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The Journal of the

Tasmanian Field Naturalists' Club

CONTENTS.

(Each Author is solely responsible for the opinions and facts recorded in his article. The Club merely places them on record.)

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The Tasmanian Field Naturalists' Club.

The Tasmanian Museum, Hobart.

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NOTE.—Members are requested to bring Specimens for Exhibition at the Meetings, which are held in the Royal Society's rooms, The Tasmanian Museum.

This Club was founded in 1904 to bring lovers of Nature together, and widen the knowledge of Tasmanian Natural History.

Subscriptions are due on the 30th September, and are:—10/- Ordinary Members, 2/6 Junior Members. This includes copy of the Club's Journal.

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New Series—Vol. II., No. 2. March, 1927.

Club Notes.

Mr. M. S. R. Sharland, who has taken a prominent part in the activities of the Club for many years past, has secured an appointment on the literary staff of the "Sydney Morning Herald," and has left Tasmania. At the last meeting of the Club members took the opportunity of saying good-bye to Mr. Sharland, and wishing him success in his future career. Mr. Sharland was presented with a work on Natural History as a small token of remembrance. The Club will feel the loss of this able nature photographer, but N.S.W. will gain, and doubtless Sydney ornithologists will welcome our late member among their ranks.

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The 1927 Easter Camp is to be held at Adventure Bay. All members who propose to attend the Camp are advised to communicate with the Hon. Secretary as soon as possible.

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At the last meeting of the Club members had the pleasure of meeting Mr. A. F. Bassett Hull, of Sydney.

* * * * *

A matter which will need the attention of the Club in the near future is the better protection of the black swan. At the last meeting Mr. Basset Hull stressed the point that in certain other States the black swan was totally protected, and since then there has been a movement started on the East Coast to limit the season, so it would appear that the Club might well gather information on the subject, and take action if necessary.

Aboriginal Stone Implements.

Among the many interesting collections of the stone culture of the Tasmanian natives few examples from the South-Western area are to be found. The reasons are readily apparent when attention is given to the surrounding circumstances.

In the first place the South-West is uninhabited, and the rough nature of the Coast, together with the rugged, wind-swept mountain barriers of the inland portion act as barriers to settlement, as well as preventing many from even casually visiting this great area of our island home. In the past the dusky natives wandered amidst the coastal plains and button-grass moors in search of wallaby and kangaroo, or dived for shellfish around the coast. The immense shell heaps at Bond Bay and Kelly Basin, near the mouth of the Davey River, bear eloquent testimony to many an aboriginal feast in the ages of long ago. The kitchen middens give up their proportion of stone implements, but these are but little different from the millions of quartzite chips which cover the hill sides. The predominating formations in this extensive track are quartzite and mica schist. Such rock was totally unsuitable for secondary chipping, and readily explains the absence of implements showing the degree of workmanship which are a common feature of the camping grounds in most other parts of the island, although the extreme North-East is another area deficient in suitable stone for secondary chipping.

There can be no doubt that the average stone implement of the natives of the South-Western area was merely a quartzite flake, although in certain instances attempts were made to secure better material.

An interesting discovery was made on the shores of Schooner Cove, Port Davey. Here there is a rocky outcrop where the stone has taken on a semi chert-like character, and the aborigines have attempted to quarry out cores in order to fashion their implements from this rock. My own observations in regard to this quarry were confirmed by Mr. P. B. Nye, Government Geologist, whose attention I drew to this interesting spot.

Although several aboriginal quarries are known in the Eastern sector of the island, this is the first that I am aware of that has been recorded from among the Pre Cambrian rocks of the South-West.

Clive Lord.

Outlines of Tasmanian Geology.

SECTION 20 (Continued).

Classification of Igneous Rocks.

We have seen that rock may cool from a magma in different conditions with reference to the surface of the ground or its distance from its own edge, and these give us different characteristics independent of the composition of the rock. We have also seen that although magmas are originally of one type they may differentiate into several series with differing composition. Our classification depends primarily on mineral constituants, and rocks with similar composition are grouped into a clan. Each clan may have solidified at any depth, and so acquired characteristics due to rate of crystalization. We therefore have a cross classification of each clan into the Plutonic, Hypabyssal and Etrusive members of that clan.

Further classification depends on constituting minerals.

(a) Basic Rocks.

