

Exploring for Palms in Japan, Part II: The Ogasawara Islands

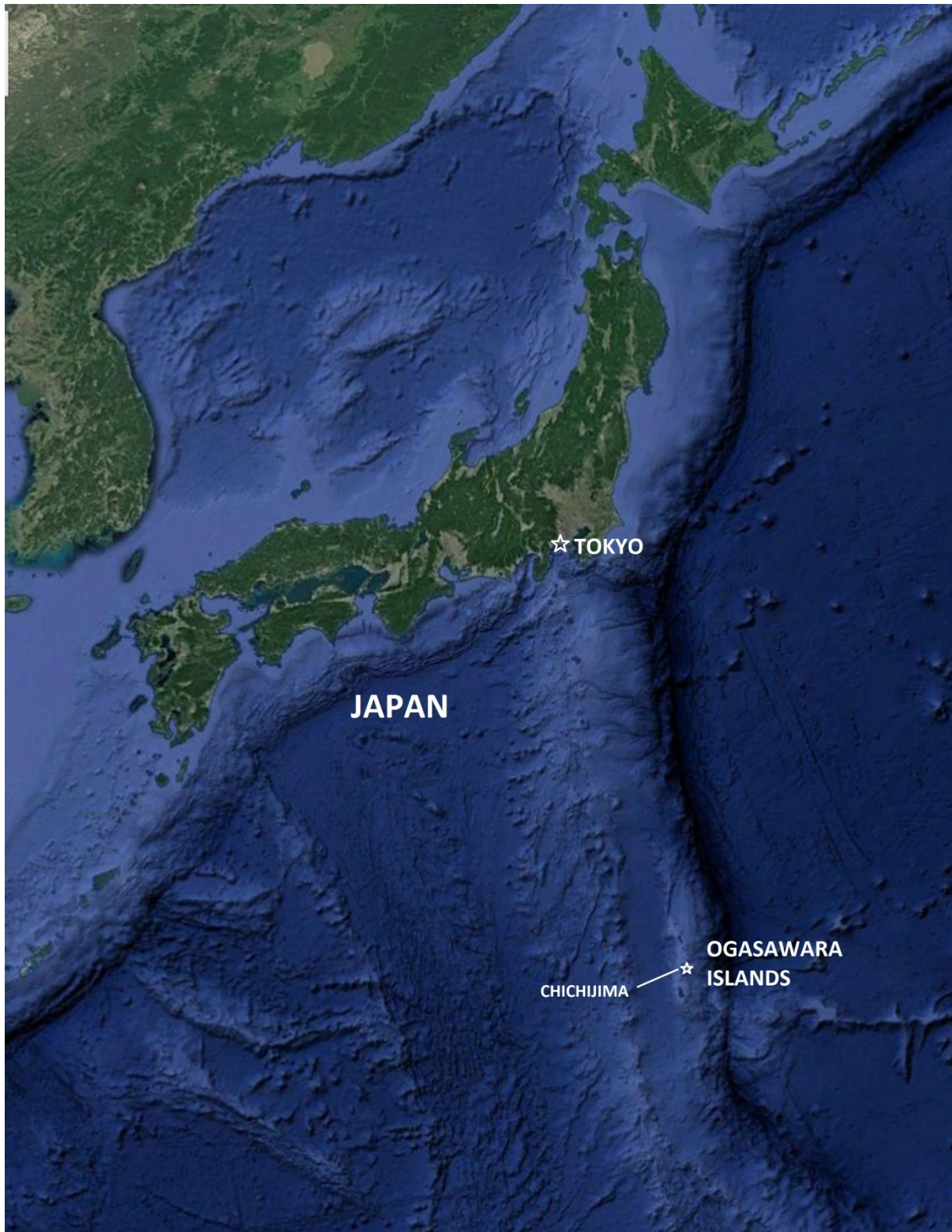
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Part I of this installment (Hodel and Hsu 2017) covered our trip to look at wild and cultivated palms in the Ryukyu Islands, Kyushu, Kyoto, and Tokyo in 2013. Because of a typhoon, we were unable to complete the last leg of our 2013 Japanese sojourn, a trip to the fabled Ogasawara Islands. Thus, we returned to Japan in May of 2014 to visit these remote islands and complete our study of Japanese palms. Unfortunately, Adam Chi-Tung Hsu, who accompanied me in 2013, was unable to participate in the 2014 trip. However, my son Robert, who was with Adam and me in 2013 and who loves to explore but not necessarily look at palms, again joined me. Also joining in the 2014 trip were my wife Marianne, our daughter Christina, and Christina's friend Rich. Our goal in the Ogasawara Islands (Bonin Islands) was to see the endemics *Clinostigma savoryanum* and *Livistona boninensis*. These two trips to Japan were part of a much larger project to catalog, document, and illustrate Pacific Island palms, a study that I have been undertaking for many years and will likely be a life-long labor of love.

