THE
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Journal of

NORTH QUEENSLAND NATURALISTS CLUB

Founder, Presd. The late Dr. HUGO FLECKER.

OBJECTS—The futherance of the study of the various branches of Natural History and the preservation of our heritage of indigenous fauna and flora.

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MEETINGS—Second Tuesday of each month at Oddfellows Hall, Lake Street, 8 p.m.

FIELD DAYS—Sunday before meeting. Notice of place and time given in "Cairns Post."

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"Each Author is responsible for the opinions and facts expressed in his or her article."

NOTE TO EXCHANGE CLUBS AND SOCIETIES :

Walking along Cairns foreshore recently, a member made conversation with a woman studying the birds, only to learn that she was here on a study grant from England and was leaving the next day. Had she known of our club previously, we could have helped with advice on bird localities. Any member of your society, when in Cairns area, is welcome to contact our club secretary for information on any nature section.

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Cairns tidal flats at the moment are host to literally thousands of migratory birds. How long will this last ? Plans call for these flats to be buried in the cause of "Progress".

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NOTE TO ALL READERS :

Season's Greetings !

And please send some more contributions for the Journal.

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NATURAL ECOSYSTEMS IN THE IRON RANGE AREA OF FAR NORTH QUEENSLAND

by Gail Davies, Trinity Bay High School

Adapted from a paper presented to the Youth Ecological Seminar of the Cairns Branch of the Wildlife Preservation Society of Queensland, 4. 3. 72

THE MARINE ECOSYSTEM:

The Weymouth-Lloyd Bay areas are very subject to strong tides. This can be seen from the changes to the silting at the mouth of the Claudie River during a relatively short time. About thirty years ago the foreshore was well over half a mile from its present position and many of the huge granite boulders now in the sea were used as caves and shelter by the Aboriginals.

One such cave, under a spectacular balancing boulder, may never be entered again. We were told that in front of it there is now a stinging seaweed, from contact with which two people have died and another two were recently badly hurt. There were no weals or any marks, but the poison affected the nervous system causing extreme pain, cramps, unconsciousness and death. Many will doubt the existence of such a plant but the Aboriginals vouch for it.

This was the first summer that stinging jellyfish were seen in the seas off Iron Range. We were assured there were none so we swam frequently in the clear warm water, which to me seemed saltier than the sea near Cairns.

The primitive mammal, the Dugong, is plentiful in this area. The warm waters promote vigorous growths of sea-grasses on which the Dugong feed. The most conspicuous seaweed is the thin but wide, slimy-leaved reddish form, found in thick deposits on the shores of Lloyd Bay. At high tide many creatures, for example the crinoid Featherstars, sea squirts, sea urchins and the brilliant pink and yellow sea cucumbers are washed up. When the tide recedes they are virtually unaffected by the sun, wind or seagulls, being protected in a damp spongy mass of rotting kelp.

The area is sheltered by many reefs, shoals and small islands. The reef proper is several miles out at this point. Innumerable trochus shells can be found along the beaches, also Nautilus shells, cowries and bailers. We found an ancient log that must have been in the sea for months as when we picked it up, it nearly dissolved through the ravages of Teredinidae, the wood boring molluscs; only the barnacles held it together. Hundreds of different sized cuttlefish shells were washed up every day, as they were near Cairns ten years ago, though the numbers here seem to have dwindled. The natives have a remedy for asthma of which the chief ingredient is cuttlefish shell.

Large turtles, live in the reef waters, the most common having a deep green shell patterned with brown and black. Their shells are prized by the Europeans, their flesh by the Aboriginals and their eggs by the pigs. With all these factors against the glorious creatures, inevitably their numbers are falling. There is a current hypothesis that the turtles eat the jellyfish and the increasing frequency of jellyfish could be caused by the turtle extermination.

