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ANCIENT ABORIGINAL BURIALS AT COWRA, NSW

a report on the study of
two skeletons
spanning 7,000 years

by Colin Pardoe

with the compliments of

The Australian Institute of Aboriginal Studies

GPO Box 553,
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October, 1988

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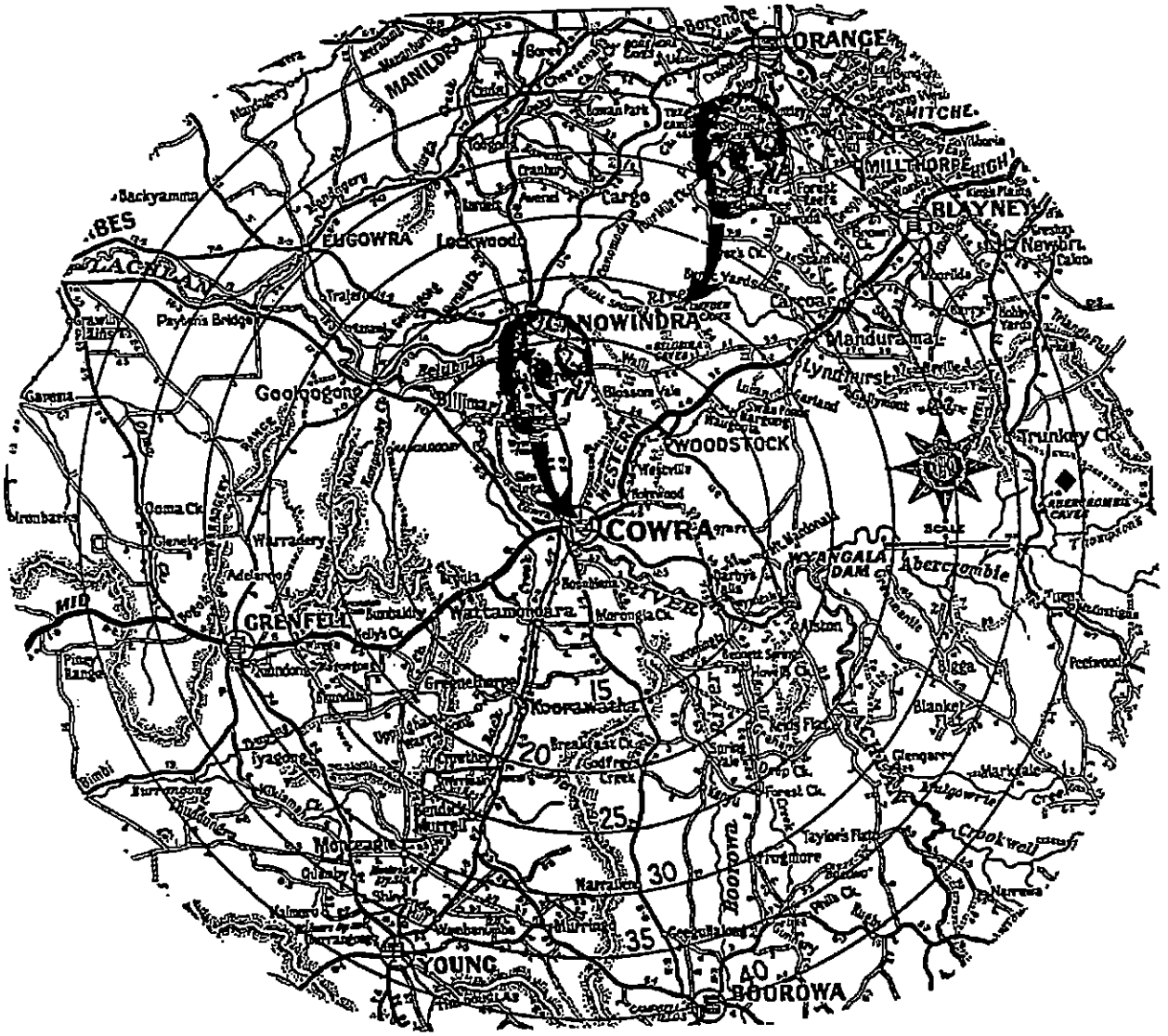
ANCIENT BURIALS AT COWRA

7,000 years ago, the weather was cooler than today. The climate around Cowra was probably moister. At that time, (about 300 generations ago) an Aboriginal hunter fell to his death down a cave. Later, maybe 1,000 to 2,000 years ago, an old man was buried overlooking the Lachlan River and the present day town of Cowra. Today, the lives of these two people; their deaths and burial can give us information about the past. That is what this report is for.



