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THE  
CUYOS ARCHIPELAGO

(CHINA SEAS).

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BY THE  
REV. J. E. TENISON-WOODS, F.G.S., F.L.S., &c.,  
*Hon. Member Royal Geographical Society of Australasia.*

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READ BEFORE THE GEOGRAPHICAL SOCIETY.

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DURING my travels in H.M.S. Flying Fish I made several visits to the Cuyos group of islands, or the Islas de los Amantes (Lovers' Islands), an extensive archipelago to the westward of the Philippines, between the large islands of Panay and Palawan or, as the Spanish call it, Paragua. As these islands have never been visited by any scientific traveller, and as no detailed description of them exists in the English language, I purpose to make them the subject of a communication to the Australian Geographical Society. Before giving any details of the incidents of my journey, it will be better for me to give a general idea of the islands.

During the explorations of the Flying Fish in these seas, Cuyo or Gran Cuyo, as it is called, was one of the principal points of the survey, which we visited and revisited very often, remaining there several days at a time. The principal object of our explorations, besides surveying the coast line, was to search for certain reefs that had been reported, and thoroughly to sound the whole of the sea in the neighbourhood of the group. The islands are all included in the province of Calamianes, which extends over another small group to the northward, and takes in a part of the island of Palawan. The Cuyos islands extend from lat.  $10^{\circ} 52' N.$ , long.  $121^{\circ} E.$ , to lat.  $11^{\circ} 27' N.$  The most easterly of the islands is in lat.  $10^{\circ} 58' 30'' N.$ , long.  $121^{\circ} 16' E.$  The first latitude given is that of Cuyo. Some



of the group are situated a few miles to the south of this. In all there are nineteen islands, of which seven only are inhabited. The following is a list of their names, with the population of each according to the latest census.\*

Cuyo	...	...	inhabitants	3,000
Cocoro	...	...	"	158
Lubide	...	...	"	475
Agutaya	...	...	"	1,613
Manamac	...	...	"	246
Bisucay	...	...	"	272
Capnoyan	...	...	"	245
Kiniluban	...	...	"	750
				6,759

Those said to be inhabited are:—Canipo (doubtful), Bararing, Kiminatin, Ymalavan, Taganayan, Matarauis, Siparay, Tagbolo, Dit, Pamitinan (doubtful), Patunga.

These islands are scattered through the archipelago, at distances from one another varying from three to ten miles. They nearly all rise steeply out of the water, and have a central dome or peak, which is not in any case above 2,000 feet high. The heights of all the hills were taken by the officers of the survey, but I omitted to obtain their determinations. Whatever population any of these islands maintain it is on plains between the sea margin and the central hill. The natives in these regions never take to the mountains unless they are driven to them by foreign invasion or by famine.

Some of the larger islands have more than one conical peak; but I did not see any in which the shape of a crater was well preserved. In some there is a barranco, or gorge, descending from the conical summit. Some of these may have been caused by a lava stream, though such features are not conspicuous or visible from the sea. Some of the smaller islands seem to be portions of sheets of black or brownish trachyte, such as the islands of Siparay, Sombrero (or Calo, which means a hat in Visayan). Others are more than half composed of brown ash deposits, hardened into layers like slabs, and inclined at every angle, being much decomposed or weathered.

The larger islands have much agricultural soil of good alluvial or fine volcanic black mould. This is the case at least with the islands Cuyo, Agutaya, and Kiniluban, each of which I visited. The smaller all have some little vegetation on the surface; notably *Pandanus odoratissimus* and *Musa textilis* or *Abaca*, which appears to have been planted there. Otherwise the vegetation of the wild jungle, which prevails to a greater or less extent, is the same in all the tropical islands and reefs throughout the Indian Ocean, and even extending to Australia. This vegetation has more of the character of what is called the mangrove region than of the nearest mainland. The shores are

\* The orthography followed in these names is not the Spanish, but that recommended for travellers by Sir John Herschel, with, of course, a value for the vowels which is found in most Continental languages: *a* as in *far*, *u* as *oo* in *poor*, *k* for *g*, no soft sound for *c*, etc., etc.

fringed with *Scævola kænigii*, *Tournefortia sericea*, *Corda myxa*, *Terminalia catappa*, *Morinda citrifolia*, *Barringtonia acutangula*, *Abrus precatorius*. This list, which will suggest the rest to anyone familiar with the flora of the East, need not be further particularised. Something more will be said presently about the mountain flora.