The whole coastline between Portland Roads and the Old Mission Site is well known for sharks, one of which I nearly trod on whilst swimming at Restoration Bay. It was very well camouflaged and I was not wearing glasses at the time. The fishing at the picturesque old mission site was said to be unequalled - so we managed, on the third day, to spear a sting-ray, which was delicious ! Arond Big Lloyd Island and its two companions are many tuna and trevally, sought after by the Japanese.

These island were once parts of the mainland, They have only sparse vegetation on their slopes, owing to the annual fires, but at their rocky edges grow thick borders of mangroves that shelter Torres Strait pigeons, lizards and carpet snakes.

THE MAINLAND ECOSYSTEMS :

The mainland flora is divided into four main regions. These areas are , from the shore : the inter-tidal mangroves and those growing above tide level : the claypan melaleuca country ; the eucalypt forest ; and finally the unique rainforest on the ranges.

The Shore Mangroves : Of some sixteen varieties of mangroves in this region I could positively identify one, the Rhizophora, present as a clump of four plants near the new barge site - these may now have gone owing to intensive blasting in the area. (Note 1) : The only other mangroves actually growing in the water are at the Port at Weymouth Bay wher they form a dense mass, several hundred yards deep along the bay's perimeter, interspersed with creek outlets. These mangroves are home to a species of honeyeater found only in this Claudie River area. There are tiny blue butterflies that lay their eggs on mistletoe only in this type of mangrove. There are also plagues of mosquitoes.

In the Lloyd Bay region the mangroves mainly grow high up on the sand dunes well out of reach of the sea. The only parts of these plants I could see were the orange-red discarded leaves, about 4.5cm long and stiff.

At Restoration Bay there is not a mangrove belt ; instead large palms grow down to the water's edge and a dense belt of bushes recedes into the distant hills. The sand at the old mission site is rich in rutile, which has been mined in the past and the beach has not been reclaimed. We were able to pick up handfuls of the heavy black sand.

Creek Bank Mangroves - Claypan Melaleuca Country : For severaly miles up the three major rivers and their tributaries are belts of mangrove plants and intertidal bullrushes and grasses. At the first accessible crossing one mile up from the Claudie mouth, the soil is a cloggy clay, excellent for retaining water between tides. On the low bank grow stunted ti-trees, some of which contain Antplant in their moist forks. The ground was littered with small granite boulders supporting lichens and having delicate grasses seeding in the cracks. A red seeded sedge grew abundantly in the marshier areas which were alive with mosquitoes. The trees swarmed with green ants ; on one small gumtree were eleven nests. At this crossing the bank was very low but sheared off and eroded. Only a few scrappy mangrove trees grew on the community side, but opposite was an impenetrable wall of differing greens.

At the second crossing a mile further up stream the bank on the community side was a steep fifteen feet high. Main vegetation on the dull red, fairly loose soil was stringy bark and paper bark eucalypts and an occasional pandanus. In the murky river we saw the shadowy outlines of two large stingrays. The opposite bank was low and covered with mangroves. Near this crossing, in a damp dark bend of the river in very rainforesty conditions, we found one of the most unusual plants ever. Imagine a bucket full of sawfish swords, each about fifteen to eighteen feet high and falling as do ordinary leaves. It had a large green fruit similar to a pineapple and weighing three to four pounds - the driest thing I have ever tasted. We guessed that this was some form of Pandanus.

To the south, at the end of Lloyd Bay, is claypan country, a flattish, well drained and, in part, well eroded area of thick barren clay that is extremely treacherous after even a few points of rain. Here grow a mixture of Melaleucas, some mangroves, stands of pandanus and black boy and sparse grasses. Large termite nests, some like examples of contemporary sculpture, also scrub turkey and bush hen mounds can be seen along the track to the old site. This country continues up to three miles inland, until the better soils of the ranges are encountered. Near the banks of the larger creeks the cover improves and here the vine (Abrus Precatorius) producing the highly toxic giddygiddy beads need be eaten to result in a very unpleasant death.

