

boat, and no means of returning should any accident befall their balloon by the way. And even should fortune's wind waft them to the pole they dare not allow their craft to fall. Well might the circular that has been issued to the Russian people on behalf of the expedition urge those who might see the balloon "not to be frightened by the globe, but to help the men in every way." Whether they succeed or fail, all must hope that they survive to tell of their experiences in a lifeless world of ice and cold—a world that once was as active as our own, and which offers a type of what the temperate and torrid zones will be in the ages that are to come.

[NOTE.—Since this paper was written the news has come to hand that Andrée's project had probably ended in failure, and that Nansen had returned, after reaching beyond the 85th parallel of north latitude.]

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ART. XLVII.—*Are they Old Kumara-pits?*

By TAYLOR WHITE.

[*Read before the Hawke's Bay Philosophical Institute.*]

ON Mr. Graham Speedy's property, near Herbertville, Hawke's Bay, are seven right-angled pits, some 18 in. or 2 ft. in depth. They are on a small, narrow piece of land mostly surrounded by a sloping incline 16 ft. in height. At first I hoped they would prove to be the remains of ancient sunken or pit dwellings, such as those found near Pelorus Sound, and said by some persons to have been occupied by a pre-Maori people; but from the narrow width of my seven pits they must be other than original sites for dwellings. Therefore I conclude that these pits are where the esculent kumara has at one time been stored. The longest pit is 22 ft. in length by 8 ft. across; another is 14 ft. by 6 ft., and others are 6 ft. by 10 ft., 10 ft. by 5 ft., 18 ft. by 7 ft., 13 ft. by 6 ft. The excavations are still fairly square in the angles, and have perpendicular sides. The width of those only 6 ft. across would prevent a man from sleeping across the space in Maori fashion; so we may conclude that here was an old-time storage-place of the Maori crops. I remember, many years ago, seeing a row of such pits, near the road-side, between Moteo and Omaha, in a sand-ridge running parallel with the river. But about or near these pits were scattered shells, the remnants of Maori feasting; and I have no certain remem-

brance of the length or breadth of the pits. Certainly the remains of former shellfish feasts gave the locality a home-like aspect.

ART. XLVIII.—*A Maori Stronghold.*

By TAYLOR WHITE.

[*Read before the Hawke's Bay Philosophical Institute.*]

THE old-time pre-pakeha Maori and his history, habits, and mode of life are becoming year by year more interesting. I will now, therefore, endeavour to describe some of the evidence still remaining of the works of the old-time Maori people.

About the year 1876 or 1877 Mr. McDonnell, who then owned the land known as Rakamoana, near Pohui, showed me the remarkable position which had been selected by Maori people as a refuge from the attack of others of their race, or possibly as a fortified habitation. The site of this fort is in a bend of the Mangaone River—I may state that this river and its affluent creeks are nearly always on either side embanked by high precipices of papa rock, in some cases several hundred feet in height, and which are in most cases entirely inaccessible and highly dangerous both to animals and man if unaware of their proximity.

This pa was situated on a kind of peninsula, being connected with the main land by a very narrow neck or passage. On either side of this entrance-passage to the pa was a great precipice, and it was easily seen that an assaulting party could only approach it by one or two at a time; it was terrible to think how the combatants might be thrown both to left and right down this frightful chasm, or that champion fighters of both parties might fall over locked in a tight embrace.

The interior of the fort was of considerable extent, and was protected on the other two sides by the cliffs, while the more gradual, though still very steep, descent to the river on the fourth side was protected by a ditch and bank, probably at one time carrying a palisaded fence.

I noticed several remains, still erect, of posts; very likely the remains of whares, or dwelling-places. I also observed several pits which made me think of rifle-pits, but possibly they were store-places for kumara or other provisions.

Water would have to be carried from outside the fort up the long and steep ascent from the river. This want of water within the pa was the common defect of Maori forts, and