At the sea margin coral and sea shells, much waterworn and broken, form a white margin a few feet above the tidal waters, but only in a few places; and this coral gravel, as it seems more appropriate to term it, is occasionally broken into a coarse sand. A little distance from the shore the bottom is completely covered with corals, and offers to the eye all those beautiful varieties of form and colour which are the inseparable accompaniment of tropical waters in coral regions. The dark and sombre character of the volcanic boulders which strew the bottom is only seen near the edge, for the rest becomes so encrusted with coral as entirely to conceal the colour of the stone.

There are lava streams on some islands formed of trachyte of brown colour, very vesicular, and exceedingly hard and rough, though much worn in places by the waves. The ash is a light yellowish brown, full of fragments of all sizes of scoria or cinders, porphyritic lava, and a soft white rock of some felspathic material. All these fragments vary in size from half an inch to a foot and more in diameter. The obsidian was particularly sharp and angular. I looked in vain for any fragments of shell amongst these ash strata. The beds were cracked and fissured in a strange way—that is, in a perpendicular and very zigzag direction. I should say these fissures are the result of contraction or pressure from the accumulation of weight on the top, which took place probably when the beds were being deposited. One of these cracks, however, was a fault which extended right through the island. The smaller ones could be traced some depth below the surface of the water.

In all the islands the lava streams and ash beds had given rise in places to caves, crevices, and narrow passages of a varied description, which caused them to be very interesting to visit, and always offered something new to my explorations. It would give a better idea of the nature of such rocks if I extract from my journal the account of a visit to one of these uninhabited islands, bearing about six miles W.N.W. from Cuyo, and named Bararing.

One of the officers of the survey (Lieut. Howard) was going to erect a station and take sights from the summit. We went in the launch, towing the whaler to windward, so that the officer in charge could get to the north end of Cuyo. We took soundings all the way across, on a very irregular bottom. The water was so shallow that the bottom was plainly visible at times, with masses of coral; then again blue water with no bottom at fifteen fathoms. We learned that there were hidden dangers in plenty around the ship not previously marked in any chart. We got to Bararing about 9 a.m. I was particularly anxious to visit this island, because I had noticed regular dipping strata on the north side as we came into the bay, which looked like a marine sandstone formation. On reaching the island, however, I found



it to consist entirely of a yellowish brown ash, enclosing fragments of scoria, cinders, and stones, sometimes six inches in diameter and even more. This ash dipped in almost every direction, and was overlaid in many places by streams of very rough and vesicular lava. In places also there was columnar basalt. The strata of ash, being of different consistency and hardness, had weathered in an unequal manner, making the different beds project like the leaves of a book, but toppling over like heaps of tiles, and seeming almost ready to slide down into the sea. The steep dip of some series of beds and their semicircular disposition made me think that on the north side of the island we have the remains of the inside of the former crater, which could not have been very long in activity. This side of the island had very deep water round it. At the east and west sides the ash was heaped in peculiar shapes like irregular cornices or heaps of tablets, between which there were deep narrow fissures, into which one could creep for some distance on projecting ledges. Here the appearance of the water was most beautiful. It was a narrow strip of deep transparent blue, in which the sides gradually faded away in broken undulations, where it became difficult to distinguish between the stone and the multitude of strange creatures that swam about. It was perilous work climbing along the ledges. Far in the crevice and high out of the reach of the water the adventurous naturalist would find the giant limpet (*Patella testudinaria*, Lin.), a great prize, distinguished for its size and beauty, but sure to be located where only the most skilful and stealthy efforts could detach it. At the mouth of these crevices the shelving rock slopes more gradually down in places, and discloses a variable prospect of movement and life, over which I could always see sea-urchins travelling with a speed that seemed to me surprising. The species I took to be *Echinotrix calamaris*. On the coast of the Malay Peninsula the species best represented is *Diadema setosum*, while in North Australia it is *Echinometra lucunter*, which everywhere prevails. The sea at certain periods of the tide was scintillating with the dazzling blue flash of the *Sapphirina ovato-lanceolata*.\* I once saw also a magnificent display from a *Gorgonia*, which emitted a light of a beautiful deep lilac hue, about twenty feet below the surface.