The Eucalypt Forest : Around the community there is little or no evidence of the white clay country. Instead the mangroves give way directly to an open sclerophyll forest dominated by Stringy Bark, Box and Bloodwood, all growing to about twenty feet before branching. The Aborigionals use the bloodwood sap as a remedy for toothache. Soils in this region vary. At our tent area the soil was a white sand over a very humus-enriched black sand. The present community site was cleared on poor dry stoney soil, on a slope, about three miles inland by the track. All efforts to replace the natural growth with poinciannas and other plants that thrive in Cairns and even at the old site have failed. So the first thing the visitor notices is the stark bare oval amongst the deeper, duller forest colours.

In the areas of better soil in the forest grow stands of the locally called Ashgum, a semi-papuan species, Tessellaris or affinity Papuana, with tall yellow-green trunks emerging from the rough grey boles.

Further inland the country begins to undulate, the cover becomes thicker and the Ashgum more prevalent. During the second world war this area was commandeered by the U. S. Airforce, and three adjoining airstrips were built. After twenty-five years all that remains are some scattered pieces of bitumen amongst the gums; the only perceptible difference is that the trees are younger and slightly smaller than their companions.

The natural ground cover of young gums, decaying logs and mulch is burnt off before the wet each year by the graziers to get a good grass crop for their cattle in the next season. As a result, young plants are being killed off and there are few replacements for the older trees. The wiry, undesirable grasses are taking over and erosion is evident already.

Two species of green snakes occur in this forest, only one of them a potential danger. Small fast lizards frequent the bush, and large frilled necked lizards can often be seen running from the tracks as vehicles approach. Also in this forest I saw a grey owl just after dusk one night, and we all saw a small hopping marsupial by the road side.

The Rainforest ; The most accessible rainforest in the district is really a primary stage in damp gullies, reasonably protected from fire. Here larger trees grow, bound by large, tough vines - Waitawhile country. Out past the airport a lot of this country is being cleared and it has been found that copious quantities of superphosphate are required to produce crops and legumes. Some other portions of this land have been constantly grazed by cattle and are now, in some parts, agriculturally barren areas, no longer capable of supporting cattle.

The remnants of the original rainforest are virtually impenetrable, hence their survival. The Janet Ranges and the Tozer Mountains are the genuine rainforest outposts formed when Australia and New Guinea were joined for three different and relatively short periods of time. The area is unique, incorporating both New Guinea and Indonesian species of trees, insects, birds and marsupials with Australian varieties. This fauna ceases south of Coen as nautral barriers prevent most of these creatures from dispersing further into Queensland.

It is not easy to guesss just how much untouched forest exists as the area is fairly inaccessible and few people care to explore the ranges, where the stinging trees grow to thirty feet high, and there is lawyercane and waitawhile. To see such places makes one admire the tenacity of men like Kennedy who passed through this area.

The Aboriginals say it is easy to live in the rainforest as many of the plants have edible fruits. We saw one fruit that was like a medium sized orange tomato with a semi-embedded hairy seed at the bottom. Native creatures in the forest include the naked-tailed Cuscus and a virtually unknown species of bandicoot that has almost invisible ears and a kangaroo type gait. Rare black parrots, once thought to be totally extinct, exist precariously in the humid forest depths, and other rare birds occasionally seen include the red-cheeked lorikeet, palm cockatoo and the gold-shouldered parrot.

Captain Cook first introduced pigs to this continent and since the advent of the missions, pig numbers have grown alarmingly. These mammals eat roots, insects, small marsupials, just about anything they can find. Their presence is one threat to the rainforest.

In the rainforest towards Portland Roads, mining leases are current as the area is rich in gold, copper and iron ores.

Early in our stay the presence of more deadly rainforest inhabitants came to us when a prospector was rushed to the hospital suffering the bite of a Taipan snake. This man is one of the few surviving victims of a Taipan's bite. Also seen were common green snakes and a King Brown.