Gabbro Clan.—These rocks are the crystalized form of an original or undifferentiated magma. The normal composition is labradorite (or lime-soda felspar with predominating lime) + a pyroxine + olivine. These rocks contain between 45 per cent. and 52 per cent. of silica.

(i.) Normal group.—This consists of Gabbro as its plutonic member, dolerite, the hypabyssal and basalt the effusive, and includes most of the Tasmanian basalts.

(ii.) Olivine free gabbro, dolerite and basalt.—The first mineral to form is the olivine, and the very first signs of differentiation gives us this family, which includes the Tasmanian dolerite (usually termed diabase) and gabbro. Further slight differentiations give us:—

(iii.) Quartz gabbros, quartz dolerites and quartz basalts, which have a somewhat higher proportion of silica and show a trace of free silica (quartz).

(iv.) Norite, a plutonic rock with a somewhat higher proportion of quartz.

(v.) A variety caused by differentiation of olivine to an orthorhombic pyroxene gives us Hornblende gabbro, enstatite dolerite and hypersthene basalt.

With a complete differentiation we have a parting of the rocks giving an ultra basic group, in which the olivine crystals have sunk and enriched the lower layers, an intermediate group, in which the sinking of the femic crystals has enriched the upper layers in silica and an acid group in which the same processes have been continued until it has resulted in the production of free silica (quartz).

(b) Ultrabasic Rocks.

Peridotite Clan.—The composition of these is olivine + a pyroxine, and the total proportion of silica is under 45 per cent. The term limburgitic (or felsparless) is often applied to these rocks, and they present the only considerable rock masses without felspar.

Peridotite (olivine + augite, diallage, amphibole or hornblende) is the Plutonic type, Monchiquite (similar composition) or Perknite (similar but with predominant pyroxene), Picrite (olivine + augite), Alnoite (similar), and Dunite are the hypabyssal types. Limburgite (augite and olivine) and Metitite Basalt (augite, olivine and melitite) are the effusive types. Peridotites are found among the oldest rocks of the West Coast, and are important, as serpentine is often derived from the weathering effect of surface agencies upon Peridotites. Sometimes iron ores are differentiated amongst these rocks.

(c) Intermediate Rocks.

We now turn to the other branch of differentiation. The composition of all these rocks includes from 52 per cent. to 66 per cent. of silica. They may be classified according to whether their predominant felspar is plagioclase or orthoclase.

(1) Diorite Clan.—This approximates nearest to the Gabbro clan. The composition is a lime-soda felspar (oligoclase to labradorite) + a little orthoclase (not more than one-third the quantity of plagioclase) + hornblende. Biotite or augite sometimes take the place of hornblende.

(i.) Normal type.—This gives us Diorite as the plutonic rock, with porphyrite as the hypabyssal, and andesites as the effusive equivalent.

(ii.) Biotite diorite—porphyrite—andesite are the rocks in which biotite has taken the place of hornblende and pyroxene diorite—porphyrite—andesite when augite or another pyroxene is present.

(2) Syenite Clan.

(i.) Monzonite family.—This is half-way between the diorites and syenites proper. In it orthoclase appears almost equal to the plogioclase constituent. Monzonite is the plutonic type, and trachy-andesite is the hypabyssal and effusive type.

(ii.) Soda-Syenite family.—The composition of this group is soda-orthoclase + less abundant plagioclase + a soda silicate (aegirine, etc.). Soda syenite is the plutonic member. Solvsbergite and tingnaite are hypabyssal, and soda trachyte is the effusive.

(iii.) Felspathoid-Syenite family.—The composition is orthoclase + a felspathoid (nepheline, leucite, sodalite, etc.) + hornblende, augite or biotite. Nepheline — leucite — sodalite syenites are the plutonic, nepheline, etc., porphyry are hypabyssal, and Phonslite and Leucitophyre are the effusive. A great number of members and sub-members of these rocks are represented among the alkali rocks of Port Cygnet—Woodbridge.

(iv.) Potash Syenite family.—This has orthoclase + a trace of plagioclase + hornblende, augite or biotite, and is represented by Syenite, Porphyry and Trachyte as its plutonie, hypabyssal and effusive members respectively. This may be termed the normal group of the Syenite Clan.

(d) Acid Rocks.

Granite Clan.—These have always a total of over 66 per cent. silica, some of which is free. The presence of quartz is the distinguishing mark. They thus represent the opposite extreme of differentiation to the ultra basic rocks.

