

Technological Process

Tasmanian Aboriginal people used technologies to great advantage, including creating and using stone tools for various purposes. The following article evidences some of the deep knowledge and exceptional skill necessary to manufacture stone tools.

CROSS CURRICULUM PRIORITIES



Aboriginal and Torres Strait
Islander Histories and Cultures



Sustainability

CONTENT AREAS



Technologies



Science



Geography



History

GENERAL CAPABILITIES



Critical and Creative Thinking



Intercultural Understanding

KEY CONCEPT

Technological process consists of the ordered sequence of steps that must be followed in order to satisfy a need or solve a problem.

ITACA Technologies

SUPPORTING CONCEPTS

- › design
- › cultural knowledge
- › cultural practice
- › natural and cultural resources
- › trade

GUIDING QUESTION

What do people need to know and be able to do to manufacture stone tools?

This printed material is **to be used with Stone Tools – a Living Cultures multimedia curriculum resource** that can be found at www.theorb.tas.gov.au

The Living Cultures Stone Tools resource and this supplementary printed material have been designed to foster culturally responsive practice when learning about Tasmanian Aboriginal Histories and Cultures.

Introduction

Making stone tools is a highly skilled process. You often get people say, ‘oh it’s just a piece of rock, you just bash it around and away you go’, but a lot of thought has to go into actually achieving what you want from it. It’s not a simple process.

Caleb Pedder, 2017



Caleb Pedder at *yingina*/Great Lake | Image: Dcnstrct Pty Ltd

Different Types of Stone Tools

Tasmanian Aboriginal people quarried and worked suitable rocks and minerals – including quartz, silcrete, chert and spongolite – into highly effective tools for cutting, chopping and scraping purposes.



Chert – Scraper



Water-worn granite – Chopper



Cherty Hornsfel – Flake



Basalt – Hammerstone



Spongolite – Core piece



Cherty Hornsfel – Scraper



Water-worn Cobble – Hammerstone

Aboriginal Heritage Tasmania used with permission | *Tools not to scale

DISCUSSION QUESTIONS

- › What materials are stone tools made from?
 - › What is involved in the process of manufacturing stone tools?
-

Darwin Glass

Darwin glass is a natural glass found south of Queenstown in West Coast, Tasmania. It takes its name from Mount Darwin in the West Coast Range, where it was first reported, and later gave its name to Darwin Crater, a probable impact crater, and the inferred source of the glass.

Darwin Glass is also known to have been used by Tasmanian Aboriginal people for the production of stone tools as it flakes well, creating extremely sharp edges. Darwin Glass

tools have been found in locations around Tasmania, including in the Macquarie Harbour region and at Kuti kina Cave on the Franklin River, where its use dates back from 20,000 to 15,000 years ago. Its most easterly distribution is at Nunamira Cave near Mount Field, where the oldest Darwin Glass stone tool found dates from 27,000 years ago. Its northern-most distribution is approximately 170 km north of the original impact, at Mackintosh Cave.

Tasmanian Museum and Art Gallery



Darwin Glass | Collection: Tasmanian Museum and Art Gallery, Y1416

DISCUSSION QUESTION

- › What does the use of Darwin Glass demonstrate about the Aboriginal people's knowledge of the properties of materials?
-

Spongolite

Spongolite, comprised almost entirely from silica derived from sponges formed on the sea-bed millions of years ago, was favoured for its capacity to produce lightweight, extremely sharp tools.

Although spongolite occurs naturally at only one single location in Tasmania – at Rebecca Creek in the state’s rugged north-west – spongolite stone tools have been found at Aboriginal midden sites in all corners of the island.

The spongolite quarry at Rebecca Creek is one of the richest and most extensively worked Aboriginal quarry and artefact sites currently known in Tasmania.

