

Palms of Vietnam – a Progress Report

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When we began our survey of the palms of Vietnam in 2007, we thought there might be about 60 species in the country. That was based on the most recent treatment of the palms by French colonial botanists, published in 1937 (Gagnepain & Conrard 1937). How wrong we were! We have now made 12 field trips and collected about 750 palm specimens. Based on these, we now recognize 23 genera and 105 species from Vietnam. Of these we have described 33 new species and one new genus – with no end in sight! In this article, we report on our most recent field trip in October 2015.

Our first stop was Ba Be National Park, about 200 km due north of Hanoi, in Bac Kan province. Along the road we saw millions of *Livistona*, ones we call *L. jenkinsiana* and *L. saribus*, growing next to each other. Perhaps we have to start using the name *L. speciosa* instead of *L. jenkinsiana*, based on the obovoid fruits of this species (see Barfod et al. 2010). Ba Be turned out to be a disappointing place for palms, although *Caryota maxima* was quite common, as was *Calamus henryanus*.

After returning to Hanoi we made a one-day trip to Tam Dao, a granite mountain just north of Hanoi. Again there were few palms, but some beautiful *Caryota obtusa* were growing in

the mist. These two species of *Caryota* are common in many places in Vietnam, and easy to distinguish by the pendulous leaves spaced along the upper part of the stem in *C. maxima*, and the flat, triangular leaves of *C. obtusa* crowded at the top of the stem (Fig. 1).

Our next stop was Ha Giang province, in the extreme north of Vietnam. We drove to the small town of Meo Vac, near the border with China. It is an area of spectacular scenery and hair-raising roads. Along the way, we saw several cultivated plants of a species of *Trachycarpus*, and one, small, solitary plant growing on a completely deforested hillside. Based on images, Toby Spanner kindly



1 (top). *Caryota obtusa* (left, at Tam Dao) and *Caryota maxima* (right, at Ba Be). 2 (bottom). *Calamus albidus* near Meo Vac; grayish lower surfaces of leaflets, and fruits.

confirmed these as *Trachycarpus fortunei*. The main purpose of our visit to Meo Vac was to look for an unusual species of *Calamus*. A colleague had sent us an image of this palm,

and we could see that it was obviously something new for Vietnam. It turned out to be *Calamus albidus*, a species known from across the border in Yunnan, China. It grows



3 (top). New species of *Calamus* from Kon Tum; leaf and fruits. 4 (bottom). *Licuala manglaensis* (left) and *Pinanga kontumensis* (right).

in large clumps and has leaflets that are grayish on the lower surface, and beautiful fruits with the scales covered with reddish-brown hairs (Fig. 2). Local people reported that in each clump, the largest stem dies after fruiting,

replaced by smaller stems in the same clump.

Our next stop was Kon Tum province, a long drive south of Hanoi. We were interested in an area where the recently completed Ho Chi



5. An acaulescent species of *Pinanga*. Inset, fruits, with the soil removed.

Minh Highway passes through undisturbed montane forest. We had visited this area in 2013 and had collected a small *Calamus* but had found only sterile plants. We were luckier this time and found fruiting plants. It is no doubt an unusual new species (Fig. 3).

Superficially it looks a lot like any other *Calamus*, but this one has some unique characters. It is the only *Calamus* we know that has spicate partial inflorescences (both male and female) and fruits with ruminant endosperm and a slimy sarcotesta. It is like

6. Left, *Lanonia centralis*. Right, *Licuala bachmaensis*.



many other Vietnamese palms in having highly unusual morphology. It is also remarkable that from this tiny area of forest, just a few kilometers along either side of the Highway, four, completely distinct, newly discovered species of palm occur – our new *Calamus* as well as *Calamus kontumensis*, *Licuala manglaensis*, and *Pinanga kontumensis* (Fig. 4). How many other such places are there are along the Ho Chi Minh Highway, a new road from Hanoi to Ho Chi Minh City, with over half the 1800 km distance through undisturbed forest?

We returned from Kon Tum along the road from Mang La to Quang Ngai. We decided to stop and have a look in a piece of forest near the road. Here we found an amazing *Pinanga*, with very short, clustered stems and subterranean flowers and fruits (Fig 5). We had to dig to collect them! This species seems most similar to one we had described earlier from southern Vietnam, *Pinanga cattienensis*, but that species grows at much lower elevations and much further to the south.