Location of the Cliefden Caves and Taronga Drive skeletons. The diamond on the right is the site of the Abercrombie rockshelter. This archaeological site was excavated by Ian Johnson in 1976.

CLIEFDEN CAVES

These caves are about 20 km northeast of Cowra near the south shore of the Belabula River. Entrance to the cave is through a hole on the side of a small hill. The hole is about 20 by 40 cm and immediately inside is a drop of about four meters. From this small chamber a narrow, low passage winds into the hill. At the end it opens into a sloping chamber up to two meters high and about six by ten meters in area. The bones were in and on the soil at the lower edge. On the other side is a shaft leading a short way up.

In the cave there was no evidence of smoke from torches, human disturbance, stone or bone tools. The skeleton is incomplete, with bones only coming from the lower part of the body.

Who was he?

The great size of the bones make it clear that not only was he male, but that he was at the upper size limits. The lengths of both the thigh and shin bones were compared with other studies to estimate how tall the Cliefden caves man was. This comes out at about 1.77m (5' 9").

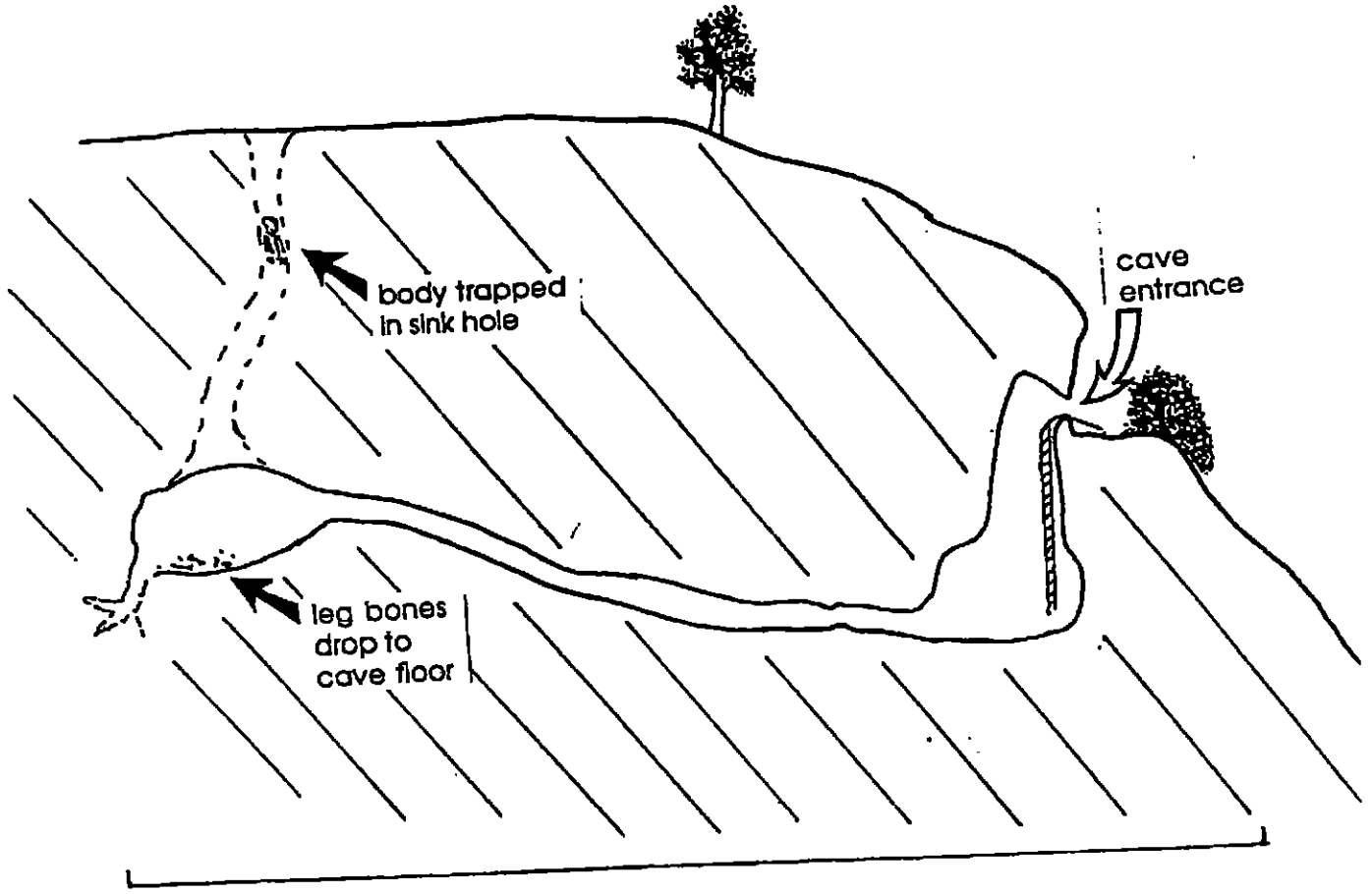
His age is difficult to tell. From some of the arthritis (I'll refer to this below) he could have been an older man, say over 40 years old. But there are other factors at work here. It is probably reasonable to assume that this person was no younger than about 35-40 when he died.