We departed Los Angeles, California on May 20, and after losing a day crossing the International Date Line, we arrived early in the morning of May 22 in Kyoto in central Japan. After settling in to our hotel but still somewhat groggy from the long, overnight flight, we made a short walk to admire some native ferns growing on wooded, damp slopes within the hotel's confines. Then we were off as tourists for two days, exploring numerous historic and cultural sites in and around the city, which must rank as one of the most handsome and appealing in the world.

On the morning of May 25 we boarded the Shinkansen (bullet train), which spirited us effortlessly for a few short hours across scenic countryside to Tokyo. Upon arrival, we took several trains to our hotel at Takeshiba on Tokyo Bay, the location from which our boat would depart the next day for the Ogasawara Islands. In the afternoon we visited the offices of OgasawaraKaiun, the company whose boat would take us to the Ogasawara Islands, and paid for our package trip (boat and hotel accommodation) and made other arrangements.

The next morning, May 26, we were excited and full of anticipation as we checked out of our hotel and walked with our luggage the short distance to Takeshiba pier where we would board our vessel, the *Ogasawara Maru*, for the 24-hour trip to Chichijima in the Ogasawara Islands. Because the Islands have no airport, sea voyage is the only way to travel there. Chichijima, the main island in the Ogasawara group, is about 1,000 km nearly due south of Tokyo (**Fig. 1**). The *Ogasawara Maru* typically makes one trip a week to Chichijima, for example, departing Tokyo Monday morning, arriving in Chichijima Tuesday morning, overnighting in Chichijima for three days, departing Friday afternoon and arriving back in Tokyo Saturday afternoon before readying for another trip to Chichijima on Monday morning. One voyage would allow us three days and



1. Map showing Japan and the Ogasawara Islands. Chichijima, the main island in the archipelago and my objective, is about 1,000 km nearly due south of Tokyo. (Adapted from Google Earth).

three nights, which we had decided would be sufficient for us to explore the island and see the palms.

We boarded the *Ogasawara Maru* and each was assigned a spot in economy class, which consisted of a futon pad and small pillow on a designated rectangular space of 200 × 75 cm (about 6.5 feet × 2.5 feet) on the floor in a large room holding about 75 such side-by-side spaces. This rectangular space would be our “cabin” or “seat” for the duration of the 24-hour trip. At night, and even for much of the day, the room was packed with stretched-out bodies side by side, sleeping, reading, or courteously speaking in quiet, hushed tones with neighbors. We could have booked higher classes of service and had private berths and bathroom facilities but felt that we could experience Japanese culture more fully by participating in this communal living arrangement (beside, it was much less expensive, too); indeed, we were the only non-Japanese in our large room and had the opportunity to interact with Japanese people on numerous occasions, including being woken the next morning at 6 AM by a reverent and somewhat spiritual harmonica player, who graciously bowed and ceased playing after receiving several stern looks from foreigner and Japanese alike! Food was available for purchase on board and we also brought some of our own, which was easily accessible in our luggage stored on shelves lining our “quarters.” During the daylight hours we walked the ship, viewed the never-ending ocean, sat in lounges and enjoyed snacks and drinks, ate dinner in the cafeteria, and then showered before retiring to our floor space for an uneventful and restful night, the vessel’s gentle rocking lulling us to sleep.