(i.) Granodiorite family.—Composed of predominant lime bearing felspar (oligoclase or andesive) + orthoclase in small quantities + biotite and sometimes hornblende + quartz. Granodiorite is the plutonic member, Quartz Porphyrite the hypabyssal, and Dacite the effusive.

(ii.) Adamellite family.—In which the plagroclase is equalled, or nearly so, by the orthoclase. Muscovite is common with the biotite. Adamellite, Aplite and Toscanite are the plutonie, hypabyssal and effusive types respectively.

(iii.) Soda-granite family.—Composed of soda orthoclase or anorthoclase + biotite + quartz. Soda granite is plutonic quartz porphyry and Keratophyres are hypabyssal, and Pantellerite is effusive. The Keratophyres are of special interest, as they are an important factor in the great ore deposits of the West Coast.

(iv.) Potash-Granite family.—This is the normal group of the clan. The ordinary composition is Orthoclase, with occasional plagioclase + biotite + quartz. Its members are Granite, Granite porphyry and Rhyolite. It is one of the most common rocks of the earth's crust.

Within these families all igneous rocks may be grouped, and each are sub-divided many times, there being descriptions of 614 igneous rocks in Daly's text book. This fact illustrates the difficulty of attempting any generalised classification, and text books must be referred to for further details.

Section 21.

Sedimentary Rocks.

We have discussed the types of rocks which may be produced by the crystalisation of a moltern magma, and now turn to the second major division of rocks which are formed on the surface of the crust from broken fragments of the crust or from the action of surface agencies. These are "deposited" by some physical agency, and are termed Sedimentary. As in the case of Igneous rocks, the mode of formation gives us the primary classification, but with sedimentary rocks the chemical composition of the constituting minerals is not always important in classification of types, and is only used in some cases. The mode of formation often devolves to the place of origin. This is the most important factor in the formation of sedimentary rocks, and largely governs their nature.

The existence of igneous rocks connotes the previous existence of some sedimentary rocks into which or over which igneous rocks have been forced. The original cooled shell of the earth has now entirely disappeared, and the oldest known rocks have been built up from still older rocks. These have been intruded by igneous rocks during all geological ages, and the sedimentary rocks consist of a mixture of fragments worn indiscriminately from all rocks older than their date of formation.

They have at times accumulated to great depths—some beds have a measured depth of from 20 to 30 miles, but this is infestissimal when compared with the diametre of the earth. Sedimentary rocks, generally speaking, have a less density than igneous rocks, and they are only found in the outermost zone of the globe's crust.

Origins of Sedimentary Rocks.

We have seen that various agencies are continually at work wearing away all land surfaces. The materials so removed cannot leave the surface of the earth, but are merely redistributed. Most are carried away by runnels, streams and rivers, and are dropped when the current slackens over the plains or are carried out to sea. All the materials worn from the coasts are deposited over the sea floor. Wind distributes dust, and volcanoes sometimes scatter ashes and volcanic dust over the land. Also certain physical agencies such as evaporation, and chemical agencies such as precipitation are at work in certain localities to cause the formation of peculiar sediments. Finally animal and plant remains at times accumulate in such quantities that they build a sedimentary rock entirely out of their remains. Sea shells and tree trunks are the best examples of these.

These three most important modes of origin—from fragments of older rocks, from the action of chemical laws and from the remains of living organisms, gives us our first division of sedimentary rocks into Fragmental, Chemical and Organic deposits. Each of these major headings may be further divided according to the place of deposition into deposits in the open sea, or in waters other than the open sea, such as estuaries, lakes and rivers, or on the dry land. These deposits are termed Marine, Aqueons and Aeolian respectively.

Deposition.

A "sediment" includes all the constituants of the future rock other than those injected or ejected through igneous action, and it includes even some of these when they fall as fine particles. The word connotes small particles, although some of these are on occasion several tons in weight, but all sedinmentary rocks lack the solid mass of interlocking crystal units that characterise the igneous rocks. The constituting minerals of the latter are intergrown, sedimentary rocks are cemented together.

Under similar conditions similar deposits are formed. These conditions are similiarity both of the rocks from which the deposits are derived and of the physical environment of the place of deposition. Thus a change from a lagoon to an open beach caused by an invasion of the sea would alter the nature of the deposit, so will a change in the sediment brought down by a river when it has, say, worn away a bed of sandstone, and is now wearing into an underlying bed of dolerite. Changes in conditions are always going on. A flood, melting of ice in summer, even a strong wind, the level of the sea, rising or sinking of land, presence or absence of vegetation, currents congenial to shell fish life, a volcanic eruption, all have their effect on deposits.