His knee-cap has long spurs, or roughened spikes on it. These are often the result of overworked or torn tendons. Small growths from arthritis are also on the ends of the shin bones, at the ankles. This might be expected as a natural result from the active life of a hunter. The arthritis probably had more to do with his overall size, build and activity than with age. The rugged, hilly terrain of the limestone country was probably to blame.

An adult skeleton carries information about childhood. Lines form in bones when growth stops for a short period at times of starvation or disease. A thin cap of bone is formed across the area of growth at either end of the bone. When growth restarts, this cap, or line, is left behind as a permanent marker of the stressful event. Seven lines are visible in the X-ray of the shin bone. This is probably the result of seasonal food shortage or perhaps an annual disease.

How Old?

The age of this man's death has been radio-carbon dated using a small piece of bone. The method is to look at different ratios of carbon in the bone, since these change with time. He died between 6,250 and 7,520 years ago. That is something like 250 to 300 generations in the past. There are few older skeletons in the country.



Mud map of the cave. We needed a rope ladder to climb down into the cave. I think the rest of the body is entombed in the hill, part way down a sink hole.

Death by Misadventure

I think that the Cliefden Caves man was not buried there, but instead that he died in an accident. Only the lower part of the body is present and there is no evidence of human intervention. The tiny cave entrance and immediate drop would have made it almost impossible to enter without a rope. It would be difficult for a large man to get in (at 6' 1" and 75kg, I just managed it by breathing out!) and impossible to move a body through. It seems unlikely that he entered here, became trapped and died: only subsequent vandalism would account for the present array of bones left in the chamber.

One solution to the mystery is death by misadventure. The blocked passage rising from the highest point in the chamber may have been a chimney or sink-hole 7,000 years ago when the glaciers and ice were disappearing. This stone age hunter may have fallen and died in the vertical passage. Ultimately, some of his bones dropped into the chamber and rolled to their present location, while the upper part of the skeleton remains entombed within the now plugged chimney.

Archaeology

This man who died here about 7,000 years ago has allowed us a glimpse into the human conditions of life at the time. This is a reminder that the so-called easy life of man the hunter is not without risk.

He was a large man, adapted to a difficult terrain as we can see by the rugged muscles and bones. He suffered from repeated privation in childhood as measured by growth lines in the bones. This might have been annual 'lean times' in winter; much like our own Christian time of Lent. His arthritic condition was no doubt made worse by advancing years and the wet chill of winter. And finally he died a violent death, perhaps falling down the hole while he was hunting.

THE TARONGA DRIVE BURIAL

This burial was disturbed when the footings for a house were being put in. Some children found the skull in a soil heap. Carol Gartside and Luke Godwin of National Parks and Wildlife Service organised a mechanical sifter and gathered together most of the bones and some stone tools from the site. I have been fortunate enough to study these at Canberra.

