
**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER**

# A DROWNED PA IN LAKE OKATAINA

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Divers have recently commenced a detailed mapping exercise on a fortified pa submerged beneath the cool waters of Lake Okataina in the Rotorua district. The site is unique in that large numbers of palisade poles are still standing erect in their original positions (Cover and Plate 1).

Back in 1966, divers from the Waikato Underwater Club dived in the lake to investigate a suspicion that some time in the past the lake level rose, drowning artefacts and pa sites around the lake shore (Quigg, 1966). They discovered the rows of palisade posts adjacent to a small island. Neil Quigg described the scene: "There was a double row of sticks, the average height of which would have been eight to ten feet. The two rows were about five feet apart, individual sticks about two feet six inches, and the two rows ran across the bottom slope maintaining constant depth."

A few months later, another group from the Waikato Underwater Club returned to the site to record as much useful information about the site as they could (Johnson and Calcott, 1967). They made a preliminary map of the site, locating a few of the larger poles in relation to a metal stake driven into the island above the water line, and sketching in a number of the remaining poles (Fig. 1).

The site has received very little attention since then, with only sporadic diving activity in the area, but a recent upsurge in interest in finding alternative dive areas has led to a greater awareness of freshwater diving. The Scubanauts Underwater Club of South Auckland visited the area in July this year and after an unsuccessful attempt to locate the site returned in September with more information, relocating the site quickly.

The palisade posts are in amazingly good condition, probably resulting from their submergence in freshwater away from moulds and insects which would rot the timber fairly quickly on land. The low temperature of the lake water also would have helped to preserve the timber.

In September a quick count showed 73 posts still standing, apparently in their original positions, with many more lying on the lake floor. A few poles are very sturdy, rather like telegraph poles about 30 cm in diameter, although most are between 5 and 10 cm thick.