Tasmanian Museum and Art Gallery



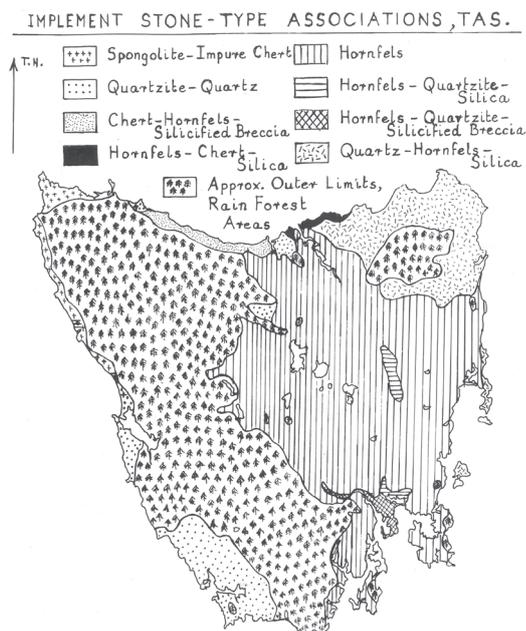
Collection: Tasmanian Museum and Art Gallery, M8712

DISCUSSION QUESTIONS

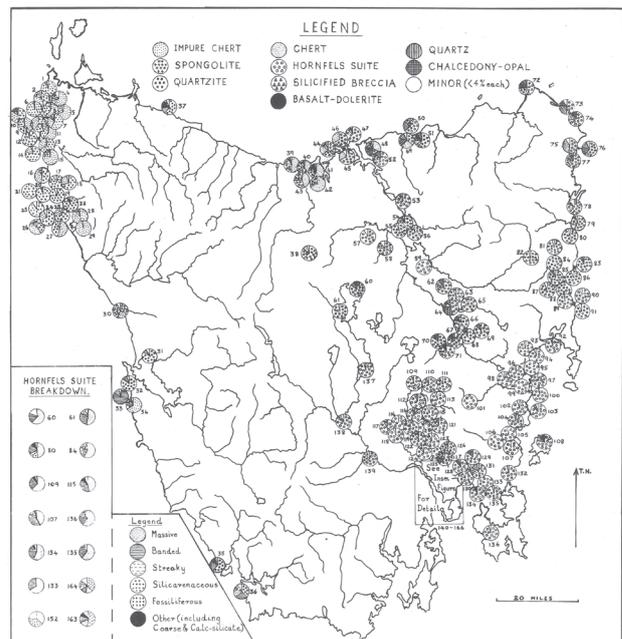
- › What types of tools was spongolite suited to?
- › How do we know that spongolite was a much valued resource?

Distribution of Sources and Tools

The maps below indicate areas where different stone tool types and materials have been found in Tasmania.



Stone source locations | Sutherland 1972: 15



Stone tool type locations | Sutherland 1972: 10

DISCUSSION QUESTIONS

- › What are the most common stone types used for tool making?
- › What are the scarcer stone types and where are they found?

Knowledge and Belief

Many different people at different times have taken an interest in stone tools. George Augustus Robinson, the co-called conciliator of Aborigines, recorded his own observations of Aboriginal people's lives, culture, customs, and practices in his journals. These included information relating to the skill involved in the making of stone tools.

The natives had employed themselves in manufacturing BALLYWINNE stones, a species of granite, called by the natives of Brune LAY.LOI.NY, by Jack (north) LARE.NER and by the Oyster Bay LO.NUNG.HE.LIB.BEN.NER. Those stones were selected for their toughness and flat surface, and with those they bruise their red earth of pomatum... they are one and a half inches. The women break off the round edge and give it a square edge. Their method working the stone to this shape appeared to me ingenious. The women I saw made a wet mark with their finger with spittle in the direction they

wanted it broken, i.e. the edges taken off like a hexagon. They then put the edge of the stone in a small fire of charcoal, and when sufficiently warm tapped it with a small stone and it broke in the direction required. The cause of the river continuing to be swollen was attributed to the circumstance of their breaking those stones and which made the water come. They said the water did not like it and heard them doing it. This is generally believed among them.

8 July 1834

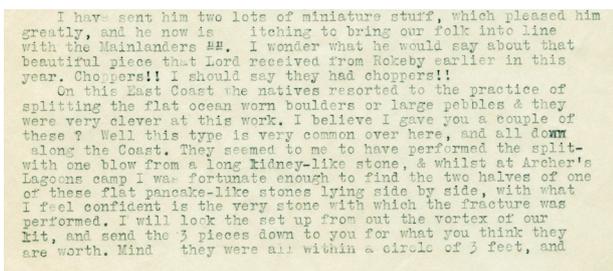
Robinson cited in Plomley 2008: 930

DISCUSSION QUESTIONS

- › What stone tool making techniques are described here?
- › How is the stone tool making process connected to the spiritual beliefs of the makers?