The burial was on the south-western side of the hill to the north of town, just near the top with an outcrop of boulders. From the site you can look over the valley, down the the Lachlan River about a mile (1.5 km) in the distance.

The picture shows the bones that are preserved. Most of the ends are lost - not from the sifting as you might expect, but from the effects of being in the soil for so long.

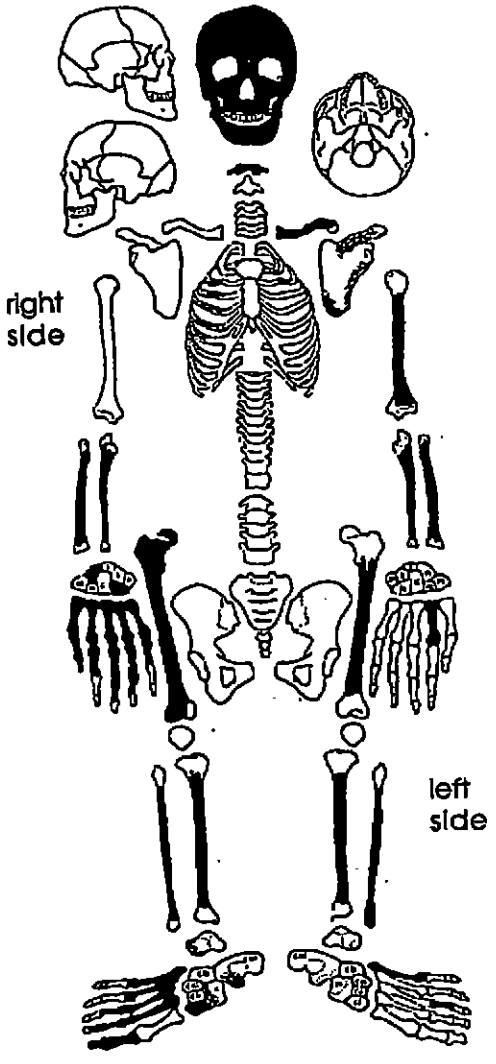


Diagram showing the bones recovered from the Taronga Drive burial. As you can see, most of the more fragile parts of the skeleton have not survived. I do not think this is the fault of the mechanical sieving that was used to recover the bones. Most of the long bones have the ends worn away. This is caused by erosion in the soil, not from breakage. Perhaps some of the bones, like the backbone, part of the ribs and the right upper arm were in another pile of soil that was taken away.

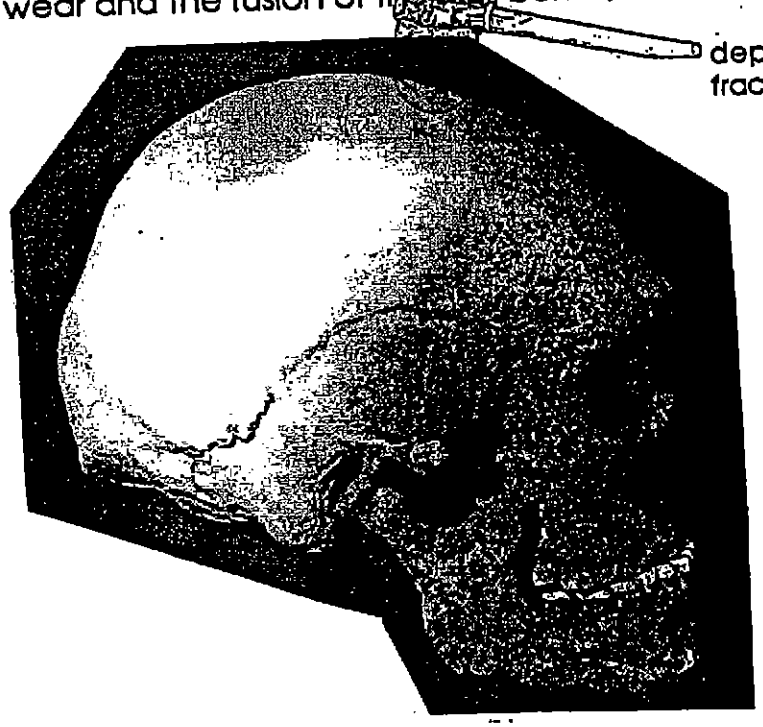
Who was he?

