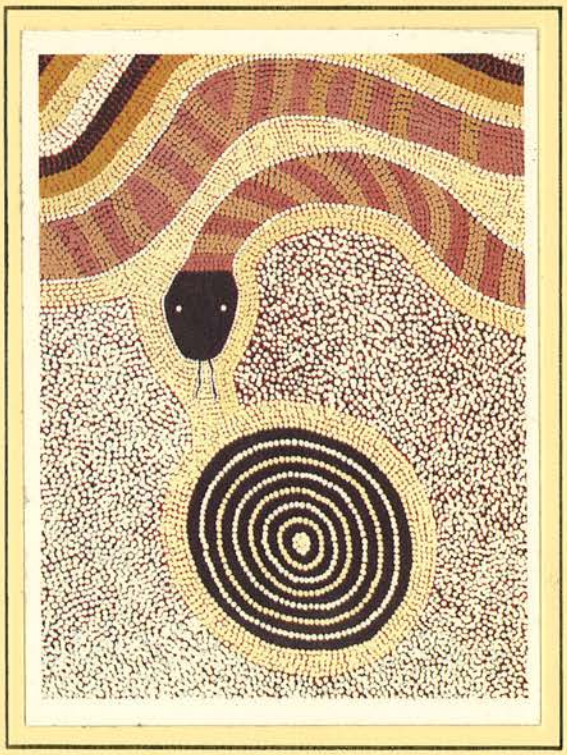
AUSTRALIANS



TO 1788

AUSTRALIANS

TO 1788

William Bradley, First interview with the Native Women at Port Jackson, New South Wales, *watercolour, 1788. Lieutenant Bradley,* RN, *surveyed Sydney Harbour between 28 January and 6 February with Captain John Hunter and sailors in two boats. On three occasions the party made friendly contact with Aboriginal men who carried no weapons. On 30 January at Spring Cove, the sailors persuaded women to come out to one of the boats and gave them beads and trinkets. During this transaction men with spears stood poised on the rocks. This group of more than seventy Aborigines was the largest the newcomers had seen.*
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AUSTRALIANS

TO 1788

EDITORS

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COVER ILLUSTRATION

Painting by Aboriginal artist Kaapa Mbitjana Tjampitjinpa of the Anmatjera, who has successfully mingled traditional methods and modern media in his work.

ABORIGINAL ARTISTS AGENCY LIMITED

Foreword

This book and its ten companions have been ten years in the making. They have been created to mark the bicentenary of European settlement in this country, and they are the outcome of collaboration on a scale never before attempted in the writing of Australian history. Hundreds of people in and beyond universities have joined together to re-create the experience of people living in Australia since 1788 and to place that experience in the wider context of a human occupation that began tens of thousands of years ago.

The editors and contributors have worked in a variety of modes: from slicing into the past at fifty-year intervals (*Australians 1838, 1888* and *1938*) to laying out, in terse chronology, events as they happened year by year (*Events and places*), and from portraying processes and movements on maps of the country (*A historical atlas*) to briefing readers for explorations of their own (*A guide to sources*). The authors represent diverse approaches, in terms both of occupation—historian, economist, archaeologist, geographer, librarian, journalist—and of outlook. We have sought the best person for each part of the job, and not altered or muffled anybody's voice. We have also tried to make the work of scholars readily accessible to general readers.

In this aspiration we have been strengthened by a close working relationship with the publishers. From early days the project has benefited from continuous consultation with representatives of Fairfax, Syme & Weldon about its form and presentation. Their confidence in our enterprise has heartened us throughout the long journey.

Together, we and they present *Australians: a historical library* to the people of Australia as an offering for 1988 and beyond.

Oliver MacDonagh

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Elmar Zalums

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PREFACE

WHEN AUSTRALIANS commemorate the lengthening history of British settlement on this continent, they are adding to a tradition established by new societies and regimes. The French in 1889 proclaimed that their republican history was a century deep. Americans in 1876 celebrated the enduring success of what their founding fathers had begun by revolution in 1776, and late in the nineteenth century they coined the word 'bicentennial' to proclaim the even greater age of cities, churches and schools founded before the revolution. 'Sesquicentennial' was invented at the same time to honour American institutions only fifty years younger.

