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## ARCHAEOLOGY IN NEW ZEALAND



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PETROGLYPH MOULDS

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The method of making moulds of petroglyphs as suggested by Clegg (1983) has been described by Furey (1989). While aluminium foil may have its use for successfully photographing petroglyphs, I consider Clegg's method to be more cumbersome and perhaps not as accurate as a mixture of latex and French chalk with scrim for strengthening as described by Ambrose (1961) for the rock carving at Ongari Point, Katikati. This was the same technique I had successfully used for making moulds of petroglyphs on Korekore pa (Q11/5), Muriwai. The pa is described in detail by Firth (1925).

My first visit to the pa in 1931 was before any serious grazing of the site had taken place and while it was still covered with pohutukawa trees. At this time the carvings on the walls in one of the large rectangular pits were clearly defined. Also evident were the marks of wooden or stone tools on the roofs and sides of rua (some of which Firth (1925) interpreted as having been used for storing water).

With the introduction of intensive grazing, a tractor road was cut up to the main portion of the pa and all trees and vegetation on the site were felled leaving the earthworks exposed to erosion by the elements and grazing animals. Many of the pits and rua filled with debris. By 1958 the petroglyphs on the walls of the large pit had eroded badly so I decided to make moulds and eventually casts of as many as possible.

Having used a latex compound in my work, I was aware of its capabilities, so set about finding an ingredient to stiffen the latex sufficiently for it to be applied to a vertical surface. Experiments showed French chalk to be superior to all other powders as it could, by careful addition and mixing in, thicken the latex to any consistency, without forming lumps.

While a spatula could be used for stirring the more fluid mixes, the hand was more satisfactory when a doughy mix was required. With the latter mix reinforced by scrim and held in place with sticks, I was able to take moulds of incisions on the curved roof of a bell-shaped water hole at Korekore pa.

Because of the quantity of latex required for his job, Ambrose used ordinary latex which accounts for the time he allowed for the drying out of some of his moulds. For my experiments I used a compound of latex sold under the brand name of "Carpetex". The advantage of using Carpetex, is that

it is much quicker drying, only a few hours depending on the number of coats of scrim and Carpetex applied. Another important feature of Carpetex, is that it does not perish and become sticky with the passage of years as ordinary latex is liable to do.

Ambrose and I found the method described for applying the latex easy and effective while the resulting moulds were tough, yet very pliable and virtually resistant to damage. Just by trowelling, the latex mixture penetrated evenly into every irregularity in the petroglyph and if it was found necessary to apply the latex by hand, any residue adhering to the fingers was easily rubbed off leaving the skin unharmed.

The moulds I made of the petroglyphs and incisions at Korekore pa in 1959 still showed no sign of deterioration in October 1989 and accurate casts could have been made from them. I have not made any more moulds since 1959 but I see no reason why the method described by Ambrose should not be just as effective now as it was then.

I believe that the method described by Ambrose has decided advantages over that used by Clegg:

(1) The latex and French chalk compound is easy and simple to mix and to use, no prolonged tamping is required and the compound can be spread into and over the petroglyph using either a trowel, a plasterer's float or by hand. Applied in any of these ways, the compound can be worked into every crevice. Usually only light pressure is required to achieve complete penetration and coverage of the petroglyph and for the application of the scrim reinforcing. Paper-hanger's scrim, a coarsely woven jute material or similar open weave is used to give strength to the mould and enable it to be handled later without fear of distortion.

(2) As the ingredients, latex and French chalk, are carried separately, the latex can be brought to the correct consistency at the site by slowly adding French chalk. Any unwanted mix can be rubbed off containers, tools and hands while brushes can be cleaned in water which can also be used to thin down latex.

(3) The surface should be reasonably dry although moisture does not greatly affect the moulding process if the first application of latex compound is a thicker mix to allow for it absorbing moisture.

(4) The size of the mould is only limited by the ability of the moulders to handle it as the layers of scrim imbedded in the latex do not allow the mould to distort or stretch. If necessary the mould can be folded and transported without damage any time after the initial drying period. Carpetex

dries much quicker than latex and my moulds of around 30 cm<sup>2</sup> would be dry in about 2 hours depending on the weather.

(5) The moulds I made of Carpetex and French chalk of the petroglyphs at Korekore pa remain flexible, did not need to be remoulded and even after 30 years of storage, a cast or any number of casts could still be made from a mould.

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