The Ogasawara Islands, also known as the Bonin Islands, is an archipelago of over 30 islands in three groups, from south to north, Hahajima, Chichijima (**Fig. 2**), and Mukojima, from about 26° to 27° N and 142° E. Volcanic in origin, the islands were formed about 48 million years ago, the result of subduction between the Pacific Plate and the Philippine Sea Plate. Warm, northerly currents make the climate primarily humid subtropical, with annual average high temperatures about 28C (83 F) and annual average low temperatures 21 C (70 F). Warmest months are June through October and coolest are December through March. Average annual rainfall is about 130 cm (50 inches), with nearly all months averaging over 10 cm (four inches). January through March are the driest months but they still average over 5 cm (two inches) per month (JMA 2017). The climate is much like that of the Florida Keys.

Volcanic activity, the product of the Pacific Plate subducting the Philippine Plate, formed the Ogasawara Islands about 48 million years ago. Because the islands are isolated from the Asian continent and large off-shore continental islands like Japan, its plants and animals have undergone unique evolutionary adaptive radiation processes (WHC 2017) and have a high rate of diversity and endemism, earning it the moniker “Galapagos of the Orient.” Indeed, the islands have been designated a UNESCO World Heritage Site (WHC 2017). Various types of subtropical mesic forest and sclerophyllous shrub lands dominate the islands (WHC 2017). Mesic forest is found in moist lowland sites with deep soils while dry forest occurs in dryer lowland and upland sites with shallow soils. The flora combines elements of Southeast and



2. Map of Chichijima, showing the main localities and roads. (From the British Sub-Aqua Club).

Northeast Asia with rates of endemism in selected woody plant groups as high as 70% (WHC 2017).

About mid-morning on May 27 we had our first glimpse of Chichijima (Figs. 2-3), which encompasses 24 km² and is home to about 2,000 people. The island is mostly hilly or with low mountains, and rises to 326 m elevation at its highest point. The interior of Chichijima is rather easily accessible via a network of well maintained roads and trails, mostly built during World War II. One of the roads runs nearly the island's full length, following the highest ridge or "spine" of the island, from east of Omura (Ogasawara-mura), the main population center, and passing Mt. Yoake-yama and Mt. Chuo-yama, before heading west back to the coast at Ogiura.



3. About mid-morning on May 27 we had our first glimpse of Chichijima.



4. One of the roads runs nearly the island's full length, following the highest ridge or "spine," offering numerous spectacular views of the breathtaking landscape of steep, green hills and turquoise bays.

This road offers numerous spectacular views of the island's breathtaking landscape of steep, green hills and turquoise bays (**Fig. 4**).

After docking at Futami Harbor, we gathered our belongings, descended the gangway, and were met on the pier by the friendly and accommodating staff of the Hotel Horizon, our home for our three-day, two night stay on Chichijima. Before departing for the hotel, I quickly surveyed the nearby hills and low mountains behind the harbor but could see no palms thrusting their canopies about the green but short forest, which evoked a jolt of anxiety because my late friend and foremost student of palms, Jean-Christophe Pintaud, who had visited Chichijima several years prior, had told me that the palms were easy to find.

For the hotel we were unusually fortunate because our package trip to Chichijima included accommodations in a simple, low-priced hotel in Omura. However, because of a special Japanese middle school tour to Chichijima, our original hotel was fully booked and the OgasawaraKaiun company moved us to the upscale resort, Hotel Horizon, several km south of Omura on the beach at Ogiura. A hotel fit for a king, indeed, it has hosted the Japanese royal family, the Hotel Horizon has friendly, beachside accommodations, excellent cuisine, and an incredibly warm, affectionate, and helpful staff.