All sediments are laid down in layers. Wind blows a little more sand over a piece of country, a flood deposits an infestissimal layer of mud on the estuary bed. The resulting rock is seen to be made up of thin layers, separatable from the one above and below like the leaves of a book. Each of these is called a "lamina." They may be no thicker than paper or so thick that each stratum consists of one lamina. They represent the layer of rock formed at one time from a single deposition of sediment. A "stratum" consists of one or more laminal deposited one on top of each other, without a change of conditions. Its nature and origin is the same throughout. Each lamina is parallel, and the whole stratum has been deposited in the course of one period of deposition. Each stratum is distinguishable from the one above and below by some characteristic indicating a slight change of condition, such as a flood or a diminution in sediments, or an invasion of the sea or sand, or the absence of traces of life, or a change in the forms. All the strata laid down in one epoch of deposition, that is, from the time that particular deposition of sediment began until it definitely stopped, is termed a "bed" or "series" of sedimentary rock. Only a total interruption of deposition terminates the formation of a bed.

Sedimentary Rocks.

From their mode of origin it follows that the outstanding characteristic of sedimentary rocks is that they occur in layers—termed stratification. Sometimes these layers are formed with great frequency, and so are very thin. The rock is then said to be finely laminated. At other times they are very far apart, the rock is said to be massively bedded. In extreme cases it is difficult to see that it is stratified at all. Strata that are laid down exactly on top of the one below, and so are perfectly parallel, are said to be "conformable" to the one below. If some slight change of conditions has occurred since the strata below was deposited, so there is a distinct break in the stratification, and the next layer is thus not perfectly parallel, it is said to be disconformable. If this change of conditions is so considerable that the deposited layer has consolidated, and then been weathered, or eroded so that valleys and ridges formed out of its surface or folded, or otherwise altered before the next layer has deposited the two strata, will be said to be unconformable.

Within each stratum the laminæ may not be parallel to the line of the stratum. This may be due to the materials being eddied about in the water, or to have been deposited on a steep slope, or to the surface having been disturbed during deposition, and is termed "false bedding" or "current bedding." This is more usually found in sandstone than in other rocks, and is the typical sanddune rock formation. In this case as the angle at which wind driven sand will stand—the batter, in other words—is 30 degrees, the cross bedding never exceeds an angle of 30 degrees to the strata. The laminæ often appear to be tilted or even folded, but if the strata are looked to, it will be observed that they were originally horizontal, and are parallel to each other, independent of the laminæ. This point must be closely watched when examining sedimentary rocks.

Sedimentary rocks frequently vary considerably within the bed, and even within the stratum, such variations being due to local changes of conditions. Thus, in a bed of sandstone, patches of mud will often be found. These changes are even more noticeable between strata. Marine deposits are notoriously liable to frequent change. Often these changes occur in groups through the strata of a bed.

When a bed of sedimentary rock is considered as a whole it will be roughly in the form of a parallelogram, longer in one direction than in the other. If it becomes tilted the angle of tilt along its longer axis is termed the "dip," and the angle of dip may be measured. A line at right angles to the dip is termed the "strike." Most inclined rocks have a dip along the line of strike, as well as a true dip. Dip can only be calculated when the limits of the bed are known, and an isolated outcrop cannot be relied on to give the correct angle. A change of dip indicates a break in the continuity of the strata, either a change in deposition or a subsequent fault.

Such is, in short, the nature of sedimentary rocks as a whole. We must now turn to study the various types. Our classification, as has been indicated, will be into (a) Fragmental, (b) Chemical, (c) Organic, with a sub-division of each heading into (1) Marine, (2) Aqueous, and (3) Aeolian. Further sub-divisions will indicate different places of depositions within each of these sub-headings and differences in modes of origin.

(a) Fragmental Rocks.

1. Marine deposits.

(a) Boulder deposits.

These are deposits of rocks, the average size of which is over 6 inches in diameter. They are the first to be dropped when the current of a river slackens on reaching the sea or to be dropped by the currents of the sea when moving from the land. They are therefore essentially shallow water deposits. The size and nature of the component boulders may be infinite.