Some of Australia's most beautiful butterflies and beetles are found here. One is a large jet-black birdwing, (Ornithoptera) which has slender, bright emerald markings on the upper wing side with a deep blue elusive stripe running from the centre top to the midwing, and a furry yellow body. Many peacock coloured butterflies can be seen among the dull green foliage. Also common are the Diggles Blue, the Oak Blues and Greenbanded Blues, Northern Jezabels and rare Orange Jezabels. Christmas beetles - family Scarabacidae - are often seen, the most splendid being the regally coloured gold Anoplognathus Parvus and its relatives. Cicadas compete with multitudes of forest birds in song, ranging from small distinctly marked brown cicadas to the huge three inch long drummers. (Ref. 1).

MY CONCLUSIONS ABOUT THE IRON RANGE AREA.

. "Earth is our heritage and I promise to try to keep it beautiful, by learning to understand it and conserve its soils, air, water, natural beauty and ALL its living things ". Those are the words of the Gould League Pledge and they apply more than anywhere else in this much abused continent, to the natural environment in the Iron Range area. The pledge is all very well, but how can we understand when we do not know just what, or how many living things exist in an area ?

The lack of understanding began with Captain Cook and his pigs, and has been perpetuated ever since.

The Aboriginals know the area, its good and bad points, its resources and how to use them. Some of their ancient remedies are now being found to be extremely effective and some have been adapted to Western medical practices. The natives never senselessly slaughtered anything; they existed in harmony with their environment, being part of it. We have a lot to learn from our Aboriginals.

When the Europeans came, they burnt and cleared square miles of land for their safe, sterile homes and their stock. They slaughtered crocodiles for their skins, to make shoes and handbags; the defenceless turtles for their flesh and shells; the dugong for their supposedly medicinal oils - all for money. Pigeons were shot for sport, meat or feathers.

This wanton destruction caused, in a few years, the end of over twenty thousand years of determined trial and error by Nature.

It seems that little thought for the future, or even the present, is put into any project proposed for the development of our far north. The new barge landing at Quintell Beach is a typical example of blundering myopia. Huge boulders have been blasted to fragments and used as fill for the soil and concrete ramp. Truck loads of black sand, taken from the eucalypt forest, are dumped on the ramp. For every two loads

dumped, one is washed away by the sea to return and further pollute the once white, coralline sands. (Note 2): The former wonderland of organisms in the thick kelp beds now rot and stink through suffocation. Owing to its foolishly selected site, the landing may never be economically used.

The proposed Weymouth development plan is outrageous. In cross-section, the country resembles stylized waves, with anticlines on synolines, steep slopes and inaccessible ridges. "Exoctic timbers are just asking to be taken" - if they can be reached. "The land is perfect for crops and cattle" - if it is liberally doused in superphosphates and held together, in the wet season, by concrete fortifications.

There is a great lack of geographical, archeological, anthropological, botanical and zoological knowledge of the area. It is known that certain birds and insects live only in these localities; investigations are bound to reveal more of them.

The recent entomological expedition by the Australian Museum, Sydney collected some 600 unknown and unnamed insects in the Claudie River rain forests. Amongst the entirely new genera and species found were members of the family Platystomatidae - tiny stalk-eyed flies; and wasps, some being up to three inches long. Many new varieties of fruitfly and firefly, bagpipe cicadas, lacewings and beetles were caught by night hunting with powerful lamps. Insects have a pre-imposed size limit, owing to their method of respiration; some of the Iron Range insects go close to being the largest in the world.

I strongly urge that before more annual fires, or futher mutilation of the rainforests, qualified teams go to the area and unveil its unique secrets. We could not even guess what was there.

"A person should not shoot the bird resting on his head", say the Bantus. This area rests heavily on our heads. Ignorance is no excuse for us to desecrate it.

POSTSCRIPT : In early June I had the good luck to pay a return visit of one long weekend to Iron Range.

After several months of heavy rains the many gullies were filled with cold. fast-running water. Erosion was everywhere, and the "Main Road" from the airport to the community had been re-routed three times in places.

