

mountains above San Juancito, department of Morazán, alt. 2200 m., February 20, 1948, *Williams & Molina 13692* (TYPE in Herb. Escuela Agrícola Panamericana, dupl. in Herb. Chicago Nat. Hist. Museum and in other herbaria); same locality, 1947-1948, *Williams & Molina 13338, 13349, 13699, 13765*.

Allied to *Persea chiapensis* Lundell from south Mexico from which it is distinguished by the smaller fruits, simpler inflorescence, somewhat differently shaped leaves which are cuneate rather than subquadrate at the base. There is another allied, but undescribed, species which we have collected in the Cordillera de Talamanca in Costa Rica.

The tree is often exceedingly common in the cloud forest in the mountains above San Juancito, has not been collected on any of the other high cloud-forest covered mountains of central Honduras.

Named for Dr. Wilson Popenoe who has been collecting and observing the species of *Persea* in tropical America for more than thirty years.

TEOSINTE IN HONDURAS

Paul C. Standley

ONE of the most perplexing and genetically important native American plants is teosinte, *Euchlaena mexicana* Schrad., the only close wild relative of maize. There has been much speculation regarding its phylogenetic status, which, if established, would shed light on the origin of cultivated maize, whose immediate relatives are presumed to be extinct. Their disappearance is proof of a long cultivation of maize, which in numerous differing forms was grown in most temperate and tropical parts of the Americas before the arrival of Europeans, and was the basis of their culture.

For some time, in recent years, it was believed that teosinte was a natural hybrid between maize and wild grasses of the genus *Tripsacum*. Recent experimental work is now considered to have disproved this theory, and the trend of current opinion is that *Euchlaena* is an amply independent genus of grasses,

strangely similar in superficial characters to maize, but producing diminutive "ears" of widely different structure.

Teosinte was discovered in southern Mexico, but is known from few localities in that country. Later it was found in Guatemala in several areas of low and high elevations. The writer saw it in late 1940, at the end of the rainy season, in the vicinity of Jutiapa in eastern Guatemala, growing in abundance about the town, and even in the very streets of Jutiapa. In most instances it reproduced luxuriantly in corn fields from which maize had been reaped, but it grew also in thickets and weedy fields not recently cultivated. Teosinte is much more abundant in the Sierra de los Cuchumatanes of western Guatemala, where Kempton and Popenoe state that it is clearly wild, and covers large areas of land, like many other indigenous plants of the high sierra.

Until quite recently true teosinte had not been reported reliably from any locality south of eastern Guatemala, although there were vague rumors of its occurrence in western Honduras. A few months ago seeds of *Euchlaena* were sent to the Escuela Agrícola Panamericana by don Pompilio Ortega, Director General of Agriculture in Tegucigalpa, the seeds having been sent to him from Pespire, department of Choluteca, near the Pacific coast of Honduras. Some of these seeds were germinated in flower pots and when they were about 10 cm. high were transplanted to open ground. They have grown rather indifferently; the few plants in a citrus grove tasseled when a meter high or less, each producing a few strictly erect stalks, each stalk having numerous "ears" or pistillate inflorescences. Two plants transplanted to a flower bed, in better soil, are much more thrifty, but different in habit, with many much shorter stalks, spreading but little above the ground. All of these plants have been visited persistently by dozens of kinds of insects, which have done no visible injury, but can have contributed nothing to their welfare. One plant grown by Mr. Ortega at his office in Tegucigalpa, in a shallow box but in intensely fertilized soil, has produced 45 well developed stalks almost if not quite three meters high.

In order to have the occurrence of Teosinte in the Pespire region verified by a botanist, Wilson Popenoe requested me to visit the localities where it was reported to grow. I went

to Pespire on November 27, 1949, with Juan de Dios Cruz of that town, a student at the Escuela Agrícola Panamericana. The following day we rode by mule five leagues east to the little village of San Antonio de Padua, over one of the worst roads that I have traveled in all Central America; but we found teosinte in abundance, and wild, or at least as wild, perhaps, as it is found anywhere.

San Antonio lies probably at 780 to 850 meters, just below or at the base of the pine forest. The location of the tiny settlement is picturesque and almost unique, on a sort of "lap" of the mountains, in front of a high rock precipice, over which falls a small river supplying abundant water for the settlement. There is a small narrow valley of sloping land, on three sides of which rise steep slopes, cultivated for 200 meters or more above the valley, and planted with maize and sugar cane. Above the steep fields and pastures are much depleted stands of pine (*Pinus oocarpa*). Tired from the long hot ride, we spent but little time in verifying the presence of teosinte, but it was sufficient time for the purpose. From the village and from the field we visited, there were pointed out to us many colonies or *manchas* of teosinte, lying on all three sides of the cool valley.

The field we visited, just outside and barely above San Antonio de Padua, was devoted to sugar cane, with a little maize close by, but all about the cane, among tall plants of jaraguá and other grasses, were hundreds of teosinte plants, thrifty, mostly with very few stems or branches, and about as tall as rather poor maize. The vegetation was "weedy" — coarse herbs and second-growth shrubs of indifferent kinds, with interspersed avocado, mango, and other trees, all or mostly planted. There was no doubt that the teosinte here as in the higher colonies was wild, or at least not planted by man, and that it was able to withstand competition of the most luxuriant weeds of this region, something that maize never could do. It may be stated safely that teosinte, if not actually native, must have been here for a long time, and could continue growth if the land now cultivated were abandoned.

It is a satisfaction to verify such a great range extension to the southward of this enigmatic plant, and well worth the ten long leagues of arduous roads, which nevertheless were

interesting because of the varied scenery, culture, and vegetation that they revealed. Who has seen only the highroads of Honduras, primitive as they seem even to those who best love the country, has seen but little of the real Honduras that lies off the traveled highways.

There are very recent but still unverified reports of teosinte from the mountains of the department of Francisco Morazán, not far from Tegucigalpa, from the mountains of Copán, and even from Nicaragua.

In the Pespire région teosinte is well known but not by its Mexican name. Here it is called *maíz café* or *maíz silvestre*. The former name is applied because the curious triangular kernels are roasted and mixed with ordinary coffee, or used as a substitute for it. It was stated that the ordinary coffee was "better than teosinte" and probably it is. Teosinte is planted in some places about Pespire as forage for stock, since it persists after maize and *maicillo* (*Sorghum vulgare*) have dried. It is not believed that it is of great local importance.

In Honduras it is useless to inquire for *Euchlaena* by its Nahuatl or Mexican name of teosinte, a term established in foreign nomenclature. In Honduras that name is well known but it pertains to quite a different plant, a cycad, described on an earlier page of this volume as *Dioon Mejiae* Standl. & L. Wms.

A NEW PSAMMISIA FROM COSTA RICA

A. C. Smith

AMONG other interesting specimens of Vacciniaceae and Ericaceae recently obtained in Costa Rica by Dr. Louis O. Williams is a *Psammisia* which represents an undescribed species, of interest as being the second known species of the genus to occur in Costa Rica. The novelty may be known as:

***Psammisia Williamsii* A. C. Sm., sp. nov.**

Frutex epiphyticus dependens ubique glaber, ramulis gracilibus teretibus; petiolis rugosis semiteretibus 8-11 mm. longis circiter 2 mm. diametro; laminis in sicco fuscis subcoriaceis anguste oblongo-ellipticis, 10-13.5 cm. longis, 3-5 cm.