After settling into our rooms, we met and planned out our activities for the next three days. The next day, Wednesday, Robert would go scuba diving while Marianne, Christina, Rich, and I would hike into the island's interior to look for *Clinostigma savoryanum* and *Livistona boninensis*. On Thursday, Robert, Christina, and Rich would snorkel and do other water activities while Marianne and I continued to explore for palms. We then planned to spend Friday morning, May 30, being tourists in Omura as we waited for our afternoon departure to Tokyo.

After planning our activities and making arrangements, we had a full afternoon of free time ahead of us so hotel staff drove Marianne and me to the Ogasawara Subtropical Agriculture Research Center, less than a km south of the hotel and up the southern terminus of the Omura to Ogiura Road that runs along the island's spine. There we admired cultivated specimens of *Clinostigma savoryanum* and *Arenga ryukyuensis*, the latter of which had apparently escaped into remnants of adjacent disturbed forest where it looked naturally at home. On the walk back down the road to the Hotel Horizon we spotted several handsome specimens of *Livistona boninensis* in disturbed forest (**Fig. 5**).

Wednesday morning hotel staff kindly and generously drove Marianne, Christina, Rich, and me to the northern end of the Omura to Ogiura mountain top road. After dropping us off at the summit, we would walk nearly the length of the road, about six km along the spine of Chichijima, back to the hotel, exploring for palms along the way. Much to my surprise, prior to our departure from Los Angeles, Marianne had incredibly found Google Street View footage on-line of the Omura to Ogiura road and she had even found a mature, roadside specimen of *Clinostigma savoryanum* in that footage. While we appreciated this perk of technology, it does



5. An attractive *Livistona boninensis* occurred in disturbed forest close to our hotel. Note the mass of leaf base fibers at the petiole base.



6. *Arenga ryukyuensis* forms clumps reaching four m tall and five m wide and seemed natural and right at home.



7. Inflorescences of *Arenga ryukyuensis* extend to one meter long.



8. Staminate flowers of *Arenga ryukyuensis* are bright orange and fragrant.



9. Fruits of *Arenga ryukyuensis* are yellow to red.



10. On Chichijima *Livistona boninensis* often formed dense, gregarious colonies or forests of many, closely spaced individuals.

slightly diminish the sense of anticipation and adventure when traveling into the wild to see palms in habitat. Nonetheless, with this information in hand, we began our trek along the road exploring for palms.

The first palm we encountered was *Arenga ryukyuensis*, which I had reported on in the first installment of this paper (Hodel and Hsu 2017). Perhaps not distinct from *A. engleri* (Hodel and Hsu 2017), this handsome, low, clustered, pinnate-leaved palm, locally abundant in moist, shady depressions and gullies in the forest understory, appeared to be natural and totally at home, prompting me temporarily to doubt past assertions that it is an introduced exotic species in the Ogasawara Islands. Henderson (2006), in his treatment of *A. ryukyuensis*, noted that he had found several herbarium specimens from the Ogasawara Islands on which two of them is written “grow wild from cult?”, which to him indicated a cultivated origin for this palm in the these islands. However, apparently not all the specimens had this notation and even those that did were qualified with a question mark, indicating that the collector was unsure if the palms were natural or introduced. Strangely, Moore and Fosberg (1956) do not list an *Arenga*, natural or otherwise, in their treatment of the palms of the Ogasawara Islands.

The hapaxanthic (stems die after flowering) *Arenga ryukyuensis* forms clumps reaching four m



11. On Chichijima *Livistona boninensis* often formed dense, gregarious colonies or forests of many, closely spaced individuals.



12. More widespread individuals of *Livistona boninensis* were conspicuous thrusting their light, somewhat grayish green canopies above the dense forest cover.