Although many of the bones are missing, and others are very much eroded, there is still a lot to be learned about this man. Like the Cliefden Caves man, the size and shape of the bones tell us that he was male. In overall size he was above average, but not quite so large as the Cliefden Caves man. He was probably an inch or so shorter.

Muscles attach to bone. The pull of the muscles affects the bone growth at that spot. Bigger, stronger muscles produce larger, more rugged spots of attachment on the bone surface. The Taronga Drive man was particularly well muscled on the calf and back of the thigh. This is very similar to the other one, and reflects the rugged nature of the country. On his arms, all the muscles associated with throwing are particularly pronounced, more so on the right side than on the left.

At some time in his life, he got hit on the head. This left a small, circular depression in the bone about the size of a one cent piece.

As he got older, his teeth wore down to stubs. This exposed the pulp chamber and infections were able to form at the tips of the tooth roots. These are called *apical abscesses.* He suffered from five of these abscesses. It is difficult to tell at what age he finally died. From the tooth wear and the fusion of the skull bones, he was perhaps in his 50's.



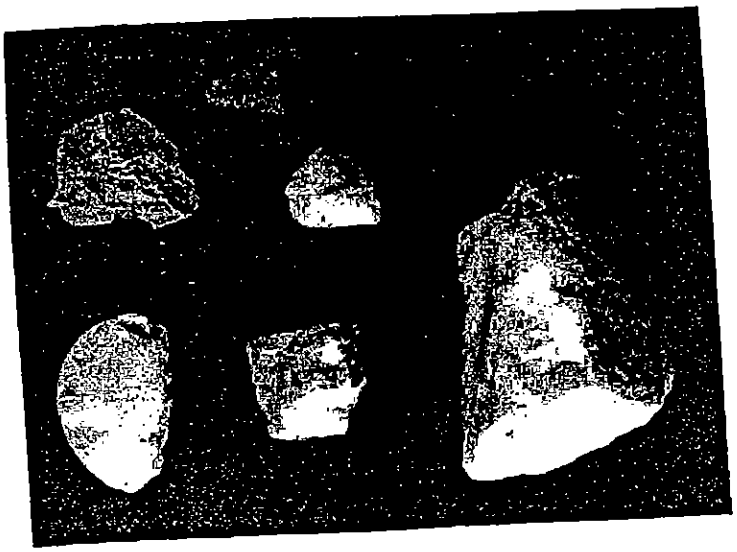
The Taronga Drive man from the side. At the top is the small *depression fracture,* caused by a blow to the head. This picture and the front view show the advanced tooth wear. You can also see a couple of small abscesses of the tooth roots. The difference in colours on left and right sides are where the back of the skull was exposed for a short time (perhaps a couple of months).

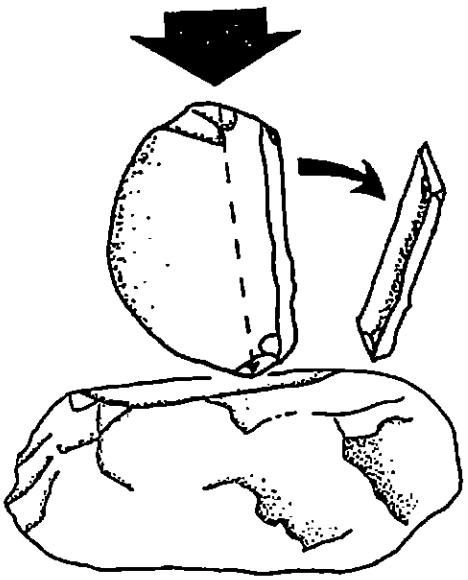
How old?

I don't know the age of this burial, although there are some rough estimates that can be made. The preservation of the bones is not extremely good, with the thinner and more delicate ends gone. This is partly to do with the soil conditions. The burial is not too recent (or else the bones would be in a better state). It is not extremely ancient (or else the bones would be more eroded).

The stone tools that were in the area are mostly quartz, shattered to make thin, rectangular pieces for hafting on to handles. This is a fairly recent kind of technology. Mind you, the tools are not necessarily from the burial, since the whole thing was disturbed before archaeologists could examine the area.

All in all, this burial is probably in the range of 1,000 to 2,000 years. It is not likely to be any younger, but it could be much older.