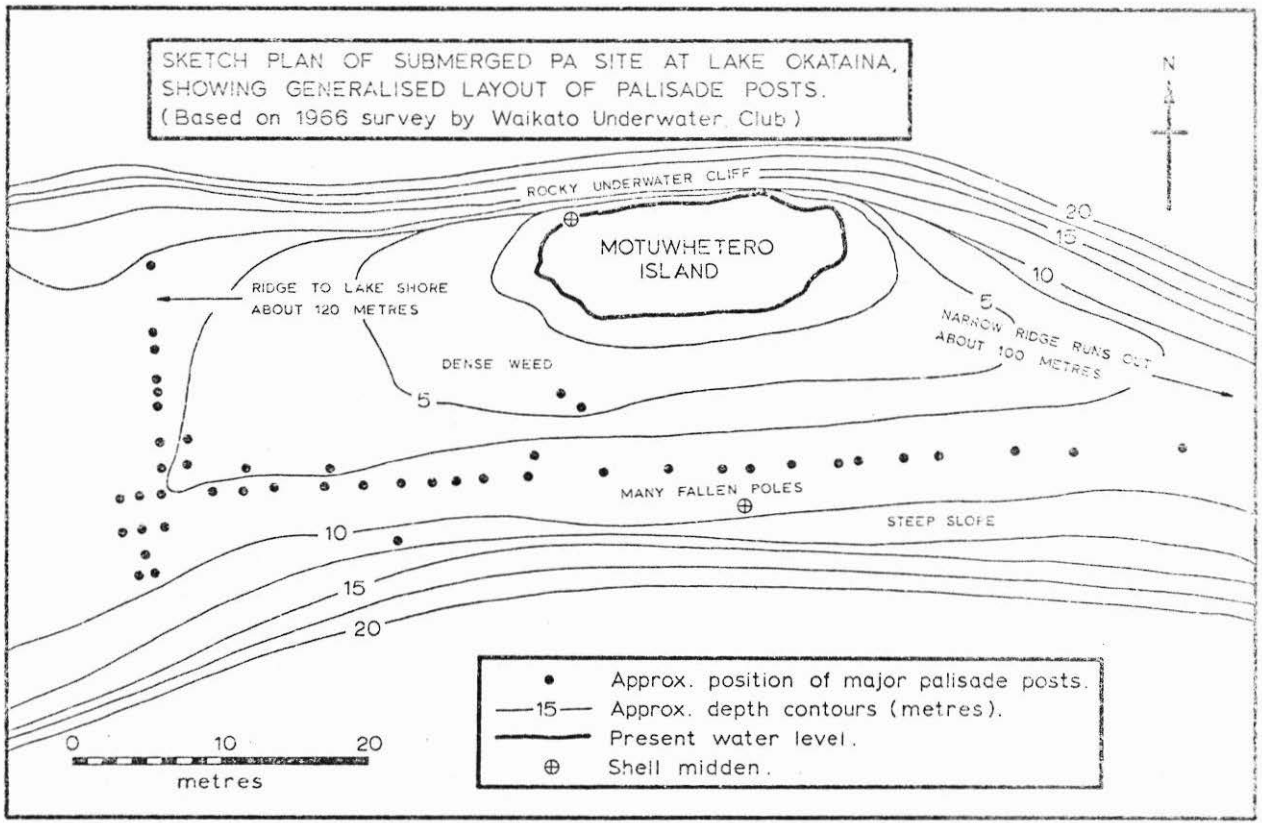



FIGURE 1. Sketch map of the Lake Okataina pa.

It is fortunate in many ways that this site is submerged. This means, among other things, that it is possible for large numbers of people to visit the site with little risk of damage, because divers can drift in mid-water above the bottom, and snorkellers float on the water above the poles. On land, such a site could quickly suffer severe damage by trampling the ground if large numbers of visitors walked through the area.

Many of the upright poles can be seen from the water surface, and the site therefore has tremendous potential for recreation and education not only for divers, but also for tourists in glass-bottomed boats or using a "look box" over the side.

Diving in the area is not easy. For a start, the site is in a remote corner of the lake some distance from the boat ramp. Buoyancy characteristics of freshwater are rather different from seawater, creating practical difficulties when trying not to stir up silt off the bottom. When we dived there in September, underwater visibility was, initially, nearly 10 metres, which is quite adequate for observation and photography. But the very light silt and fine green weed on the bottom is easily disturbed, quickly clouding the water and making good photography and observation difficult. With no currents in the area to wash away the clouded water, there is no alternative but to wait for several hours between dives while the dust settles.

Above water, the small island has a platform on top and one or two small terraces, and a midden of freshwater mussel shells. Underwater, terraces are not obvious, but could be present obscured by weed and silt. The low point of the saddle between the island and the mainland would seem to be a likely site for a defensive ditch, but none could be seen. Again, if such a ditch was present, it would probably be obscured by silt and weed. It is intended to use a sophisticated echo-sounding device which can penetrate weed and silt and show up the contour of the solid surface beneath the mud. This may reveal terracing, ditches, or other fallen timbers not immediately obvious by diving observation.

Once the site is mapped in detail, a monitoring programme over the next few years should provide information on the rate at which the palisade timbers are deteriorating, and therefore provide a data base for decisions on the longer-term future of management of the site. It is hoped that interpretation aids, such as maps and pamphlets, will eventually be produced to help the public understand the significance of the site, and to gain the maximum benefit from it before it deteriorates much further.

At this stage the exact age of the site is not known. The lake level may have risen and flooded the pa as a result of the eruption of Mount Tarawera in 1886, but further investigation will be needed to confirm this. It appears that the level probably rose between 10 and 20 m, creating an island at the site where a headland pa once stood.

Divers from the Scubanauts Underwater Club have sought advice from archaeologists to ensure their activities in the area will not destroy any information. Their first task is to accurately map the site, using aerial photography in the first instance to produce a good base map to work from. Then all the poles will be assigned numbers and located on the map. The depth of the base and the height and diameter of each pole will be recorded. Any special features of each pole will also be noted. A number of them appear to have sharpened points.