tall and five m wide (**Fig. 6**). Stems or trunks are slender, to 20 cm in diameter when clothed with persistent leaf bases and short or subterranean except when flowering where they can reach more than two m tall. The ascending to spreading, pinnate leaves are six to eight in number and three to four m long, including a petiole to one m long and a leaf base to 30 cm long. Each leaf holds up to 48 pinnae per side, which are regularly arranged, spreading in more or less the same plane, to 60 cm long, 3.5 cm wide, linear, dark green and strongly nerved adaxially (upperside), strikingly grayish silvery abaxially (underside), and notched along the margins distally. Inflorescences are unisexual, with staminate to 60 cm long and 45 cm wide and pistillate to one meter long (when the peduncle is fully extended in fruit) (**Fig. 7**) and 50 cm wide, and basipetally produced (initially produced from the stem apex and then downward toward the base), the distal most ones typically subtended by much reduced leaves. Staminate flowers are to 10 mm long, orange, and fragrant (**Fig. 8**) while pistillate flowers are 3 mm in diameter and orange. The yellow to red fruits are nearly two cm in diameter (**Fig. 9**).

As we continued farther down the road, by far the most common and conspicuous palm was *Livistona boninensis*. It formed dense, gregarious colonies or forests of many, closely spaced individuals (**Figs. 10-11**), and more widespread individuals were also conspicuous thrusting their light, somewhat grayish green canopies above the dense forest cover (**Fig. 12**). This solitary



13. *Livistona boninensis* grows to about 15 m tall.



14. The trunk of *Livistona boninensis* is tan to brown, more or less smooth but faintly ringed and longitudinally grooved.



15. The base of the trunk of *Livistona boninensis* tends to flare outward.



16. About 35 to 50, ascending to drooping, palmate leaves compose the canopy of *Livistona boninensis*.



17. Leaves of *Livistona boninensis* are up to 3.5 m long and have blades divided one-half to three-quarters their length into as many as 80 segments with conspicuously pendulous tips. The ascending to spreading inflorescences are shorter than the leaves.

species grows to 15 m tall (**Fig. 13**), and has a solitary, tan to brown, more or less smooth but faintly ringed and longitudinally grooved trunk to 30 cm in diameter (**Fig. 14**). The base of the trunk tends to flare outward, sometimes conspicuously so (**Fig. 15**). About 35 to 50, ascending to drooping, palmate leaves compose the canopy, with a fewer quantity of old, dead, brown leaves persisting below this in a “skirt” (**Fig. 16**). Leaves are up to 3.5 m long (**Fig. 17**) and have a petiole to 1.2 m long that is variously armed along the margins with recurved spines to 10 mm long (**Fig. 18**), especially on smaller, younger plants. The petiole base is embedded in a conspicuous mass of reddish brown, fabric-like fibers of the leaf base margins (**Fig. 5**). The costapalmate, nearly circular, flat to undulating leaf blade is 1.5 to 2 m long and nearly as wide, light grayish green above, slightly paler or even faintly grayish below, and divided one-half to three-quarters its length into as many as 80, bifid segments, these conspicuously pendulous in their distal 30 to 40 cm (**Fig. 17**). The numerous, solitary, much branched, ascending to spreading inflorescences are up to 2.5 m long, shorter than the leaves (**Fig. 17**), and have at least one peduncular bract (**Fig. 19**) and numerous other, loosely sheathing inflorescence bracts. Flowers are whitish to yellow or cream-colored, fruits more or less globose with a narrowed base to nearly egg-shaped, 25 to 35 mm long, 20 to 28 mm wide, and beautifully glossy turquoise, as if painted (**Figs. 20-22**), but aging to dark brownish green, perhaps after



18. Petioles of *Livistona boninensis* are variously armed along the margins with recurved spines to 10 mm long, especially on smaller, younger plants.



19. Inflorescences of *Livistona boninensis* have a prophyll (right) and at least one peduncular bract (at thumb).

falling.

These fresh fruits are larger and colored differently than those noted by Moore and Fosberg (1956) and Dowe (2009) but at least the former were working from dried fruits that shrink slightly upon drying. The handsome turquoise color of the fruits, though, is at odds with both previous accounts, but again might be due to the state of the fresh fruit versus dry fruit.

Even as a young plant, *Livistona boninensis* is exceedingly handsome, especially when growing in shade (**Fig. 23**). Its large, round, flat, glossy green leaf blades held at the end of long petioles are particularly striking (**Fig. 24**).