In Australia, New South Wales had patriots keen to designate 1838 as a year of jubilee. Half a century later, the idea of a centennial festivity was initiated in Sydney and taken up with more or less enthusiasm by people in other colonies who were unsure whether they wanted their shorter histories to be connected with that of the old penal colony. 'Sesquicentennial' became a word for Australians to get their mouths around in 1938, when organisers of the 150th anniversary commemoration did their best to engage citizens of other states in festivities centred on New South Wales. Readers of *Australians 1838*, *Australians 1888*, and *Australians 1938* will find these jubilee, centennial and sesquicentennial celebrations explored. Their occurrence, indeed, is a reason why we have picked those years as vehicles for one of the approaches employed in these books.

Historians are professionally interested in the passing of time, and in 1977 a few historians in Canberra began to think about 1988 as a year offering a special opportunity to their craft. That year, we guessed, would inspire a larger and more general commemoration than Australians had organised at the end of any previous half-century. The coming occasion was sure to be more *national* than those others, for advances in central government, transport and communication had accelerated the transformation of states that had once been separate colonies into provinces of a single polity, whose people travelled about as never before, talked to each other on STD, watched all over the continent the same prime ministerial news

conference and the same cricket match. Moreover, Australian history itself was gaining a new popularity, as Stuart Macintyre comments at the end of the first chapter in *Australians: a guide to sources*. The names of Manning Clark and Geoffrey Blainey were better known than those of any scholarly historian in earlier times; historical and genealogical societies were burgeoning, and tourists flocked to Ballarat to see goldrush days reconstructed at Sovereign Hill and to Old Sydney Town to see convict floggings re-enacted. Television viewers switched on to Australian costume dramas; and cinema audiences were offered, in 1977 alone, eight feature films based on life in the remote and recent Australian past.

All in all, it appeared likely that public and private enterprise would make 1988 a year for intense consciousness of Australian history. What might historians contribute? Individually, of course, whatever scholarly article or biography or general history an author was moved to attempt. Collectively? The Canberra group, consulting widely, found some antipathy towards the very idea of collaborative enterprise—'history by committee'—and some particular doubts about proposed approaches. But it also found much interest and enthusiasm, and eventually enough support to embark on the project that has become *Australians: a historical library*.

The makers of these books do not see them as official history in any sense. The project has had no money from the Australian Bicentennial Authority. Money for general administration and for research on different volumes has been provided from universities (especially the Australian National University and the University of New South Wales), and from the Australian Research Grants Scheme. General and volume editors have taken on the job as part of their work in universities and colleges of advanced education. With few exceptions, contributors are also unpaid. Royalties will go into a fund to support Australian studies. Some advance royalties, paid years ahead of publication, have been ploughed into research for the books.

That was a source of funds unforeseen when we began. Some potential publishers told us that they would need a subsidy; Fairfax, Syme and Weldon asked for no subsidy, anticipated larger sales than any other publisher we approached, and encouraged us to plan without any inhibitions the size of the books and the quantity and quality of illustrations. The scale on which the publishers have been willing to undertake the project has helped us keep two early resolutions: to write for general readers, addressing them with respect but without assuming prior knowledge and to illustrate the books richly, not for mere decorative effect but to integrate visual material with text.

One half of our enterprise was quickly decided on. Anniversaries, like royal visits, can yield amenities that were needed anyway but required the special occasion to provoke someone into providing them. The celebrations of 1888 endowed Sydney with Centennial Park and the approach of 1988 induced politicians in Canberra to put up a new and permanent Parliament House. Historians had long lamented the absence of a set of reference books that would deliver essential information about Australian history to students, authors and browsers. Our series therefore includes *Australians: a historical atlas*, *Australians: events and places*, *Australians: a historical dictionary*, *Australians: historical statistics* and *Australians: a guide to sources*.