After detailed mapping has been completed, features of the site will be re-assessed. Continuing consultation with archaeologists will determine whether any further investigation of the site is warranted, and if so what form this should take. The divers are conscious that at this stage all they can offer is to carry out careful underwater work on the site, but that they have no archaeological expertise and need guidance from qualified people if the project is to proceed successfully. The Maori community in particular needs to be consulted regarding the future of the site.

All the poles presently have a covering of small algae, some 2 cm thick, which may be obscuring surface detail. This algae may be carefully brushed off a few key poles to see if any carving or other features are present on them. Any such discoveries would be photographed and further advice sought.

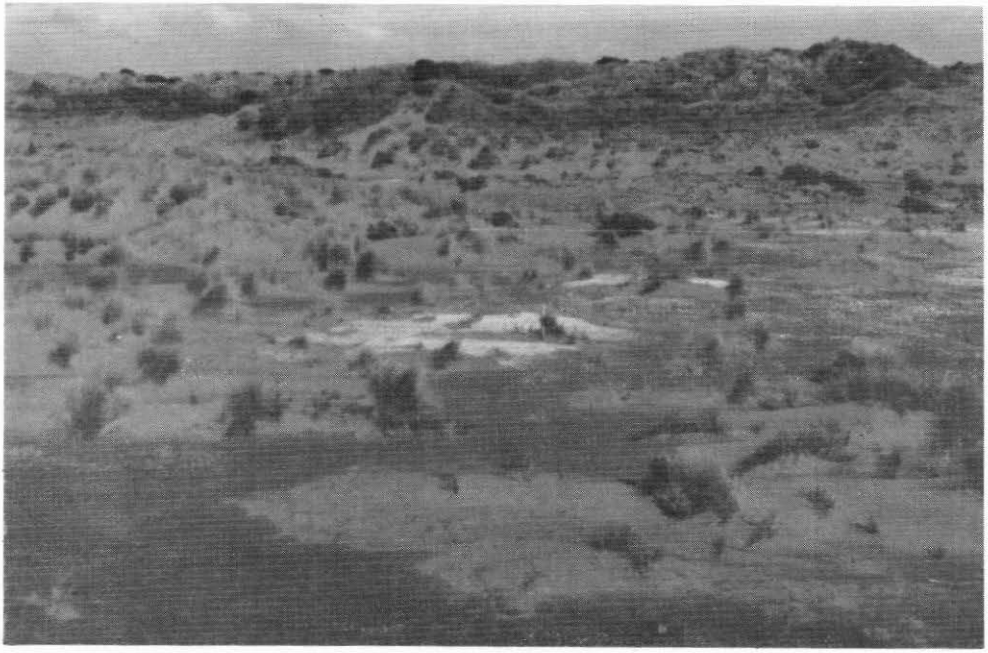
The divers are very conscious that anchoring boats in the immediate vicinity of the site could do irreparable damage to the palisade posts, so they have either tied up to small trees on the island, or left boats drifting with a boatman on board. Also careless diving practices could accidently break off some of the thinner more fragile poles. They are therefore seeking official recognition of the value of the site, and will encourage the Lake Okataina Reserve Board to place a sign at the boat ramp, and on the island, pointing out the fragility of the site and the need for special care when operating nearby. The New Zealand Underwater Association is preparing a campaign to inform its divers of the need for special care when diving in this area, and suggesting a "code of conduct" to minimise the risk of inadvertent damage to any of the archaeological features. This will also point out such obvious things as the total legal ban on fossicking for artefacts, or disturbing anything on the site, including middens and timbers.

References

Quigg, N. 1966 Underwater archaeology in New Zealand. Dive South Pacific Underwater Magazine, 5(6):25.

Johnson, N. and J. Calcott 1967 Underwater pa: Lake Okataina. Dive South Pacific Underwater Magazine, 6(5):14-16.

OKATAINA PA. A diver with group of palisade posts.



MANAWATU MIDDENS. Shell middens north of Himatangi, May 1981.