Beccari (1921) originally described *Livistona boninensis* as a variety, *L. chinensis* var. *boninensis*. Later Nakai (1928) raised it to species rank but Moore and Fosberg (1956) returned it to varietal rank. Finally Dowe (2009) returned it to species rank but one of the primary characters for distinguishing the two taxa, the lack of a peduncular bract in *L. chinensis* and the presence of one in *L. boninensis*, does not pass muster; both taxa have a peduncular bract (**Fig. 19**) (Hodel and Hsu 2017). The prophyll is so small and typically hidden deeply among the tightly packed leaf bases that it is often overlooked, and the peduncular bract is misinterpreted as the prophyll.



20. The spectacular fruits of *Livistona boninensis* are turquoise, glossy, and unusually showy.



21. Fruits of *Livistona boninensis* are beautifully glossy turquoise, as if painted.



22. The striking fruits of *Livistona boninensis* are large and nearly egg-shaped.



23. My daughter Christina Hodel provides scale for this young plant of *Livistona boninensis*, which, even when young, is exceedingly handsome, especially when growing in shade.



24. My daughter Christina Hodel provides scale for this spectacular, large, round, flat, glossy green leaf blade of a young, shade-growing *Livistona boninensis*.



25. *Livistona boninensis* typically thrust their canopies above the relatively short vegetation.



26. Much to our relief, we came around a bend in the road and there was the *Clinostigma savoryanum*, just like we had seen it on Google Street View. My daughter Christina Hodel provides scale.

We continued along the Omura to Ogiura road, searching for the spot where Marianne had seen the *Clinostigma savoryanum* in the Google Street View and passing more *Livistona boninensis* thrusting their canopies above the relatively short vegetation (**Fig. 25**). We were beginning to be concerned that we had missed the *C. savoryanum* or it had died because after several hours of walking we had not seen one individual of this species. Finally, we came around a bend in the road and, much to our relief, there it was, right by the roadside (**Fig. 26**), just as we had seen it on Google Street View. Several other scattered individuals were present in the dense vegetation (**Figs. 27-28**) so we decided to stop, rest, and have our lunch in the shade on the side of the road.

At least on Chichijima *Clinostigma savoryanum* occurs mostly as scattered, isolated individuals, not in large, gregarious stands as other species of the genus tend to do. The relative paucity of this species on Chichijima is likely artificial and due to forest destruction and disturbance and the felling of palms for the edible “heart” (meristem) during World War II (Moore and Fosberg (1956). Jean-Christophe had told me that *C. savoryanum* was much more common on Hahajima where fewer people lived and the forest was less disturbed and more intact.

Clinostigma savoryanum grows to about 20 m tall (**Figs. 27-28**) and has a solitary, greenish aging to brown, mostly smooth, and irregularly but closely ringed trunk about 15 cm in diameter (**Fig. 29**), much like that of a kentia palm (*Howea forsteriana*). The trunk is initially covered with a grayish white, waxy, glaucous “bloom” but this weathers away with age. In young plants just forming trunk the glaucous “bloom” is particularly conspicuous on the internodes and leaf bases (**Fig. 30**). The base of the trunk typically is expanded and supported by a prominent, well developed, root boss (**Fig. 31**) but lacks stilt roots. About 15, ascending to drooping, slightly arching, long-pinnate leaves compose the canopy (**Fig. 27**). Each leaf is about three m long, has a relatively short petiole about 45 cm long, and holds nearly 60 elegantly pendulous pinnae per side. Pinnae are to 55 cm long, 3 cm wide, closely placed, and have a prominent, pale midrib, which abaxially (underside) has scattered, brown ramenta to one cm long (**Fig. 32**). Tubular, elongate leaf bases form a conspicuous, slender, handsome, light green crownshaft moderately covered with the glaucous “bloom” (**Fig. 33**). The inflorescences are typically four or five in number, held below the crownshaft (**Fig. 34**), and initially enclosed in an orangish brown, tubular prophyll to 70 cm long and a similar but shorter peduncular bract (**Fig. 35**). Inflorescences are stiffly ascending, strikingly white, and about 50 cm long in flower (**Fig. 36**) but become spreading to drooping (or even pendulous), greenish, and expand to nearly one m long when heavily laden with fruit (**Fig. 37**). The rachillae are white in flower but greenish in fruit, and to 35 cm long. Staminate flowers are five mm long while pistillate flowers are four mm long and greenish white with brownish petals and sepals (**Figs. 38**). The fruits are elongate-globose, 13 mm long and 10 mm wide, and pink to red when mature (**Figs. 37, 39**).

