
*Geological Notes on the Easter Excursion* is copyright by Edward O. Marks 1926.

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My own knowledge of Queensland natural history is not sufficient to enable me to treat its bird life from this point of view in a comprehensive fashion, but I have endeavoured to suggest the lines on which such studies should proceed. The harvest truly is plenteous, but the labourers are few. I trust that the Queensland Naturalists’ Club will continue to prosper and to encourage such work, and I desire to thank the members for their kind support during the year now concluded.

NOTES ON STRADBROKE ISLAND.
(By R. Ildige.)

Easter again found the members of the Field Naturalists’ Club represented by many of its members of both sexes investigating the natural history of this large island, which, together with Moreton Island, forms the great natural eastern breakwater enclosing Moreton Bay.

It has not yet—probably will not for many years to come—revealed all its secrets, as the short periods of time during which members can carry on their work, preclude much observation.

The Island in former years was fairly well known to me from Moondarewa to Amity Point, thence to Point Look-out, and inland to many of the lagoons. Twice I made trips across from Canaipa to the 18-Mile Lagoon.

These were chiefly in quest of birds, subsequently followed, however, by the collecting of shells around the beaches and banks, with Amity Point as a base. On the banks many handsome species of cowries (cypraea) were obtainable amongst these Cypraea eburnea was the rarest. Low water of spring tides, also after heavy storms will yield many fine species of shells.

Since the formation of the present Field Naturalists’ Club in 1906, my attention has been given more to the collecting and study of insects, which even in early days were not by any means neglected. Now, what little knowledge I have as regards the insect fauna of Stradbroke Island, and my exchanges with southern entomologists, has led me to the conclusion that its fauna in this respect approaches more nearly to that of the country round Sydney than to that of Brisbane. It is notable the number of species in Coleoptera which are identical from Sydney forms, and not found about Brisbane. Again, in Lepidoptera are many species confined to the Island, as also is the case in Hymenoptera, Neuroptera, Diptera, etc. There are certainly numbers of insects which are equally at home on the Island as on the adjacent mainland.

The explanation of the similarity of forms to those of Sydney may perhaps be found in the soil and vegetation of the Island being of somewhat like character to that around that city.

A fact worthy of note about this excursion was the almost entire freedom from the worry of mosquitoes. Neither by day nor by night were we troubled by these dipterous plagues. Might it not be well for our city fathers to enquire into this remarkable scarcity of these insects in a place where we were surrounded by swamps, usually considered as fine breeding grounds. Perhaps they had all departed for Dunwich, where the dengue was said to be prevalent.

Another matter that requires attention is that the placards as to sanitation are openly set at defiance by young men as to shooting. One sturdy fellow I saw coming ashore with a gun, and a lot of boys following him. I warned them, and plainly told them I should consider it a duty to report the matter. They simply defied me. This was close to our camp at One Mile.

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GEOLOGICAL NOTES ON THE EASTER EXCURSION.
(By Dr. E. O. Marks, President.)

Moreton and Stradbroke Islands, consisting almost entirely of sand dunes, do not offer a wide scope for the study of “solid” geology. Indeed, it is only in four very limited areas (one on Moreton and three on Stradbroke) that any rock is known to be exposed. Nevertheless, our last three Easter excursions have resulted in some useful contributions to the geology of these islands.

Last Easter our visit to Point Lookout provided a geological surprise, in finding that headland to consist
of trachytic lava, a fact not previously recorded. This year we were able to examine the sandstone, well known to occur at Dunwich.

This is a clayey, ferruginous, coarse-grained massive sandstone. Such bedding as it has shows it to be nearly horizontal. Similar sandstone occurs also at Peel and Coochimidlo Islands. This has usually been regarded as part of the very extensive Bundamba-Mezozoic sandstone series, which immediately overlies the Ipswich coal measures, typical Ipswich measures occurring on the mainland shore at Wynnum and Manly. Unfortunately, the coarse-grained and loosely cemented sandstone at Dunwich is not a likely matrix for the preservation of fossils by means of which its age could be determined.

When examining the water-worn quartz pebbles of which the coarse-grained portions are composed, we were fortunate in finding one pebble of weathered trachyte or trachytic tuff, which is of almost as great interest as a fossil would have been.

In its decomposed ground mass of felspathic material are embedded numerous phenocrysts of quartz with sharp crystalline outlines, often partly corroded by the magma or fragmentary, but none showing any rounding by attrition. The ground mass shows a tendency to a flow structure, suggesting the fragment to be a lava rather than a tuff.

In comparison, the trachytic Brisbane tuff, so familiar to us all, shows very similar quartz-grains in a felspathic ground mass, the quartz-grains being almost as numerous, but with a greater tendency to be fragmental, and sometimes with a structure suggestive of a flow. Some of the rhyolite at Point Lookout also shows very similar quartz phenocrysts, many apparently fragmentary, corroded by the magma as in the pebble, though not so numerous, and with a marred flow structure.

Now, the Brisbane tuff lies at the very base of the Ipswich measures, and the nearest known outcrops occur at Castra and Tingalpa, some 14 miles from Dunwich in a westerly direction. The nearest known trachytie lava is Point Lookout, 10 miles to the northeast, the next nearest being some 40 miles distant.

As a source of origin for this pebble, we must look either to the Brisbane tuff or Point Lookout.

Planchon's Stringybark (Eucalyptus Planchoniana), Sunnybank, near Brisbane. —Photo, G.T.W.
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The Brisbane tuff is a rather soft rock, which does not stand attrition at all well, and would soon be ground down to powder in a stream. It is unlikely to have been carried 14 miles in a course gravel, but cannot be quite excluded on that account. If the pebble is a fragment of Brisbane tuff, this would show definitely that the sandstone is of Tertiary age, not Bundamba, for the Bundamba sandstone follows in comfortable and overlapping sequence on the Ipswich measures, under which the tuff lay buried. No fragment of the tuff could have been available until earth movements and denudation had exposed it, long after Bundamba times.

Now, the other trachytic eruptions, Flinders Peak, Glass House Mountains, etc., have usually been regarded, though without absolute proof, as of Tertiary age. They are almost certainly later than the Bundamba sandstone, and it is more than likely that the Point Lookout eruption belongs to the same phase of volcanicity.

If our Dunwich pebble came, as seems likely, from the Point Lookout lava, it means that either the Dunwich sandstone is of a later period in the Tertiary or else that if the sandstone is Bundamba, the Point Lookout eruption occurred previous to that.

As there is no evidence that the sandstone is part of the Bundamba series, we are justified in saying that the probability is strongly in favour of it being of Tertiary age, and this view is strengthened by the recent investigation of Messrs. C. C. Morton and Owen Jones, who both regard the loose sandstone at Humpybong as of Tertiary age.

We must, however, clearly bear in mind that the age of the Dunwich rock is not yet proved, though the pebble has gone a long way to solve the problem.

If, as seems probable now, the Dunwich sandstone, as well as that of Peel Island and Coochi-mudlo is that of Tertiary age, this gives a large extension to the already known areas of post-mesozoic deposits near Brisbane. It also opens up the question of the distribution of land and water in Tertiary time, for there is nothing now but sand dunes between the Dunwich sandstone and the ocean beach.