

Occidente y Oriente: Collecting Palms and Cycads in Ecuador

by Amanda K. Neill and John P. Janovec

Ecuador harbors incredibly high biological diversity. This is evinced by an estimated 15,000–17,000 plant species, of which approximately 130 are palms and 5 are cycads. One factor in the diversification of life in Ecuador is the mighty Andes mountain range, which divides the country longitudinally. In the search for seeds to enhance MBC's New World collections of palms and cycads, we explored moist forests on both sides of the highlands with our Ecuadorian collaborator Wilson Quizhpe during September of 2000.

Fernando Nicoalde, a botanist at the University of Ibarra, accompanied us on the first leg of our trip to the Esmeraldas Province, on the western (occidente) side of the Andes. He took us to various sites in the lush forests along the Rio Cayapas, accessible only by canoe. Fernando's friends in several villages led

the way to populations of three cycad species: *Zamia lindenii*, *Z. roezlii*, and a new unnamed species of *Zamia*. We collected seeds from all three species. The two described species were found with mature female cones, each of which had already released some seeds onto the ground beneath the mother plants. The beautiful scarlet flesh on these seeds was punishingly foul-smelling. We realized later the smell would not wash off our hands for several days!

While driving east on the road to Lita, we stopped to collect from a large population of the palm *Bactris coloradonis* that was on farmed land. Our activities attracted the attention of a group of men down the road, and one approached us and informed us that this was his farm. We explained our purpose, and paid him for the privilege. When a truck full of men drove by, he hopped in, and they disappeared down the road. A few minutes later another man walked toward us and told us that HE was the owner of this farm. We gladly paid twice for the *Bactris* on this "collectively-owned" property.

The rest of our trip was spent on the eastern (oriente) side of the Andes, where all rivers eventually flow into the great Amazon. When viewed from the lower foothills, the Amazon basin looks like a misty, green ocean, unbelievably flat and stretching to an infinite horizon. We made collecting forays from the border town of Tena in the eastern-central Napo Province.

Mauritia flexuosa is a robust palm found in villages along the Rio Napo. The sweet-tasting fruit has an unusual scaly red covering, and each scale separates and flakes off when the fruit is ripe. Villagers helped us to harvest



these fruits with a bamboo pole to which was affixed a second short stick pointing back at an angle, creating a hook.

During another foray, we were looking for ripe *Chamaedorea* fruits in the forest during a downpour, when we were startled by what looked like a large pink snake moving through the detritus. On closer inspection, we realized that this was a two-foot-long earthworm as thick as a garden hose!

We logged several canoe-hours in the southeastern Zamora-Chinchipe Province to reach Shaime, an indigenous village on the Rio Nangaritza. This river cuts through sandstone hills near the Cordillera del Condor, and at times winds through narrow steep-walled canyons interrupted by occasional waterfalls. The forest in this area is pristine and beautiful, and here we made most of our palm collections, including many as-yet unidentified species of *Chamaedorea* and *Geonoma*.

With the help of various individuals along the way, we collected seeds from 26 species of palms and 3 species of cycads during our trip. Our special thanks to the staff and students at the National and Loja herbaria. Next trip, we hope to collect from the other 100+ species of Ecuadorian palms and cycads.



From left to right are Wilson Quizhpe, John Janovec, and Fernando Nicoalde, holding inflorescences (flower clusters) and infructescences (fruit clusters) of the palm *Wettienia quinaria*.