Geographically the closest relatives of *Clinostigma savoryanum* are *C. carolinensis* in Chuuk (Truk) and *C. ponapensis* in Pohnpei (Ponape), both far to the south in the Caroline Islands of the Federated States of Micronesia (Hodel 2013, Moore and Fosberg 1956). Both differ from *C. savoryanum* in their much larger habit, larger fruits, and flowers borne in triads in the proximal



27. *Clinostigma savoryanum* is a solitary palm.



28. *Clinostigma savoryanum* grows in dense vegetation.



29. The trunk of *Clinostigma savoryanum* is greenish aging to brown, mostly smooth, and irregularly but closely ringed much like that of a kentia palm (*Howea forsteriana*).



30. In young plants of *Clinostigma savoryanum* just forming trunk the glaucous "bloom" is particularly conspicuous on the internodes and leaf bases.



31. The base of the trunk of *Clinostigma savoryanum* typically is expanded and supported by a prominent, well developed root boss.



32. Pinnae of *Clinostigma savoryanum* have a prominent, pale midrib, which abaxially (underside) has scattered, brown rameta to one cm long.



33. *Clinostigma savoryanum* has a slender, handsome, light green crownshaft moderately covered with a glaucous "bloom."



34. Inflorescences of *Clinostigma savoryanum* typically number four or five and are held below the crownshaft.



35. Inflorescences of *Clinostigma savoryanum* are initially enclosed in an orangish brown, tubular prophyll to 70 cm long and a similar but shorter peduncular bract.



36. In flower the stiffly ascending inflorescences of *Clinostigma savoryanum* are strikingly white.



37. When heavily laden with fruit infructescences of *Clinostigma savoryanum* become spreading to drooping (or even pendulous) and greenish.



38. Pistillate flowers of *Clinostigma savoryanum* are four mm long and greenish white with brownish petals and sepals.



39. Mature ripe fruits of *Clinostigma savoryanum* are elongate-globose, 13 mm long and 10 mm wide, and pink to red.



40. Mountain and ocean views on Chichijima were fantastic and included an occasional *Livistona boninensis*, here much weather beaten and battered.

one-third to one-half of the rachillae (vs. lower two-thirds to four-fifths of the rachillae in *C. savoryanum*). The most northerly species in the genus and located outside the limit of the tropics, *C. savoryanum* has a tolerance for cool weather and performs more than adequately in subtropical areas like coastal southern California when irrigated regularly and given protection from extreme cold and excessively dry winds.

The naming of *Clinostigma savoryanum* carries with it some intriguing history. Alfred Rehder, German American horticulturist and plant taxonomist at the Arnold Arboretum of Harvard University, and Ernest Henry Wilson, a notable English plant collector and explorer in eastern Asia, especially China, and who later also worked at Arnold Arboretum, first named and described this species as *Cyphokentia savoryana* (Rehder and Wilson 1919), basing it on material that Wilson had collected in 1917 on Mukojima north of Chichijima. Moore and Fosberg (1956) later transferred this species to *Clinostigma*.

In their discussion of this new species, Rehder and Wilson noted that this graceful and handsome palm and the presence of fresh water were a powerful enticement for whaling fleets plying that area of the Pacific in the 19th century, and made the islands a famous stopping off point for ships and their crews. They named the palm in honor of Nathaniel Savory (1794-1874), an American who was part of the small contingent of international settlers who landed and established the first colony on the unclaimed islands in 1830. He went on to become the governor of the settlement and continued to hold a prominent role before and during later Japanese colonization of the islands.