(i.) Boulders.—The unsolidified form in which these rocks are first deposited. The constituent units are usually perfectly round or nearly so.

(ii.) Screes.—An unsolidified mass of large rock fragments similar to boulders, but with angular forms and sharp edges, indicating that they had little or no wearing by water.

(iii.) Conglomerate.—The rock formed by the solidification of a boulder deposit by some cementing material, the majority of the constituting boulders or pebbles being of a similar rock.

(iv.) Agglomerate.—Similar to conglomerate, but with the constituting boulders consisting of a variety of different rocks.

(v.) Breccia.—The rock formed by the solidification of a scree deposit by a cementing material.

(vi.) Basal Conglomerate.—When a bare rock surface is being first acted upon by the sea its upper layers are broken by erosion into boulders. When sediments are deposited these boulders of the original rock form a basal conglomerate consisting of boulders broken from the older rock, which is to be seen below, cemented by newer sediments which form the rock above. A basal conglomerate usually is seen in the foundation layers of any bed of sedimentary rock.

(vii.) Glacial Conglomerate.—This rock is formed by the dropping of boulders off a melting ice sheet or floating berg into the sediments being deposited below. It can be distinguished by the variety in size, nature and shape of the boulders dropped, and by the fact that many can be seen to have been obviously dropped into the sediments that enclose them.

(b) Pebble deposits.

These are the next fragments to be dropped from the slackening current. They vary from coarse sand to small boulders, and finer material are frequently present.

(i.) Shingle.—The unsolidified form of these rocks in which the component pebbles are somewhat large.

(ii.) Gravel.—Similarly but with fine component grains.

(iii.) Grits.—The solidified form of gravel deposits. These merge downwards into sandstones.

(c) Sand deposits.

These are the next fragments to fall, and, like the proceeding forms, are essentially coastal or shallow water deposits.

(i.) Sand.—Grains of rock sufficient large to feel rough to the touch.

(ii.) Sandstone.—The solidified form of sand deposits. When sand is being deposited the grains are sufficiently small to allow the influence of difference of weight to permit sorting of sands of different minerals. Thus sandstone more usually consists of one predominating mineral. Sandstone, strictly speaking, consists of grains of quartz. If any other mineral is predominant its name is added to the rock, as felspathic sandstone, micaceous sandstone, etc.

(d) Mud deposits.

These are the ultimate effect of the sorting process, and are only laid down when the current has no power to hold them in suspension. In marine deposits they indicate deposition in deep water— over 100 fathoms.

(i.) Mud.—Deposits of fragments too fine to feel rough to the touch.

(ii.) Clay.—Deposits in which fragments are so fine that they unite in a mass impervious to water.

(iii.) Mudstone.—Solidified mud.

(iv.) Shale.—Solidified clay. Clay and shale are very seldom found as marine deposits. They usually indicate laucustrine conditions.

(e) Abyssal deposits.

Very little sediment reaches the great ocean depths. In places a little has been dredged up. This consists of minute particles of rocks and volcanic dust and dust blown from the land. This type of rock is unimportant.

2. Aqueous deposits.

(a) Boulder deposits.

(i.) Boulders.—Such deposits can only exist where a stream or river has been able to erode them into shape over a fairly lengthy course.

(ii.) Screes.—These are the more usual deposits of shorter streams and mountain torrents.

(iii.) River drifts.—The solidified form of the above. They may be conglomerate or brecciate, according to whether the constituants are round or angular. and usually indicates a flood plain and the first deposits in an estuary.

(iv.) Glacio-fluvatile deposits.—The rocks formed from material brought down by glaciers and carried over the surrounding country by water from the melting ice. They are glacial deposits more or less sorted into grades of fineness.

(b) Pebble deposits.

Gravel—grits.

(c) Sand deposits.

Sand—sandstone.

(d) Mud deposits.

Mud—clay—mudstone—shale.

All these deposits are found in this group. They are formed under the same conditions and present the same features as those described in the previous group. One additional rock of peculiar interest must be noted under (d) Mud deposits. That is:

(v.) Varved shale.—This is formed from mud carried by a stream issuing from a glacier. In summer much ice melts, and a thick layer of mud is deposited where these beds are forming. In winter very little water escapes, and the mud deposited is slight. A bed of these shales presents an extraordinary succession of thin and thick layers—each often of different colours.

