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A Gem for Tissue Culture: *Asterogyne spicata* of Venezuela

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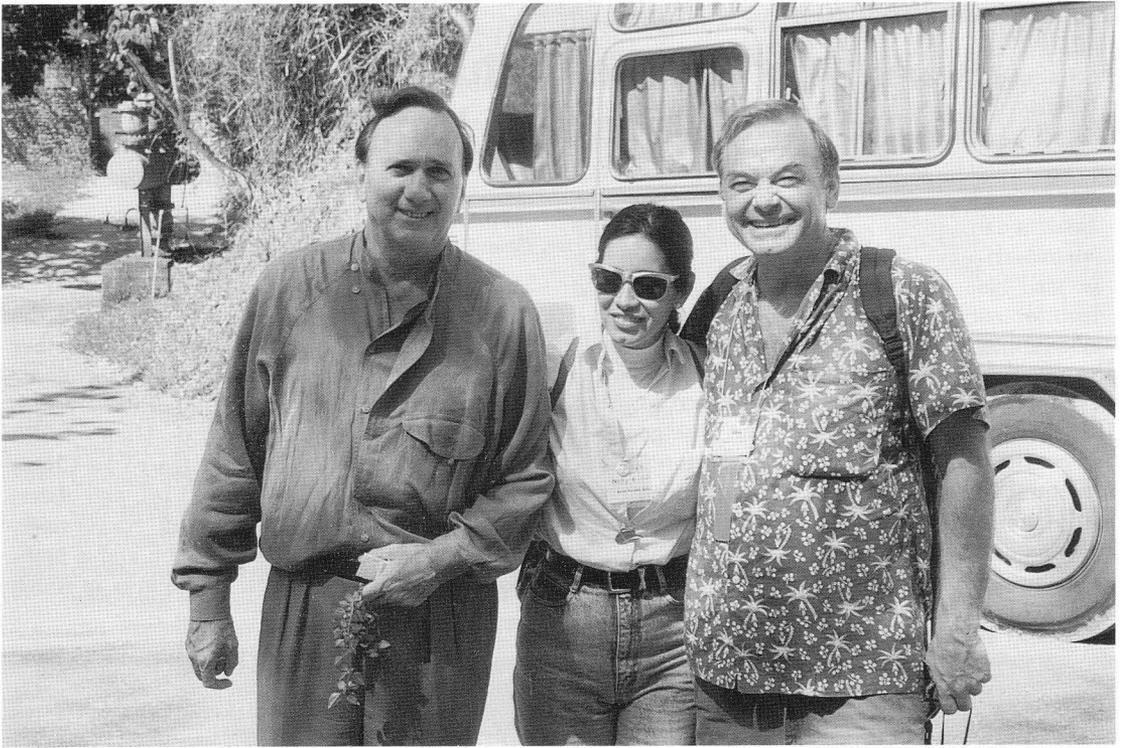
According to *Genera Palmarum* (Uhl and Dransfield 1987), the genus *Asterogyne* belongs to the largest subfamily, Arecoideae, and to tribe Geonomeae, where *Geonoma* is the type genus.

For *Asterogyne*, five species have been reported in Central America and in northern South America. *Asterogyne martiana* is native in Central America and has been found also in Colombia. It grows in wet forest, often at low elevation ca.

200–400 m above sea level. There are three other species which occur in Venezuela: *Asterogyne ramosa*, in the state of Sucre (Gulf of Paria: Cerro Espejo 750–850 m and Cerro de Humo 1,060 m) and in the state of Yaracuy (cerro La Chapa north of Nirgua at 1,200–1,300 m), and *Asterogyne yaracuyense* Henderson & Steyermark, which has a very limited distribution and is probably an endangered species, as the area in which



1. The blood-red center leaf of a juvenile *Asterogyne spicata*. 2. Dr. John Dransfield with an adult *Asterogyne spicata* individual, which has at least four new flower bracts, in Guatopo National Park.



3. IPS President Jim Cain, who masterminded the Caracas Biennial; Venezuelan guide Nelly Esteves, who animated the busloads of IPS participants; and Oscar Martinez, host at Hacienda Carabobo, who will propagate *Asterogyne spicata* by tissue culture in the AGRICAR labs at Turgua, near Caracas, Venezuela.

it has been found is being destroyed (Henderson and Steyermark 1986). The third one in Venezuela, *Asterogyne spicata*, has been found in Guatopo National Park in the state of Miranda at about 500–600 meters elevation. There is also a new species, *Asterogyne guinanesse*, recently discovered in an expedition to Mt. Belvedere in southeast French Guyana.

Asterogyne spicata is an elegant, small, solitary palm, very well adapted for horticulture. It is also relatively easy to propagate. The genus *Asterogyne* is monoecious, with male and female flowers on the same plant. *A. spicata* has a spicate inflorescence and the male flowers have 21–24 stamens, whereas *A. ramosa* has a branched inflorescence with 4–12 unbranched rachillae. Male flowers of *A. ramosa* have 10–12 stamens.

The seeds germinate in 3–4 months and the seedlings are relatively slow in growth. However, given the same conditions as in its habitat—good well-drained soil, which should not be too difficult to comply with—it is a fine palm, excellent for

indoor cultivation (Hoyos and Braun 1984, Wes-sels Boer 1988).

In the forest one can see grown-up individuals of up to 8 m high, stems ca. 4 cm diameter, and leaves erect up to 120 cm long, multinerved at 25 degrees to the center nerve. The first young leaf is frequently red colored, which gives the palm a very great ornamental value (Figs. 1,2). At a distance it seems as if the plant were in flower.

The local name in the state of Miranda, Venezuela, is “Palmiche” and the dark red ovoid fruits, 18 mm long and 7 mm wide are edible. The endocarp has a sweet acid taste.

The red leaves also occur in quite a few species of trees in genera like *Mesua*, *Calophyllum*, *Cinnamomum*, *Eugenia*, *Diospyros*, *Brownea*, *Saraca*, *Mangifera*, *Bombax*, *Pachira*, *Lophira*, *Triplaris*, *Coccoloba*, *Ricinus*, as well as in plants like *Coleus*, *Acalypha*, *Cordyline*, *Codiaeum*, *Caladium*, etc. The coloration is sometimes so vivid that from a distance the plants seem to be in flower.



4. Author Sven Nehlin of Venezuela and Sue Rowlands of Southern California at Guatopo National Park during the June IPS Biennial with new leaf of *Asterogyne spicata*. Photograph by Jim Cain.

Some other palms in the tropics show the same phenomena, but usually to a lesser degree. There are brown reddish leaves in *Pinanga kuhlii*, *P. patula*, *Heterospathe elegans*, some *Oenocarpus* from the Amazonas area, and *Salacca zalacca*. Yellow/orange young leaves also occur in species like *Phoenicorium borsigianum*.

The coloration of the leaves certainly gives these palms an increased ornamental value, as do the the red or orange crownshafts of *Cyrtostachys renda* and *Areca vestiaria* or the violet/blue leaf borders and shoots of *Latania lontaroides* and *L. loddigesii* in young plants. All this gives these palms special attraction as ornamental species for horticulture in general and especially for palm enthusiasts who like myself enjoy collecting rare and ornamental species.

Here is where the new methods in tissue culture with massive propagation can be applied to shorten the production time, preserve the genetic properties of any particular specimen, and also save endangered species.

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