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SANGANJIMA AND HIDESHIMA -- JAPANESE SEA-BIRD SANCTUARIES

By Chester Fennell

The little green island lay perfectly calm and still in the hot July sun, surrounded by a flat, glassy sea and shimmering in the heat waves of the afternoon. As our diesel-propelled fishing launch chugged to a halt some hundred feet off the north shore and we waited for the dory to be lowered, one would have sworn that not a single living creature inhabited the place. But my good friend, Saburo Kumagai, had assured me otherwise and I was alert and tense with the excitement of finding here the nesting grounds of the streaked shearwater (Puffinus leucomelas (Temminck)) and the Swinhoe's fork-tailed petrel (Oceanodroma monorhis monorhis (Swinhoe)). After all, it had taken us the best part of two days to reach this little, remote islet off the north-eastern coast of Honshu, from our center of operations in Tokyo, and some 21 hours spent in Japanese trains, buses and a fishing launch surely must be rewarded and compensated for by far more than the ordinary run of adventure.

As the little sculled dory deposited us one by one on the slippery wave-washed rocks of Sanganjima, the first bit of feathered life greeted us in the form of a pair of haku-sekirei or Japanese pied wagtails. This was the first time I had seen this species in its nesting habitat although it is a common winter visitant along the rivers and canals in the Kobe region. This particular pair evidently had a nest somewhere among the rocks near our landing spot for they both appeared quite concerned, scolding in high-pitched, sharp notes and flashing their long gray and white tails excitedly as they flew from rock to rock ahead of our approach.

We began our ascent of the island by following up a small, dry, brush and bamboo grass-choked ravine arched over by fine specimens of the "tabu-no-ki" or false camphor tree (Machilus thunbergii Siebold & Zucc.). This tree heavily forests the entire island and provides excellent protection for the nesting species. Hardly had we left the upturned, jagged rocks of the shore and entered the ravine when we found the first nesting burrows of the streaked shearwater. They were well and wisely dug under the protecting, intertwined roots of the false camphor trees and situated in the steep banks of the gully. I cautiously reached a gloved hand into one of the more likely-looking burrows and at arm's length touched the brooding bird and drew it forth for examination. In true shearwater style it struggled and fiercely bit my gloved hands again and again. It is not as beautiful a species as the wedge-tailed shearwater, at least in my opinion, because of the dirty-like streaking on the head, neck and upper breast but I do believe it is slightly larger boned and heavier. According to Alexander (Birds of the Ocean) it is 3½ in. longer in total length while bill, wing and tarsi are proportionately longer. The single egg is, also, slightly larger than that of Puffinus pacificus cuneatus and pure white in color or nest stained.

I examined some twenty burrows and found in nearly all a brooding bird and a single egg. We failed to locate a single chick, which indicated that the nesting

period had only well begun. The burrows were on the average 3½ in. to 5 in. in diameter and 16 to 25 in. in length. Nearly all were slightly down-graded towards the end of the burrow and scantily lined with feathers and dry leaves of the false camphor tree. The soil in which they were excavated was of a rich, fine, moist loamy quality.

At six o'clock, the fishing launch returned to Kamaishi with the main portion of the excursion party leaving my friend S. Kumagai, Giko Shozi (a young Buddhist priest from Wakayanagi, the home town of Mr. Kumagai), another Japanese fellow from Kamaishi and myself to spend the night on the island. We spread our tatami (straw mats) right where we found ourselves, in the midst of the nesting burrows and approximately half-way up to the top of the island and proceeded to partake of a little sustenance while awaiting the arrival of the night flight of the individuals coming in from off the open stretches of the sea. All was still, deathly silent and, except for the occasional cry of one of the brooding birds as we had pulled it from its burrow, we had not heard a single note during the four hours we had already been on the island.

At exactly 2030, just as darkness was settling-in in earnest, we heard the first brooding bird cry and at 2045 the first individuals were observed flying in overhead from off the ocean. From that moment on it seemed as though all the very demons of hell itself had been loosened as thousands of the birds came crying in overhead and from all sides, crashing in and down through the branches and foliage of the false camphor trees, falling heavily among the roots, loose rocks and bamboo grass all around us and many, many times blindly striking us on our heads or upper parts of our bodies as we sat in awe and wonder at the spectacle. Naturally, I was swept back to similar experiences on Rabbit Island off the coast of Oahu, and my throat choked with nostalgia and emotion. Here, though, the cries had quite a different quality, and we distinctly were able to note two different types: one, a high-pitched whistle, the other, a distressed wailing call. The former, as Mr. Kumagai believes, is uttered only by the male while the latter belongs to the female. Of course, at present, this is only a matter of conjecture, for we have no known proof of the origin of the two calls.