To return, however, to the volcanic evidences. The island was very steep and rocky, and so densely covered with brushwood that the structure could not be seen except at the sides. Lieut. Howard, with three of the blue-jackets, managed to climb to the summit and erect a beacon—not, however, without suffering much from swarms of ants, green and red, which cover the brushwood. Near the summit the

\* Few phosphorescent animals exhibit their glaries during the day, but *Sapphirina* is an exception. It is one of the largest of the *Entomostraca*, about a quarter of an inch in length, broad and flat, without the beauty of form which characterises *Cyclops*, *Calanus*, and others; but what it lacks in this respect is more than equalled by its marvellous powers of light production, few animals of any kind equalling it. So vivid is the phosphorescence that it can be distinctly seen by day; and, peering down into the depths where it abounds, flashes of colour—blue, gold, sapphire, purple, green, and other hues—appear in bewildering frequency, ranging from the softest to the most intense and vivid lights, marking this living sapphire as one of the true gems of the sea. ("Living Lights," by C. F. Holder, London, 1887, p. 74.) Probably the Oriental species differs from that of the Atlantic.

principal vegetation was the banana, from which the fibre is obtained. While the officer was engaged I went down to the sea beach, and, taking the launch's dingy, tried to make a cruise round the island, but was stopped by the broken water on the south side, which was hardly safe for the little craft. In returning I saw upon the rocks a very large specimen of the *Hydrosaurus*, or fishing-lizard, which was between six and seven feet long, and looked a most formidable creature. The ship's boy with me would have shot it had I pointed it out in time; but I scarcely made a movement when it walked leisurely away. It is fortunate these creatures are so timid, for, were they aggressive, they would do considerable damage. There were a good many goats also on the island, and as their bones lay about it seemed as if they had some other enemy besides man—not the lizard, surely! though I should say he was more than a match for a goat if he went in for that sort of game.

The rocks were literally lined with swarms of hopping-fish, which jumped out of the water and adhered to the rocks by means of some arrangement of the lower part of the large ductorial mouth. The species differed somewhat from the *Periophthalmus roelreuteri*, which is found extensively along the coast of the Malay Peninsula. They lie on the rocks, exposed to the sun, and seem not to care to be in the water. When alarmed they will jump on the surface of the water and bounce off again, or make a series of short jumps until they reach a rock or stone, to which they cling, but do not apparently swim under water. They like to be washed by the surf of the advancing or receding tide, so as to keep the skin moist, but otherwise seem to dread being immersed. Now is not this a curious arrangement? We have flying-fish, who sail for a moment through the air; and climbing-fish, who crawl out of the water and get up trees; but here is a fish that will not swim at all, and jumps away from the water.

Under the lava stream on the south side of the island was a little cave, which was evidently used by the Indians in the rainy season. Shells were placed underneath the edge to catch rain-water. On some of the cliffs there were remains of stages which had been used to get the edible birds'-nests. The linchi, as these birds (*Collocalia*) are called here, are abundant in pairs all about this island; but in habit they might easily be mistaken for small doves. The higher regions of the air were well supplied with a kind of frigate bird (*Trachypetes aquilus*). Altogether the day spent on this island was full of objects of interest, and I could have well found occupation upon it for days instead of hours.

The island of Cuyo, which is the largest of the group, is about three or four miles in length with a breadth of two, and rising into a roundly conical hill (Mount Bombon) some thousand feet in height. It has always been distinguished as the principal centre of a population characterised, they say, by very friendly and amiable dispositions. The island was also much used as a seaport and a place of shelter for vessels trading to Palawan from Panay and the northern Philippines. The Spanish missionaries founded the town of Cuyo when they began



to evangelise the natives, in the year 1622, at which time the group was included in the province of Calamianes. The inhabitants belong to the Visayan branch of Philippine Malays; but there are local subdivisions and various mixed peoples of Mestizo blood, from the effect of foreign intrusion by Spaniards, Chinese, etc. The pure natives are said to be of a clearer colour than the rest of the province, with a better presence, higher stature, and with a language less rude and customs more civilised. The greater part of the inhabitants are dealers, trading with natural and cultivated productions of the island, the principal of which are abaca and pina fibre and cocoanut wine. The women have also a reputation for their textile fabrics of hemp, cotton, and pina, manufactured in a hand-loom of the most primitive description. Like many of the Malay races, the females do all the dealing in the markets, as well as the labour in the fields. The men are mostly occupied in fishing, which is their favourite pursuit. Along the coral reefs round the coast there is a good supply of fish, as well as turtles. The commonest and most valued fish is what they call balate, a Spanish word employed for many different kinds of fishes, but here probably distinguishing a mullet (*Mugil*). The men also fish for pearls with a moderate amount of success. The agriculture is of the most primitive kind, for they do little more than burn off the jungle and then sow mountain rice, a species much valued, but a poor bearer. They also collect honey and wax from the wild bees, which make their nests in hollow trees and in the cavities of rocks. The jungles are full of deer and game birds, which are also hunted. Notwithstanding all these resources, the people fare but badly. There is scarcely a year that some of the population does not perish from starvation, when the rains and the wind of the monsoon stop the fisheries.