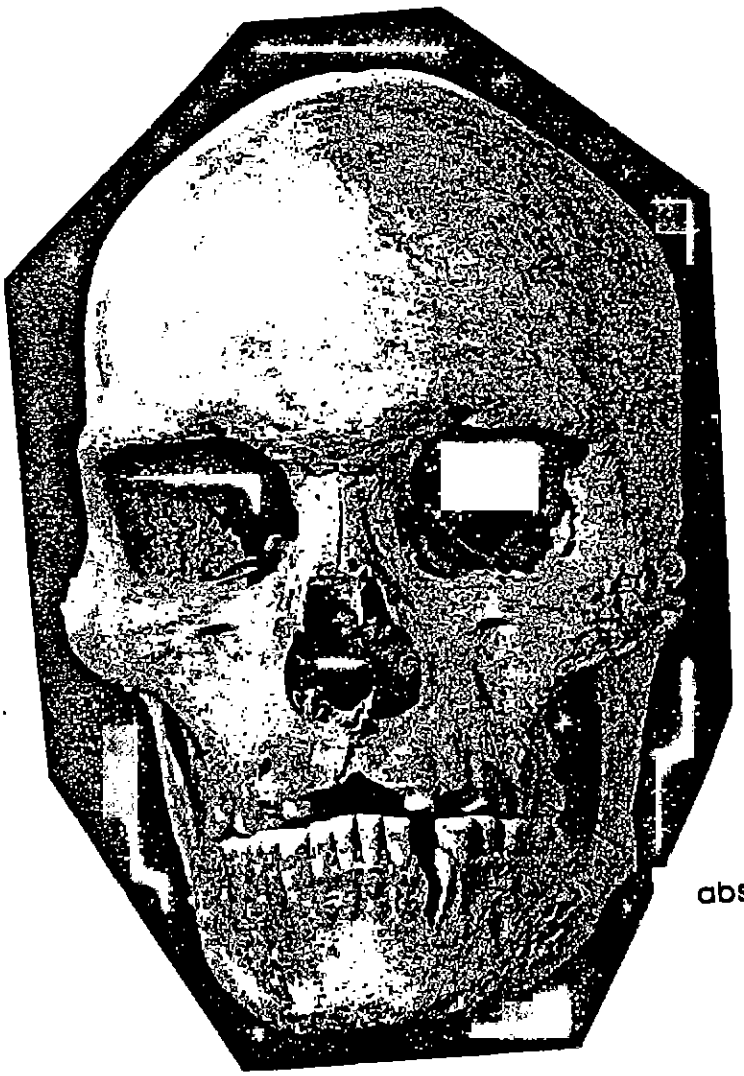




The rounded piece of quartz on the lower left in the photo has been broken using a hammer and anvil technique. This shows up on the waste piece as crushing of the ends. A thin rectangular piece is broken off and that is the part hafted to a handle for cutting. At the Abercrombie rockshelter, excavated by Ian Johnson of Parks in 1976, at least 95% of the stone in the site was quartz. Most of it was waste resulting from attempts to use the local vein quartz.

Ancient life

This man went through the initiation rite of manhood where the front teeth are knocked out. You can see on the skull where the teeth have been cleanly extracted. The bone has *resorbed*, or shrunk back and there was not any infection. This initiation rite has been found throughout the world, but nowhere is it as common as in Australia. The oldest example of it comes from the Darling River, about 6,000 years ago. The ancient spread of this rite is unknown for most of the southeastern part of the country. That is something I am now studying: where it occurs, how long ago, how many people in the area had it done, whether women had it done as well.