3. Aeolian deposits.

(a) Boulder deposits.

The only forms such can exist in this class is as materials dropped from glaciers.

(i.) Till.—Glacial moraines after the disappearance of the ice.

(ii.) Tillite.—Solidified moraine rock.

(b) Sand deposits.

(i.) Sand dunes.—Sand blown by wind, and usually piled into a succession of ridges. These are only seen along the sea coast.

(ii.) Sand ridges.—Similar ridges formed in dry areas.

(iii.) Dune rock.—Solidified sand dune.

(iv.) Raised beach.—Rock formed by the solidification of an ancient beach, and consisting of sand, shells, driftwood, etc., now found inland through recession of the sea or uplift of the land.

(c) Dust deposits.

(i.) Loess.—Deposits of fine blown earth. These may be in a very solid form.

(d) Volcanic deposits.

(i.) Volcanic dust.—Deposits of fine materials ejected by volcanos and settled down over a land surface.

(b). Chemical Rocks.

1. Marine deposits.

Probably no rocks of this class occur.

2. Aqueous deposits.

(i.) Chlorides, Sulphates.—These occur through evaporation in lakes or enclosed arms of the sea, and produce salt deposits, and when in sufficient quantities, rock salt.

(ii.) Borates.—These are rare. They occur with (i.) above.

(iii.) Carbonates.—Similarly.

(iv.) Travertine.—A hot spring deposit consisting chiefly of calcium carbonate.

(v.) Suiter.—Similar, but consisting chiefly of silica.

(vi.) Limestone.—Sometimes formed from precipitated calcium carbonate.

(vii.) Dolomite.—Similar, but with magnesia.

(viii.) Iron Ores.—These are formed in bogs and peety marshes from the action of bacteria on decaying plant remains. Bog iron and iron pans, such as are common under our Button-grass plains, are examples.

3. Aeolean deposits.

Few rocks are formed chemically on the surface of the ground. Some salt deposits may be included here. Also buck-shot gravel—fine round red grains of gravel coated with iron gathered from percolating water and bacterial action on decaying vegetation.

(c) Organic Rocks.

1. Marine deposits.

(a) Shallow water deposits.

(i.) Shell banks.—These often accumulate to great depths.

(ii.) Limestone.—Some of our most important beds (e.g., at Maria Island) are merely consolidated shell banks.

(iii.) Coral rock.—This often forms immense beds.

(b) Deep sea and abyssal deposits.

(i.) Ooze.—This covers the flow of the ocean at depths too great for sediments to reach. It consists of the hard portions of small and microscopic organisms that live and die on the ocean above. Foraminifera, radiolaria diatoms and certain molusca and algae are the chief constituting organisms.

(ii.) Limestones.—Solidified ooze.

2. Aqueous deposits.

(i.) Lacustrine ooze.—The yellow mud in many of our mountain lakes consists largely of the remains of diatoms.

(ii.) Carbonaceous mud.—Mud in which plant remains are present in large quantities.

(iii.) Carbonaceous shale.—Solidified carbonaceous mud.

(iv.) Peet.—A mass of plant remains, formed usually in bogs.

(v.) Coal.—A carbonaceous deposit formed from the remains of plant life.

3. Aeolian deposits.

(i.) Bone breccia.—A mixture of sediments usually wind borne with large proportions of animal bones. Such deposits are rare, and usually found in caves or round drying desert lakes.

(ii.) Peet. (iii.) Coal.—Some peet and coal is undoubtedly formed on the surface of the land, although this must be very damp land.

(iv.) Nitrates.—Deposits of nitrate salts from dedecaying seaweed or animal and bird excreta.

(To be Continued.)

The Sea Elephant.

(Macrorhinus leoninus).

Years ago sea elephants occurred on King Island, in Bass Straits. The ruthless destruction of the early days of last century exterminated the species in Tasmanian waters, and for probably a century there has not been a Tasmanian record. The bleak shores of Macquarie Island shelter a few remnants of former large herds, and it was probably a straggler from this Southern outpost which reached Tasmanian shores last Christmas.

The specimen was first noted at Orford, on the East Coast, but early in January became stranded in Wedge Bay, where he was secured by certain of the inhabitants. Fortunately, owing to the foresight of a local resident, the skeleton was secured for the Tasmanian Museum, and a detailed description will probably be published by the Royal Society of Tasmania.

C.E.L.