Our next stop was Da Nang. Our purpose here was to look for a species of *Calamus*. Earlier this year, one of us (Henderson) had seen a specimen in the Paris herbarium consisting of a small *Calamus*, collected in 1927 by J. and

M. Clemens and said to come from “rocky hills near Tourane” (the colonial name for Da Nang). It is obviously an undescribed species with very unusual morphology. We were not too optimistic about finding this palm, after so long a time, with so vague a locality, and near so large a city. We thought the most likely place was the famous Marble Hills between Da Nang and Hoi An. Despite much searching we did not find the palm, although local people told us that a rattan used to grow there, many years ago. We decided to look in the nearby Son Tra Nature Reserve. There are lots of palms there, growing on lots of rocky hills, but we did not find our *Calamus*. However, there were many other species, including *Licuala bachmaensis* and *Lanonia centralis* (Fig. 6).

From Da Nang we drove north. Just before the Hai Van pass we noticed a sign for a waterfall area just off the road, called Suoi Luong. Although these waterfall places are where people go for picnics, they are always interesting because there is often forest along the rivers, even though it is usually highly disturbed. We were not disappointed. The first palm we saw was *Chuniophoenix suoitienensis* (Fig. 7), recently described from a very similar locality, Suoi Tien, more than 500 km to the south near Nha Trang (Henderson 2015). There were also many plants of *Rhapis laosensis*

7. *Chuniophoenix suoitienensis* at Suoi Luong.





8 (top). *Livistona jenkinsiana* in Phong Nha-Ke Bang. 9 (bottom). New species of *Rhapsis* in Phong Nha-Ke Bang.

growing at Suoi Luong along the rocky banks of the river.

From Suoi Luong we continued over the Hai Van Pass and down to Bach Ma National Park.



10. Phong Nga-Ke Bang National Park. The *Rhapis* grows at the bases of the limestone cliffs.

Here our friend Mr. Quyet, a retired rattan collector who lives near the Park, had collected *Calamus spiralis* for us. We have been interested in this palm for several years. It is a most unusual species of *Calamus* in possessing both a flagellum and a cirrus, and is known from only one tiny locality about five hours' walk southwest of the Park headquarters. It is another example of a Vietnamese palm with highly unusual morphology.

From Bach Ma we continued to Phong Nga-Ke Bang National Park. In the garden of our hotel, *Livistona jenkinsiana* was fruiting (Fig. 8). The Park is a wonderful place, famous for its rugged, limestone scenery, huge caves, and subterranean rivers. Our quarry here was a species of *Rhapis* that we knew grew along a road that goes through the park and on to Laos, Route 20. During the war this road was a branch of the Ho Chi Minh Trail and was heavily bombed. You can still see the craters in the forest near the road. We stopped at a small temple near the start of the road, the Temple of the Eight Girls. Here, on 14 November 1972, eight girls, all under 20 years of age and part of a volunteer force that maintained the Trail, sheltered from the bombing in a cave. A bomb caused a large rock to fall and block the entrance to the cave, trapping the girls inside. Although the would-be rescuers could hear their cries for help, the rock was too big to move.

We were fortunate to find the *Rhapis* in both flower and fruit. It is a dwarf palm, scarcely one meter tall with leaves with only a few segments (Fig. 9). It grows along the bases of limestone cliffs (Fig. 10), in apparently pure limestone rock. We were able to confirm it as a new species, apparently related to two other Vietnamese species, *Rhapis puhuongensis* and *R. vidalii*, but differing in its youngest leaves which are silvery-gray on the lower surface. We were happy to find this palm because one of us has been revising the genus (with IPS support), and this species was the last piece of the puzzle (Henderson 2016). It is curious that many *Rhapis* species have such local distributions. Despite apparently large areas of suitable habitat, they seem to occur in only a few, limited areas.

From Phong Nga-Ke Bang we returned to Hanoi. Although we had not collected many specimens on this trip, we had made up for this in quality – three potential new species and one new country record for Vietnam – with still no end in sight!

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