Technique and Quality

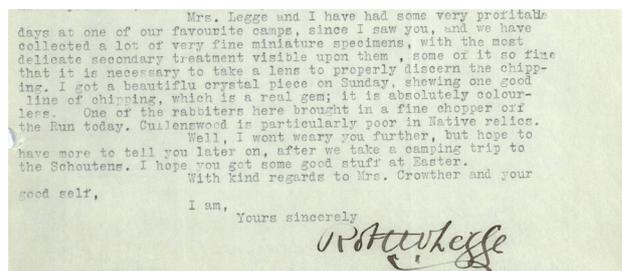
A series of letters from the Crowther collection, held at Tasmanian Archive and Heritage Office – dated between 1926-1938 – includes primary sources in the form of correspondence between amateur collectors and antiquarians who had an interest in Tasmanian stone tools.



I have sent him two lots of miniature stuff, which pleased him greatly, and he now is itching to bring our folk into line with the Mainlanders #1. I wonder what he would say about that beautiful piece that Lord received from Rokeby earlier in this year. Choppers!! I should say they had choppers!!

On this East Coast the natives resorted to the practice of splitting the flat oceanic boulders or large pebbles & they were very clever at this work. I believe I gave you a couple of these? Well this type is very common over here, and all down along the Coast. They seemed to me to have performed the split with one blow from a long kidney-like stone, & whilst at Archer's Lagoons camp I was fortunate enough to find the two halves of one of these flat pancake-like stones lying side by side, with what I feel confident is the very stone with which the fracture was performed. I will look the set up from out the vortex of our kit, and send the 3 pieces down to you for what you think they are worth. Mind they were all within a circle of 3 feet, and

TAHO: CRO41/1/8



Mrs. Legge and I have had some very profitable days at one of our favourite camps, since I saw you, and we have collected a lot of very fine miniature specimens, with the most delicate secondary treatment visible upon them, some of it so fine that it is necessary to take a lens to properly discern the chipping. I got a beautiful crystal piece on Sunday, showing one good line of chipping, which is a real gem; it is absolutely colourless. One of the rabbits here brought in a fine chopper on the Run today. Cullenwood is particularly poor in Native relics.

Well, I won't weary you further, but hope to have more to tell you later on, after we take a camping trip to the Schoutens. I hope you got some good stuff at Easter.

With kind regards to Mrs. Crowther and your good self,

I am,
Yours sincerely
Mrs. Legge

TAHO: CRO41/1/8

Several specimens of the large tree climbing chopper were found , it is of particular interest to note that one more or less perfect was found at the base or close to the base of each of the large trees. It may be that one was set apart for the use of anyone who might have occasion to go up the tree. Two finds of Red Ochre occurred on the large area

TAHO: CRO41/1/2

DISCUSSION QUESTIONS

- › What techniques are being described here?
- › How is the process being described?

Archaeologists provide another perspective on the making of Tasmanian stone tools.

The Tasmanians sometimes used for cutting or notching wood a very rude instrument. Eyewitnesses describe how they would pick up a suitable flat stone, knock off chips from one side, partly or all around the edge and use it without more ado.

Mitchell 1955: 131

Manufacturing Technique. Among the stone tools of the Tasmanians there is a general absence of any definite intentional or conventional form... In general the tools were made from hard brittle stone of a siliceous nature possessing a flat or conchoidal

fracture, from which irregularly shaped flakes and pieces were knapped from the core or nucleus. This last may have been a large water-worn boulder, or a lump of stone taken from an outcrop. The knapping was done by striking off pieces with a large pebble, or by striking one stone on another... No particular shape was aimed at; the shape of the finished tool was in most cases primarily determined by the shape of the original shape... The chipping of a working edge on a flake is really a simple matter, and can be readily demonstrated.

Mitchell 1955: 133

DISCUSSION QUESTIONS

- › How might the perspectives of authors affect our understanding of the knowledge and skill involved in stone tool manufacture?
- › Can you identify and describe the knowledge and skills people must have to manufacture stone tools?

www.theorb.tas.gov.au/living-cultures/stonetools/teacher-drawer

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