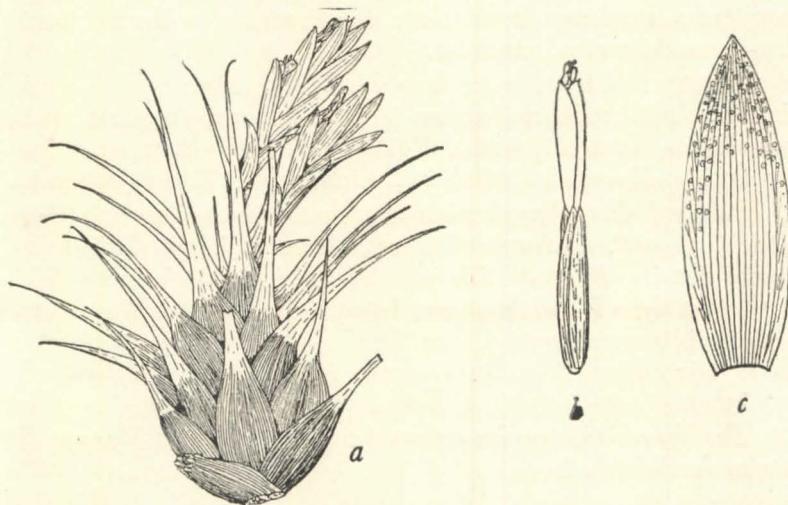
Lyman B. Smith

AMONG a number of unusual Bromeliaceae received from the Escuela Agrícola Panamericana in the last few years we find a Tillandsia which does not appear to have been noted before.

Tillandsia cryptopoda L. B. Smith, n. sp.

Acaulis, florifera 24 cm. alta; foliis multis, dense sed haud bulbose rosulatis, ad 20 cm. longis, utrinque densissime adpresso-lepidotis, vaginis ellipticis, amplis, castaneo-lepid-

otis, laminis anguste triangularibus, acuminatis, basi 15 mm. latis, cinereo-lepidotis; scapo brevissimo, foliis omnino occulto; inflorescentia pauperrime ramosa (spicis binis formata), curvata; bracteis primariis minimis quam eis florigeris multo minoribus; spicis erectis, ellipticis, valde stipitatis et bracteis sterilibus auctis, ca. 3 cm. latis, valde complanatis, densis 3-5-floris; bracteis florigeris ellipticis, acutis, ad 45 mm. longis, sepala superantibus, carinatis, vivis verisimiliter subcarnosis, ex sicco tenuibus nervatisque, rubris (! Williams), dissite obscureisque cinereo-lepidotis; floribus subsessilibus; sepalis lanceolatis, acutis, 4 cm. longis, liberis, membranaceis, dissite lepidotis; petalis erectis, fere 7 cm. longis, nudis, viridibus (! Williams); staminibus exsertis.



TILLANDSIA CRYPTOPODA L. B. Smith - *a*, habit, X 1/4; *b*, flower, X 1/2; *c*, floral bract, X 1.

HONDURAS: Morazán: on oak near La Labranza, Cloud forest on Mt. Uyuca, drainage of the Río Yeguare at about Longitude 87° W. and Latitude 14° N., alt. 2000 m., March 1950, Louis O. Williams 17224 (TYPE in Herb. Esc. Agr. Panam.).

In its habit and especially in its very short scape, *Tillandsia cryptopoda* resembles such species as *T. incurva* Griseb., *T. flabellata* Baker, and *T. patula* Mez. It differs from all three