Then suddenly, among all the bedlam and caterwauling, Kumagai gripped my arm and drew my attention to yet another call drifting down from high over the tree tops. It was a harsher, shorter cry and stood out distinctly even among all the hubbub and clamor of the shearwaters. As the evening progressed we heard this particular call more and more frequently and finally as we directed the beam of the electric lantern into the tree tops we discerned a fluttery, bat-like form, black in color, which Kumagai identified with a loud shout in my ear as "umitsubame" (sea-swallow) or the Swinhoe's fork-tailed petrel. Shortly thereafter, as we climbed the hill towards a point where this particular call seemed to be more frequently uttered we heard it coming from within a mound of moss and soil covered rocks. Down on our knees we went and within a few moments extracted from a very small burrow leading off the entrance-way of a shearwater's burrow a pair of this fine little petrel. It reminds me strongly of the Bulwer's petrel but has a forked tail and is even smaller in size. Like that species, it has a pleasant sweet odor when pressed to the nostrils in spite of a strictly marine-like diet. Apparently, it was too early for egg laying for we found no fresh eggs or young and only three, old, highly discolored and stained infertile eggs outside the entrance to shearwater burrows, which were probably of last year's vintage.

Though it was well-nigh impossible to estimate the number of these petrels on Sanganjima within the brief stay of a single night, I am inclined to believe that they were far more common than we thought at the time, for, because of the great uproar of the shearwaters, their calls could be heard only within a very short distance; then, too, I believe that, since we heard the majority calling from overhead

while in flight and found no fresh eggs, they were still in the height of the courtship period and had not yet settled down to nesting.

The hullabaloo markedly increased in volume and intensity at 0230 the following morning with the rising of the moon and seemed to attain an almost overwhelming peak of sound. Our ear-drums ached and fluttered from the strain, and we were weary and utterly exhausted from watching so closely the orgiastic fete. We lay down upon our tatami and tried to rest from time to time but started at the least change in the performance or sat up to turn the beam of light upon a nearby couple woefully serenading one another.

At last, with the first faint streaks of dawn in the eastern sky, at 0410, to be exact, those individuals seaward bound began the mass movement. First by one's and two's and three's they plummeted overhead with loud, long wails and piercing whistles of farewell, then as the fingers of dawn rapidly brightened and the heavy folds of the purple curtain of night were lifted they fairly pushed one another aside in mid-air in groups of 15, 25, 50 and more in eager haste to get out over the watery wastes and far from land before the fullness of day once more bathed the world.

By 0445 the exodus was complete and the whole island again lay in death-like silence, apparently the same deserted, uninhabited spot we had set foot upon the previous afternoon. A single narcissus flycatcher wheezed his lonely little refrain from a tree top in the distance and a lone carrion crow cawed his dismal matin, notes which only seemed to accentuate the otherwise ghostly silence. Bathed in the fiery glow of an island sunrise we folded our tatami, gathered together our cameras, notebooks, knapsacks, etc., and stumbled down the ravine to the rocks to await the arrival of the launch already to be heard "put-put-putting" across the water in the distance. As we rounded a large rock off the western end of the Island, a flock of some 250 large white-rumped swifts (Micropus pacificus (Latham)) circled and cut around its summit in pursuit of their morning fare - a merry farewell to the little islet.

That same morning, shortly after returning to Kamaishi and partaking of a bite to eat, we boarded another train and continued on up the coast of Honshu some three hours to Miyako and Hideshima, the breeding grounds of the Madeiran fork-tailed petrel (Oceanodroma castro castro (Harcourt)). We were met at the station in Miyako by the chief of police of the town and at once transported in a small pick-up truck to the pier where another launch awaited us. Talk about efficiency and promptness! This was it! By two o'clock that afternoon we pulled up along the north side of Hideshima and were climbing up the steep, rugged, rocky slope. Not till we had nearly reached the top did we find any signs of nesting burrows or birds of any kind; then there were - small burrows freshly dug in under the roots of the false camphor trees and loose rocks as on Sanganjima, except that here were no shearwaters, only the single species of petrel, the Madeiran fork-tailed. Why the Swinhoe's fork-tailed petrel doesn't nest here too is difficult to explain, for the terrain appears to be exactly the same as on Sanganjima. We examined some fifteen or more burrows and found all with a single, pure white egg tended by a single brooding bird. This, too, is a wonderful little species, sooty black with a pure white rump and forked tail; a trifle larger than the Swinhoe's. Nearly all birds that I removed from the burrows disgorged a rather foul, fishy-smelling, reddish fluid, a habit which the Swinhoe's petrel has failed to acquire.

