

wearing constantly a few twigs contained in a small bag or basket slung to the wrist, in the assurance that so good fortune will follow. But few other than chiefs are fortunate enough to possess this valuable jetsam. The twigs are also used as a medium of barter, a fragment of a colony, say, a branch seven or eight inches long, with its associated branchlets, having the exchange value of half a dozen pigs—the staple wealth of the island—or a wife.

In view of these interesting customs a few particulars regarding the Alcyonarian colony referred to are given. The specimen in the museum is a large and much-branched Gorgonid axis, intensely black in colour, with shiny surface marked by many fine grooves and ridges, and entirely devoid of flesh or spicules. By the characters of colour, branching, and general structure of the axis it is clearly a "black coral"—the "schwarze Horncoralle"—*Gorgonia* (now *Plexaura*) *antipathes* of Esper, or some closely related species. Such forms are widely distributed in Oceania, and are known to the natives by various names, frequently signifying "sea-wood," "sea-roots," "iron-wood," and such like. The present specimen is more than 2 ft. high, but examples 5 or 6 ft. high are on record. The colonies are most frequently cast ashore after storms, but they grow in five to six fathoms off Amboina, and belong to a typically shallow-water family.

It is natural that the large and thick stems of very old colonies used by East Indian peoples for the manufacture of ornaments should be considered of great value, but it is peculiar that the small twigs of an Alcyonarian widely distributed in Polynesia, an inhabitant of shallow water, and therefore likely to be often cast ashore, should be sufficiently rare in Santo to be a highly coveted medium of exchange.

JAMES RITCHIE.

The Royal Scottish Museum, Edinburgh, April 18.

Mechanically-formed Grikes in Sandstone.

THE grikes, or channels, frequently formed by the corrosive action of carbonic and organic acids upon the surfaces of exposed limestone beds are known to most geologists, but a case I recently met with, where similar surface-features have been naturally produced upon a sandstone ledge footing a part of the cliff at Orcombe Point, near Exmouth, is, I venture to think, a phase of marine erosion sufficiently unusual to merit a detailed description.

Here the Red Marls, with intercalated sandstones, rest on Permian (?) Sandstone. This, owing to its superior hardness, forms a ledge rising abruptly from the beach to a height of about 9 ft. This ledge of sandstone, which has a fairly level surface, is backed by a mass of a somewhat softer variety in the cliff, which, at its greatest distance, is about 20 ft. from the margin of the ledge.

The surface of this ledge is grooved and channelled to a remarkable extent, and presents an appearance similar to that of limestone grikes. The longest channel has a length of between 15 and 16 feet, the deepest is 2 ft. 3 in. in depth, and the widest has a width of about 2 ft. at the top. In this widest channel is a ridge, about 1 ft. from the top, running along its centre, clearly representing an eroded parting which originally separated this widest channel into two parts. All the channels run seawards, and are deepest near the edge of the ledge. They are veritable cañons in miniature. A photograph taken from a point above the surface of the ledge is here reproduced.

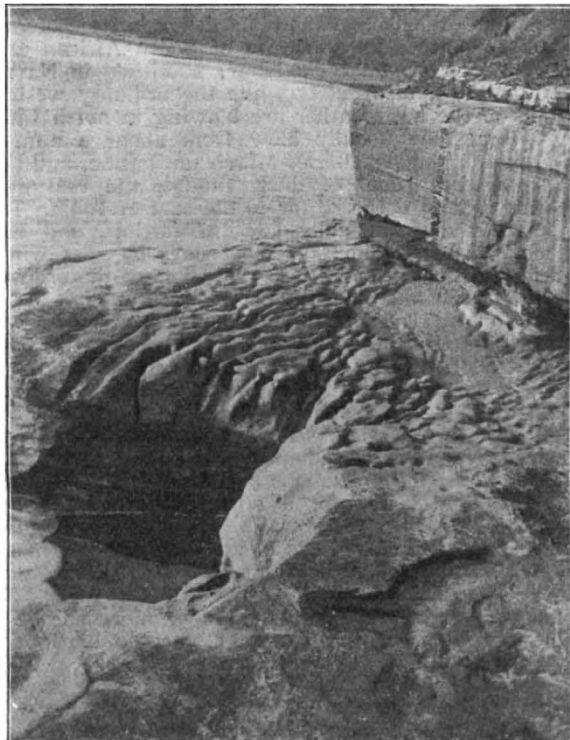
These unusual features have been produced as follows:—During stormy weather the pebbles, grit,

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and sand on the beach are cast upon the ledge by the waves. The advancing and receding water causes the beach material to move to and fro on the top of the ledge, and thus the pebbles and sand have literally worn out these grooves, and the work of deepening and enlarging still goes on.

The position and direction of the channels was probably originally determined by slight "fossil" ripple-marks which existed on the surface of the rock.

The sandstone forming the ledge is a fairly hard,



Grikes in sandstone at Orcombe Point, near Exmouth (looking west).

red, ferruginous rock, composed chiefly of quartz grains, the larger being smooth and rounded, or sub-angular, and the smaller rough and angular. The beach material is chiefly made up of quartz, quartzite, vein-quartz, sandstone, flint, jasper, and shell fragments.

CECIL CARUS-WILSON.

April 21.

Gain of Definition obtained by Moving a Telescope.

THE phenomenon described by Mr. M. E. J. Gheury in NATURE of March 27, p. 86, is familiar to me in telescopic work.

Many years ago, when I used to sweep for comets, sometimes nebulae would be seen to enter the field which were so faint that when the telescope came to rest they were only just discernible or invisible altogether. By slowly swinging the telescope back and forth they would become readily visible, as if the process of motion had the effect of greatly multiplying their light. This was not an unusual occurrence. I remember also that it made quite a difference as to whether the object entered from the right or left side of the field. It was easier to detect a very faint nebula or comet when it entered from a certain side. I cannot now remember whether this was from the right or left (the sweeps being horizontal), but I know