NOTES ON VARIOUS ISLANDS OF THE PHOENIX GROUP VISITED IN H.M.S. "LEITH", FEBRUARY, 1937.

1. Canton or Mary Island.

Largest island of the Group, being approximately $8\frac{1}{2}$ miles long by $3\frac{1}{2}$ miles wide. Average width of land from 200 to 500 yards, but narrowing on southern shore.

Anchorage situated off western end of the island opposite boat passage, but practicable only in easterly weather conditions.

Good landing just inside the lagoon through the boat passage, but very strong tidal flow and landing or returning to ship must be timed accordingly. Strength of current at full tide at least 5 to 6 knots.

Vegetation negligible, consisting of clumps of low scrub along south coast and in a few other isolated spots and 10 coconut trees - a cluster of 8 just south of the landing place and 2 solitary palms on north-west coast - the only evidence of planting operations in the past. Ground is very stony and partly covered with coarse weed and tufts of dry-looking grass.

Whole island is alive with myriads of sea-birds nesting or resting on the ground - frigate-birds (man-of-war hawk) particularly in evidence, besides gannets, brown and white terns, "boobies", plover, snipe, curlews, and many other varieties. Ground was absolutely littered with eggs.

Majority of birds showed very little alarm on being approached and many of them refused to stir even when touched with the foot.

Island is also infested with millions of diminutive rats, the degenerate descendants, it is presumed, of rats brought to the island by ships.

Remains of an old wreck scattered about the beach near the landing-place, also signs of past settlement.

Flag planted close to the clump of the coconut-trees on the south side of the boat-passage and notice-board nailed to one of the trees.

Sites of old wells searched for but without success.

Passage and lagoon teem with sharks about 4 to 6 feet long - no large sharks noticed amongst them.

Large central lagoon about $7\frac{3}{4}$ miles long - greatest width about 3 miles, narrowing to a point at south-eastern end.

Whole lagoon appeared to be full of patches and studded with coral heads, but it should be possible to select stretch of water capable of being converted by blasting into safe alighting ground for seaplanes. Facilities for the use of landplanes also worth further investigation.

2. Phoenix Islands.

Small atoll about 1200 yards long by 800 yards wide, with completely enclosed shallow lagoon about 500 yards long by 300 yards wide. Lagoon reputed to contain fresh water, but found on trial to be quite undrinkable.

Novanchorage.

Landing effected without trouble on south-west shore in light north-easterly wind and swell.

Small cairn of stones erected close to landing-place on which flag planted and notice-board placed at base.

No vegetation of any description except coarse weed and grass as at Canton Island.

Another home of millions of sea-birds which, the unlike at Canton Island, followed the progress of landing-party in circling clouds, swooping down close to the ground and screeching shrilly in alarm. Eggs everywhere and extremely difficult to avoid in walking.

Ground pitted with rabbit-holes every few paces.

The rabbits appeared very undersized and mostly ginger or tan-and-white

tan-and-white in colour. They showed an amazing turn of speed with an action more like that of a hare.

Island appears to be useful for no purpose whatever except as a sanctuary for bird life.

3. Sydney Island.

Island approximately 2 miles long by $1\frac{3}{4}$ miles wide, nearly circular in shape. Lagoon similarly shaped, about $1\frac{1}{4}$ miles across and completely land-locked.

Anchorage for ships, fairly safe in easterly wind but quite impracticable in westerly weather, on western side of island nearly opposite prominent stone platform on beach. Reef sheers very steeply and holding-ground within less than one cable's length of the shore.

Landing can only be effected through breakers straight on to the beach, an at all times difficult but frequently hazardous undertaking. Best time for landing appears to be on a rising tide from half-tide to just before high water. A spot where the beach is shelving and not steep-to should always be selected. Although it is reported that landings were usually made, when the island was being worked for copra, through the surf opposite the copra-shed on the beach, the best spot appears to be about 50 to 100 yards soull north of the stone platform mentioned above.

Coconuts growing in profusion almost all over the island and apparently flourishing except for a certain percentage of dead trees with only the bare trunks remaining, as though struck by lightning but possibly due to some other cause.

Soil appeared sandy and sparse and only capable of sustaining light scrub, though obviously suitable to the growth of coconut-trees. Fresh-water swamps occur in parts of the island.

Well-water said to be obtainable on the island but no old wells discovered.

There are two or three very dilapidated buildings and a few rotting native huts still standing, also a broken boat and canoe, and some tools and oars in one of the sheds. A large iron cistern is attached to one of the houses.

Pigs and fowls abound, also cats.

Fish at this island is reported to be poisonous but eaten with impunity by the whole ship's company of H.M.S. "Leith".

Flag planted on top of the stone platform, a little to the south of the one beacon still standing, notice-board nailed to coconut-tree about 50 yards to the north.

Value of the island very seriously discounted by the dangerous nature of the landing. Suitability of the soil for the cultivation of the staple food products of the Gilbert and Ellice Islands somewhat problematical, although the swampy areas might prove favourable.

Average width of the land about $\frac{1}{3}$ mile

4. Hull Island.

Island about $4\frac{1}{4}$ miles long by 2 miles wide, roughly rhomboidal in shape. Average width of land about 400 yards, greatest width being about 600 yards at the western end.

Island contains lagoon about 4 miles long by $1\frac{3}{4}$ miles wide with numerous small passages connecting the lagoon with the outer reef on the north-west and south-east coasts but no entrance navigable by boats.

No anchorage for ships. Best landing-place under easterly weather conditions at western end of island over the reef opposite the copra-shed, not opposite the beacon (stone cairn) on beach.

Western end of island densely planted with

coconut-trees apparently thriving. Other parts of island clothed by tall and fairly dense scrub. Soil appears more fertile than at any other island of the Group except Gardner Island.

Well water reported but no trace of old wells discovered.

Copra shed still in fairly good condition. Number of dilapidated native huts still standing. Tools and other miscellaneous plant stored in copra shed.

Island teems with pigs. Fowls reported but none actually seen. Rats, as usual, prolific.

Flag is planted on beacon at western end of island and notice-board nailed to near by coconut tree.

5. Gardner Island.

Island approximately 4 miles long by 1 mile wide, containing lagoon about 3 miles long by $\frac{3}{4}$ mile wide. Average width of land about 300 yards, widening to about $\frac{1}{2}$ mile at western end.

Two entrances into lagoon. Western entrance appears to be navigable by boats but mouth of entrance barred by reef which completely encircles island. Permanent deep-sea entrance might possibly be effected by blasting.

Good landing at half-tide (or more) was found at western end over the reef in small bay about 400 yards south of Reef Point. Landing only practicable in fine weather with wind in the east. This landing-place could be greatly improved by blasting.

Anchorage for ships reported but not discovered.

Very conspicuous wreck high up on reef just south of Reef Point with funnel and masts still intact - back of vessel badly broken.

Surface of laggon marked by usual shallow patches but several stretches of good clear blue water discernible

No signs of well-water.

Small grove of coconut trees at north-west end of island growing in amongst the scrub which appeared to be taller and denser here than at any other island of the Group. Plenty of large densely-foliaged trees with rich black humus in abundance. Comparative fertility of soil very marked.

Island teeming with millions of coconut crabs, and rats. Masses of birds' nests in the trees.

of the scrub about 50 yards south of the landing-place in the centre of the bay between Reef Point and South West Point.