The burrows were approximately 3 to 4 in. wide and 2 in. high at the entrance and 1½ to 2 ft. in length, generally curved. The egg was found resting directly on the soft, damp earth at the end of the burrow and no nesting material of any sort was in the burrow.

Unfortunately, I had no time to take a count of the burrows or to explore the

entire island, so cannot say just how many of this species inhabit the Island. However, the nesting areas I did find were none too thickly honey-combed with burrows and I doubt that this particular colony is of any great size. Apparently no other sea bird nests on this island.

Both Sanganjima and Hideshima are uninhabited by humans and visited only occasionally by fishermen. According to Saburo Kumagai, very few people are aware of the nesting shearwaters and petrels. Under these favorable circumstances, the present colonies should enjoy a long, unmolested future.

The above observations were made on the 17th and 18th, July 1949, off the northeastern coast of Honshu, Japan.

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NEW ZEALAND TEATREE
By George C. Munro

Among a number of interesting things in the August /1949/ "Elepaio" is in "Field Trip" by U. Kojima, reference to "New Zealand heather." Surely this is Leptospermum scoparum known there as teatree or the Maori name manuka. With permission from the late Mr. Charles S. Judd, then Executive officer and Chief forester of the Board of Agriculture and Forestry, I scattered seed of this hardy shrub or small tree high on most of the C.C.C. trails on the northern half of the Koolau Range. That was in 1935 when starting the Bird survey. I have not tramped those trails since, so I am interested to know that it has taken hold. It had done so well on Lanai where I had introduced it about 1920 that I thought it would help the somewhat decadent forests on the highest parts of the Koolau range.

In New Zealand it is the link between grass and forest. It starts on grass or open land, makes a good cover, fosters the plants of large forest trees till they overtop and choke it out. It did excellent work on Lanai where other trees would not grow when I was on the island. Another New Zealand tree that has done well on Lanai is Cordyline australis known in its home as the "cabbage tree." A close relation of our ti but grows into a branched tree about 20 feet high. These were planted on the main ridge about 1930 and I am told now have trunks two feet in diameter. I quite expect its swordshaped leaves will be good interceptors of "fogdrip." It will not be as effective in this as the tall Norfolk Island pine which I had planted on the ridges of the Lanai mountain about 1920 which will grow to over 100 feet high. Its condensation of fog gave the idea of using this species to augment the valuable underground water supply of the island. I predict that the time will come when this or a similar tree will be planted extensively on the ridges of watersheds on these islands where more water is needed.

I hold the memory of Charles S. Judd in highest respect. He was ever encouraging and helpful to me in my research. Even when differing from me he was always generous in publishing my papers and results of my experiments on Molokai and Lanai.

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LETTERS AND NOTES

Kaneohe, T.H.: On July 8th, I stopped by the shallow pools just inside the outer gate of the Kaneohe Naval Air Station. The water was extremely low. The pools closest to the gate were completely empty of bird life, but in the small area farther on, three stilt were counted. One night heron flapped away toward the sea, and three terns were fishing in the seaward pools. On going around to the area closest to the sea, more stilt were observed, a total of 34 counted, although from the sound, others were feeding out of sight. I was about to leave when a flock of birds came down-wind, turned sharply to head into the wind, and lined up along the shore: twenty-four turnstone - the first seen by this observer since their departure for their breeding grounds. - G. Hatch.

Bishop, California, July 31, 1950: ... I am having a wonderful summer in Kings Canyon National Park, up in the most rugged of the Sierras. We are encamped mostly in the zone of jagged peaks, beautiful blue lakes, whitebark and lodgepole pines, Clarks nutcrackers and Rosy finches, to say nothing of red and white columbines, red heather, and rock rabbits and marmots. After work is pau next fall I am planning a year's study in Mexico in SE Sonora, studying ornithological ecology. I have had a mad interest in this branch since three years ago, and I worked on an ecological problem at USC last year.

I am surprised at the phenomenal increase of Sooties on Manana Island. Dave /Woodside/ said there were only 200 in 1948. Prediction: Bridled terns and Red-footed boobies will nest on Manana Island. - Walter Donaghho.