After enjoying our lunch and admiring the palms we continued down the road to a well marked foot path that took us directly down the mountain side through mixed, disturbed forest to the coast not far from our hotel. We capped off the wonderful and successful day with an excellent dinner served up by the hotel's competent and friendly staff.

On May 29 Robert, Christina, and Rich departed the hotel to partake in scuba diving and other water activities, so Marianne and I decided to explore Ogamiyama Park Natural Area in the hills above Omura, hoping to see more palms. The hotel bus dropped us off in Omura near the entrance to the park and would pick us up after lunch to return us to the hotel. The park has a network of well marked foot paths meandering through native, mostly endemic and unusual vegetation. Many of the plant species present were clearly marked with interpretive signs, which included a photograph of the plant, its botanical name (in English), and other information about the species (in Japanese). We recognized many of the plants as close relatives of common landscape species in California, such as *Ficus*, *Hibiscus*, *Ligustrum*, and *Rhaphiolepis* among others. However, the palms proved elusive in the park, perhaps because the vegetation was subject to past human disturbance and/or the area was much dryer than where we had been the previous day. Nonetheless, the mountain and ocean views were fantastic and we still saw an occasional, weather beaten *Livistona boninensis* (**Fig. 40**) and, on far off, steep, dry, grassy slopes above Omura, a group of rather thrifty looking *Clinostigma savoryanum* with



41. A small but gregarious colony of *Clinostigma savoryanum* was protected in a damp, shady ravine.



42. *Arenga ryukyuensis* is a spectacular plant in a moist, protected ravine.

much reduced canopies of spindly, wind-whipped leaves.

We returned to Omura for lunch and, while in the restaurant, noticed a promotional tourist brochure with a photo of a splendid group of *Clinostigma savoryanum*. So, after lunch we visited the Ogasawara tourist office to inquire about the handsome group of palms pictured in the brochure. When we pointed out the palms in the brochure to a friendly and helpful official and explained our desire to see them, she immediately knew where they were, explaining they were not far away and easy to access! As it turned out, this group of palms was actually in Ogamiyama Park Natural Area but in a north-facing, shaded, damp ravine only about a km away along a well traveled road.

When we met the hotel bus we told the driver our change of plans and asked him to take us up the road to the stunning stand of *Clinostigma savoryanum* and then return in a couple hours to pick us up. After a few-minute drive we arrived at the roadside ravine with the conspicuous and gregarious group of *C. savoryanum*. A well used foot path followed the road and intersected the ravine, crossing it on a wooden bridge that offered a marvelous view of these superb palms (Fig. 41). We descended into the ravine to photograph palm trunks and exposed roots and were struck by how moist the protected site was. Ferns and other moisture-dependent plants carpeted the floor of the ravine and close by were spectacular specimens of *Arenga ryukyuensis* (Fig. 42). We were reluctant to leave this remarkable refuge but we knew our ride back to the hotel would soon be waiting for us in Omura.

Back at the hotel for our last night, we traded success stories with our children and Rich of the day's activities and prepared for our next-day departure for Tokyo. The next day it seemed that the entire population of Omura was at the dock to see us off, including the ever-present and helpful hotel staff. It was with a poignant and heavy heart that we departed Chichijima but knew that the palms we admired and friendships we forged would be with us for a lifetime.

For me the trip to Ogasawara to see its endemic palms, especially *Clinostigma savoryanum*, was a life-long quest. I became interested in the islands and its palms in 1973, just a few years after I had fallen under the mesmerizing spell of palms and while an undergraduate at California Polytechnic State University in Pomona. One of my professors, the late Tom Yoshikawa, even helped me compose a letter in Japanese to the islands asking if they could send me palm seeds and, disappointedly but not unexpectedly, I received no reply. I then vowed to Tom and the late Richard W. Palmer, a palm friend, that I would someday go to the Ogasawara Islands to see its palms. Well, it took 44 years, but I did it.

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PalmArbor: <http://ucanr.edu/sites/HodelPalmsTrees/PalmArbor/>
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