Most of the trees were water-logged. The glorious Ashgums were a dull green, yet everything looked relatively fresh and green. Few examples of wild life could be seen, though I was told the wallabies were in millions in the forest.

On the shorelines, salmon fishing by the Aboriginals was in full swing at low and high tides, when spectacularly sized fish were speared. The cod caught in recent months were averaging around 60lbs. Dugony fishing was poor, but turtles were frequently caught. I tasted my first turtle, cooked native style, and it was most appealing.

Notes 1 & 2 : The barge landing is finished, the area much disturbed, but the mangroves are still standing. The ramp is now a concrete covered structure but shows signs of cracking as its supporting sand settles with the water flowing through it. The approach to the ramp is rocky and very shallow - even for barges. It may never be used.

Reference 1. - Entomological Society of Queensland "News Bulletin" No. 85, April 1972.

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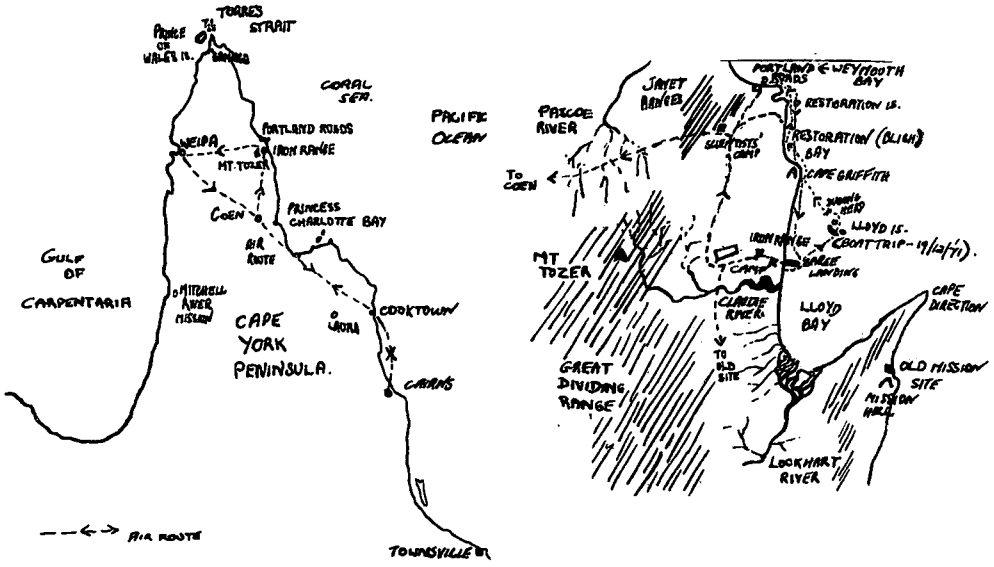

RECOLLECTIONS FROM THE PENINSULA

The Peninsula country north west of Coen has usually been dry for months before November thunderstorms come. Then the small gilgais and "melon holes" are filled, only to dry up again in the summer heat. Many years ago, I remember a party of stockmen found a 3 inch perch in a gilgai which had filled in an overnight storm. The nearest permanent water was a lagoon three miles away. Another year, after a November storm in the open melon-hole country, a native stockman with me found a baby turtle (tortoise) about the size of a man's thumb-nail, in the bottom of a three-foot-deep melon-hole. All the water had dried up, so I took it back to camp in my pocket. There we set it down on the pad to the lagoon, but facing out towards the plain. Released, it turned and headed straight towards the water, and all of us went with it to save it from birds and to marvel at its unerring sense of direction.

The late "Stanley H. Boyd, Cooktown.

The Cunning Crow A water hold with water like milky tea soon became like pea soup when a few cattle walked through it. Then all the small fish commenced poking their heads up gasping for air, and then the crows got to work. They could grab a fish, take it out on the flat among the shade trees where the cattle camped each day, drop it on the ground amongst the hundreds of heaps of dry cow dung, and pull a lump of the dry dung on top of the fish. Later we saw a crow uncover a fish and take it away.