Aiea Field trip, July 9, 1950:

It had been slightly over two years since we had scheduled a field trip to Aiea, hence we looked forward to the day with much interest. The weather proved perfect, only pleasantly warm, moderate trade winds, blue sky with occasional overcast, but no rain until just as we returned to the cars. Twenty-four made up the group, which naturally split into smaller, constantly shifting sections, in order that we might have better birding.

Aiea has never been one of the best trails for birds, so we enjoyed the beauty of the vegetation and open vistas, and rejoiced in the added dividends of pleasure when birds did come into our view. The songs of Liothrix were heard almost constantly, and two members were fortunate in having a close view of a flock of about twenty passing through the underbrush. Rice birds were abundant, not only in the lower part of the trail, but as far as we went in a four hour period. The ubiquitous white-eye was ever heard, and glimpsed in passing.

Elepaio seemed very scarce, even their call note was rarely heard. Unoyo Kojima watched four who put on a special act for her benefit, and three others were observed by a group of us. Amakihi, while yielding, I believe, only one good sight record, were heard often along the way. Perhaps this should be qualified - arguments raged all day over a certain repeated note.

Two apapane were seen by three of the group, the rest listened for half an hour to the two-note, "rocking" call, but were unable to catch even a glimpse of the singer. The creeper was seen, causing one to wonder if this very rare bird may be on the increase. One owl was sighted, and owl pellets found along the trail, containing mouse fur, and a few small jaw bones, apparently mouse, also.

A stop at Moanalua gardens, where the once beautiful ponds are covered with scum and slime, brought sight of a gallinule on a nest, built in a tangle of dead branches resting in the water, a good sight, indeed, in view of their diminishing numbers. A few coot were also seen, and then, a last perfect note as we drove toward home, over the Kalihi flats, a flight of six plover! Sight count recorded: Liothrix, 26; Elepaio, 7; Ricebird, 35; Coot, 5; Gallinule, 2; Plover, 6; Amakihi, Creeper, Owl, 1 each; White-eye, no count made. - G. Hatch.

Popoia, T.H.: Popoia-bound on Saturday afternoon, July 29, twenty-three adults left town in mid-afternoon. The day was bright, dry and pleasant after several days of showers. Once over the Pali the group detoured to the Kaneohe Naval Air Station en route to Ulupau Head to look at the booby colony. Along the road in the marshes several Hawaiian stilt were observed, some feeding, others just standing. Inside the Air Station there was a pause while an unexpected obstacle was removed from the road. Although the group had permission to visit the boobies, no one had mentioned the fact that a boom had been lowered again over the road leading to Ulupau Head. The Marine guard was called and after some hesitation allowed the entire party to go through. He could understand, he said, why Mr. Porter, with his game warden's badge, might want to go in, but "What do all them people want to go up there for?" He assured us firmly that although he would admit us this time, another time it would be necessary for all to clear through the Provost-Marshall at Ft. Shafter, then proceeded to lower the boom again after us and trailed us at least part of the way, still full of doubts, and awaited us at the road block to count us and lock us out again when we left.

To those kamaainas who had not visited Uluapau Head since before the war the landscape was all unfamiliar, with roads where none were before, and man made palis and the like. As we climbed up the lee side of the Head, there was the unmistakeable and familiar smell of the booby colony, and when we reached the top, despite the strange tunnels and buildings and armament, there were the boobies, red-footed and brown-faced, in the down, fledged, and adults. A very rough estimate of 300 individuals were seen. All around us on the pali and down in the valley the chicks sat on their crazy nests, while fledglings stretched their wings and exercised in the trees and bushes. At least one adult was found sheltering her very small chick. Other adults came and went with food, gliding and swooping in their effortless flight.

From the Naval Air Station we proceeded along the Kalama shore road to Kailua, whence Solo Mahoe transported us in two boatloads to Popoia. The sea was smooth and the wind gentle and warm; the sun near setting.

On the island we found no nestling shearwaters in the burrows, but many eggs. We had really come to observe the older birds, so we ate our rations, then settled down in the dusk to watch the adults come in from the sea. The air was thick at times with swooping shearwaters circling and playing as they came in for perfect landings. At dark, at least a hundred adults landed and roosted on the rocks directly in front of the watching humans, while a very large number, of which we were unable to estimate a count, went underground into the burrows, and then the music began! Very able writers have attempted to describe the shearwaters' night song, but this one was unprepared for the similarity to the sound coming from any maternity hospital nursery. Wailing, moaning, screeching in all keys, the sound was no doubt amplified by the underground tunnels by which it travelled to the surface.