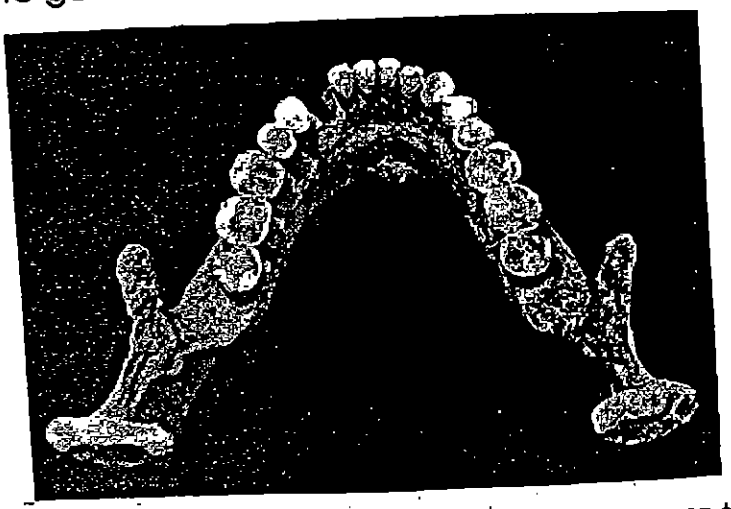


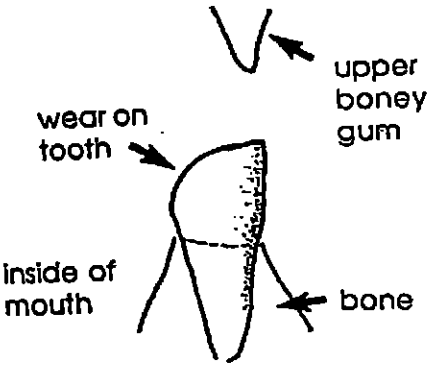
Photograph of the Taronga Drive man. Notice the way the gum line has receded at the front where the teeth were knocked out. This is normal when teeth have been lost. The ritual of tooth avulsion is widespread throughout Australia. The number of teeth knocked out varies. This case of two central incisors is common, but one tooth or as many as four may be lost.

With the front teeth knocked out, his lower front teeth shouldn't have been worn very much. However, they were and this wear is not the usual wear from teeth grinding together, but curves from the inside, up and out. This would happen if you were to chew strips of leather to soften it, or draw plant fibre (like bark) to make string. Here is a quote from a man writing in 1897 about his reminiscences of life on the Lachlan River:

> The blacks made fishing and bird-catching nets from the bark of the currygong tree, which they chewed into fibre with their teeth. The fishing net they stretched with sticks into the shape of a bow, one woman being placed at each end of it.

Here is a case of being able to see into the past, and into the events of this man's life. From an examination of his teeth, we are able to get an idea of his daily life.





Tooth wear on the lower front teeth. You can see on the previous picture that he would not have been grinding his lower teeth against the upper gum. Also the curvature of the wear is not what we normally see. It is easy to imagine that he would have often found it necessary to chew leather or plant fibres to make tools and equipment. The drawing shows what the tooth looks like from the side.

The Institute library has some information on the Cowra area, although not much archaeology has been done there. I've listed below some books and articles that are relevant.

Information about Australian Tribes. by "H.P.", in The Australasian Anthropological Journal (1896-97).

Abercrombie Arch Shelter: an excavation near Bathurst, NSW. by Ian Johnson. In Australian Archaeology (1977), volume 6, pages 28 to 40.

Prehistoric human skeletal remains from Cowra and the Macquarie Marsh, New South Wales. by Colin Pardoe and Steve Webb. In Australian Archaeology (1986), volume 22, pages 7 to 26.

A request

I would like to find out how long ago the Taronga Drive man died. As I said, I'm interested in finding out about the age and distribution of tooth avulsion. This person's bones would be a great help in establishing that. Information like the age helps in our overall pictures of the ancient past, especially when so little is known of the archaeology for this specific region. It is also something that makes me very curious: is the age anything like my estimate?

What would be needed is a small amount of bone, about half of the fragments of rib bone that are left. This would be completely destroyed in the chemical process and from it we would get a date to within about 100 years. I realise that it can be disturbing to have this happen. Rest assured that I won't go ahead without permission. If the community doesn't want this dating done, it's no big deal. If you do, I will certainly get the information back when it comes out (it can take up to six months).

If you have any questions about this report, or on archaeology in general, please don't hesitate to get in touch with me at the Institute, or phone (062) 461 111.

Yours Sincerely,

Colin Pardoe

Colin Pardoe

P.S. I'd like to thank Adrian Hart at the Institute for all the photographic work he has done on this and the other reports. Also, my thanks to Carol Gartside and Luke Godwin of National Parks and Wildlife Service for the opportunity to do this study.