

LEI (WHALE TEETH)

The ordinary Samoan word for tooth/teeth is 'nifo,' but whale teeth — the source of rare and valuable ivory — were referred to as 'lei'.

FULL TOOTH

Sperm whales have 30-60 teeth in their lower jaw.

Teeth can be 4-10 inches in length and weigh up to 2 pounds.

HALVED TOOTH

The tooth is first halved using sharpened basalt.

QUARTER TOOTH

If the tooth is large enough it is halved again to create quarter pieces.

ROUGH SHAPING

In order to achieve its iconic shape, the whale ivory is sanded using a series of coral, pencil urchin spine, pumice, and polished with granite stone.

FINAL PIECE

After continuous sanding and polishing the final shape takes place.



CUTTING

Using a sharpened piece of basalt, the larger lei (whale ivory) was first halved down the front center line of the tooth, and then halved again.



If the tooth is large enough, it should be possible to secure three or four usable segments from a single tooth.

If the tooth is especially small and or thin, it may only yield a single usable segment.



Cutting them in this way would take multiple hours.

It is possible that tiny holes were drilled first and then the cutting took place; this work was likely later done using metal saws and chisels introduced to Samoa around the 1830s-1840s.



ROUGH SHAPING

When working with a quartered tooth, it will have two hard lines and a softer curve.



The goal of sanding is to produce a single tooth segment that is as symmetrical, and to a point; as cylindrical, as possible like the piece on the right.

Sanding and smoothing was done using the most coarse implements to the least coarse.

TOOL 1: CORAL

As the most coarse of the tools, coral was used first.

TOOL 2: PUMICE

Fine-grained volcanic stones like pumice were used to shape and further smooth out rough shaped pendants.

TOOL 3: PENCIL URCHIN SPINE

As the softest of the sanding tools, the pencil urchin spine was used to finely polish out any remaining imperfections.

TOOL 4: POLISHING WITH STONE

Smooth, flat stones such as basalt could be used to help polish the stone. This may be followed by polishing using softer siapo material.

Coconut and possibly candle nut (lama) oil was used to preserve it and keep it smooth.