The people are all Christians, belonging, of course, to the Catholic faith. They were converted, as already mentioned, in the year 1622; but I searched amongst the parish registers and records, and the earliest date I could find was 1720, since which there have been resident pastors. There are two ancient churches built within the walls of the fortresses of Cuyo and Agutaya. These venerable defences have long ago crumbled into peaceful monuments of the past, though even now described as "fortalezas magnificas." They were built by the devoted Recoletos Fathers when all the Philippines groaned under the ruthless and continual raids of the "Moros" of Sulu. Many a time the fortaleza not only enclosed the church, but all the population of the island, trembling helplessly, and scarcely able to strike a blow to avert the fate which they knew too well awaited them; for more often than not the piratical Moslems prevailed, when the blood of the male inhabitants flowed like water, and the women and children were swept off to be sold as slaves. It is not without emotion that one sees these memorials of early missionary perils in the Philippines. The quaint old bastions and battlements, built of huge blocks of coral, are not without pretensions to architectural symmetry nor engineering skill. The cannon lying in the ferns and moss belong to ancient days too, and no doubt were highly valued in their time; for we find the fortresses described as "artillada con piezas menores y dos

canones de à XII." They can sleep in peace now amid the ferns and rust, for the Moros of Sulu will never trouble anybody again.\*

The town, like all the towns in the Philippines, is composed of narrow streets, bounded by the slenderest of bamboo fences. Within these are Malayan houses of the usual type, differing in size and style according as the inmates are Spaniards, Mestizos, or natives. Each is separated from the other by a thick growth of bamboos, palms, and tropical fruits, so that the aspect of the street is like a large shrubbery with scattered houses. The native huts, as we may call them, are perched on a slender framework of bamboo, and surmounted by a high-peaked thatch of nipa palm leaves, and this is the character of all the Indian dwellings. The houses of the Mestizos are sometimes even better than those of the Spaniards; roofed with thatch too, but on a wide, rather depressed covering, and projecting eaves. The basement story serves for a kind of store, shut off by wooden partitions from the gaze of the street. All the dwelling is in the upper story, reached by a wide staircase of well-waxed wood like mahogany, generally *Molave* or *Vitex geniculata*. The native houses are almost destitute of furniture, except a weaving loom at one side. The doors and windows are closed by clumsy shutters of thatch like the roof; the walls have a few religious pictures, and a brick or stone hearth, without chimney or protection, serves all the purposes for which fire is ever required. With regard to food, clothing, and sleeping, the wants of these people are reduced to a minimum. The Mestizos and Spaniards, on the other hand, have a certain amount of furniture in the way of tables, chairs, and bedding. Cuyo is further distinguished by a large galera, or cock-fighting arena, built of bamboo and thatch. Here on Sundays and festivals the natives assemble in the afternoons to witness the "sport" in which they delight. It is easy to indulge in cheap benevolence by having a fling at this cruel amusement; but in view of our hunting, racing, and shooting sports, I cannot think that we are superior to the poor Indians. The worst thing about these entertainments is the gambling spirit which they foster, like our own national sports. It is a good sign that public opinion is against them in the Philippines, and they are less and less frequented by persons of respectability.

NOTE.—The above paper was dictated by the late Rev. J. E. Tenison-Woods in December, 1888. His illness soon afterwards took such a serious turn as to prevent him finishing it or giving any further attention to literary matters. It is therefore published in its present incomplete form.

\* It is calculated that up to a late period the Moros carried off no less than 4,000 captives annually. The well-known Professor Semper had a narrow escape from them on the north-west coast of Mindanao, and owed his safety to a providential delay in starting.