In an attempt to determine whether the birds roosting in the open were also moaning, small groups of watchers worked their way quietly around and up to them. Apparently these were bachelors who found nothing to sing about, for they were silent

and for the most part motionless as they stood. However, as a large and extremely beautiful moon rose, we were able to see that they flew off on little junkets and wheeled about, usually returning to the same roosting spot on the rock.

At one spot an extraordinary clucking sound issued from a burrow. Several people tried to identify the sound which sounded more like a setting hen's remarks than any other. A flashlight shown into the burrow failed to show up its occupant, and no one had an arm long enough to reach back in the tunnel and bring it out. No amount of talking and walking about and over the burrow seemed to dismay the clucker which kept on steadily inspite of the commotion around and above its home. None of us had ever heard a shearwater cluck before and wondered if she had an egg or a chick or what caused her so to do now, but being unable to find out, gave up and went off. In one particularly noisy series of burrows and tunnels, we found another spot where clucking could be plainly heard. A flash shown into this burrow rewarded us with the sight, not of a shearwater at all, but of a demure and ladylike Bulwer's petrel sitting in her burrow and entertaining herself. Grenville Hatch identified her, and Paul Porter confirmed the identification, lifting her out of her burrow for all to see. She had no egg in her burrow, and was very submissive to being handled so that everyone had a good look at her before she was lowered into her home again. That settled the mystery of the clucking shearwater, and also settled the heretofore moot question of whether or not Bulwer's petrel nested near or with shearwaters or nested on Popoia at all. We assume that another of her family was in the first burrow from which the clucking sound was heard.

Late in the evening, by the light of the very brilliant full moon, the party was returned via Mahoe's boat to the mainland, feeling very well satisfied with the day's findings and the evening's real pleasure. - Charlotta Hoskins.

Manana Island, July 4, 1950: On July 4th Miss Ruth Dingus, Lt. Edward Nelms and I had the pleasure of going to Manana, or Rabbit Island. The day had been chosen, not only because it was a holiday, but because Ruth had made the trip on July 4th last year, and wished to compare the progress of the nesting for the last two years.

The elements were favorable. The high seas of the preceding week calmed, the boatman found it an easy trip, and we stepped ashore dryshod! As we started up the steep slope toward the crater sooty terns flew up in bewildering numbers, with sharp incessant cries. It seemed virtually impossible to make any sort of accurate count - the air seemed filled with birds. We made our way to the crater edge, avoiding the shearwater burrows along the way, but stooping to look into them, to see if they were occupied. Many contained a brooding shearwater and one egg. No nestlings were found.

Tern eggs dotted the entire face of the crater and steep inner wall, and tern chicks were numerous, in about an equal number. All chicks were small. Ruth judged that the season this year is slightly less advanced than last year at this time. We selected a spot on the crater rim free of eggs and nestlings - a somewhat difficult task - and settled down while Ruth and Ed took pictures of eggs, chicks in various stages of development, and adults. I have seen one roll of these, which are really magnificent, and which provides an invaluable record of tern development.

The island proves very definitely the wisdom shown by the Board of Agriculture and Forestry in closing it. There has been an amazing increase in the numbers of nesting birds. The most striking feature of the island today, aside from the increased population, is the shift in species. In 1940 the sooty colony was very small; at night only an occasional call could be heard among the deeper cries of the noddies. In 1946, the colony was still small, confined to the eastern slope. Last year the noddies still outnumbered the sooties, but now, I would estimate that there

are easily three or four times as many sooties as noddies. The noddies now occupy only small areas on the lower, inner eastern slope of the crater, and the barren rocky depression which faces Kaohikaipu.

This shifting population on Manana should prove of great interest. It brings home, too, the difficulties that we have in proving exactly what is happening, because no banding has been done on Manana since Chester Fennell banded there in 1947. With extensive banding, there and elsewhere, we might find out where the noddies have gone, and perhaps, too, where the sooties are coming from. - Grenville Hatch.

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SEPTEMBER ACTIVITIES:

FIELD TRIP: September 10th, to Poamoho. Meet at the Library of Hawaii at 8:00 A.M. bringing lunch (and car if possible). This trail in the Koolaus, so very rewarding in bird life, will be followed unless inclement weather prevents, in which case another will be chosen on the day itself.

MEETING: September 18th, Auditorium, Library of Hawaii. Mr. William Ward will present colored movies of the nene and other bird life on the island of Hawaii taken this Spring, together with sound recordings of the songs of native birds. Those familiar with the high quality of Mr. Ward's photography will not want to miss this new group of films, and others will find the program one of special interest. Come and bring your friends.

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