When we wondered about other ways of throwing new light on the past, we considered and set aside a number of approaches. In particular we decided not to add to the shelves one more general narrative history by many hands, which (it seemed to us) would merely elaborate our present understandings of the past without providing any fresh vision. We began to talk about an approach that invited and even required all authors to break new ground. Instead of inviting a

team of contributors to divide up history into chronological sections and have each fill in a stage in his or her own way, we thought of asking groups of writers to work together on a very short period; instead of inviting historians to pass the baton along a familiar track, we proposed a series of survey camps; instead of stringing events on a thread of narrative, we imagined cutting slices.

A book about Australia in a particular year would have at least some qualities in common with Sovereign Hill and Old Sydney Town—exhibitions built to show what our society was like at one moment in its past. Such a book would resemble Elie Halévy's *England in 1815* (1912), or the third chapter of Lord Macaulay's *History of England* (1848), which dealt with the nation in 1685. Both are works in which authors reconstruct a society in a particular year, and contrive perceptions of earlier events by means other than continuous narrative. Adopted by a group of writers, the approach would invite intimate collaboration between scholars with different skills. An economic historian working with a historical geographer, or a historian of medicine exchanging ideas with a social historian, would, we believed, win for readers a richer understanding of the lives Australians were living at a chosen time than any one scholar, working alone, could have achieved.

By writing about one year in people's lives, moreover, historians could avoid creating the most common illusion conveyed by narrative approaches: that history is a stream, carrying people towards a predetermined destination clearly visible to us, if not to them. Slicing through a year, we might hope to see and hear people living as we do, taking some things for granted—the sun rises and sets, the seasons pass, people grow older—but at the same time surrounded by choices and uncertainties. We might recognise people more easily as our own kind if we met them living out the daily, weekly, seasonal, annual and biological rhythms of their lives; and we would certainly understand them more fully by grasping the truth that the future that beckoned or alarmed them was not necessarily *our* past—what actually happened—but rather a hidden destiny, a precarious vision of probabilities, possibilities and uncertainties.

The slice approach could help us to recover the richness of everyday life. James Joyce, inspired to write fiction about what some people in Dublin were doing and thinking and feeling on one day in 1904, had made the discovery, his biographer Richard Ellmann suggests, 'that the ordinary is the extraordinary'. Great novelists make worlds of their own, but the historian can also seek the extraordinary in the ordinary. Indeed, that is one way of describing the kind of history newly attempted in the age of democracy, whose subject is not just public and powerful heroes and villains, but the myriad men and women who are their constituents, victims, contemporaries from womb to grave. The writers of *Australians 1838*, *Australians 1888* and *Australians 1938* have searched hard for sources giving access to the private, the domestic, the workaday, the realms of family and community, the lives of ordinary men, women and children. This is not, as G. M. Trevelyan said of his pioneering social history of England, history with the politics left out; politics is in, but placed in its social, economic and cultural contexts.

While charting the rhythms of existence, we have not ignored change and conflict. In 1838 an unprecedented overland movement of people and animals was under way across southeastern Australia. One consequence of that movement was intensified hostility between white settlers and Aborigines, and the killing of Aborigines by pastoral workers at Myall Creek is a central event in *Australians 1838*. In *Australians 1888* colonists celebrate a century of British settlement and politicians try their hardest to exclude the Chinese. *Australians 1938* records both the mild improvement in material conditions experienced by most people since the depression years, and the strike at Port Kembla about the export of pig iron to Japan.

The years 1838, 1888 and 1938 attracted us not only because they were times of commemoration, but also because they do not have historians' labels attached to them, as, say, does 1851 (gold), or 1914 (war) or 1929 (depression). Exploring years not already identified with familiar themes would serve well, we thought, our purpose of discovering things not yet in the history books about what life was like for earlier generations of Australians.

These are also years that are almost one person's lifetime apart. The slice approach does not ignore everything that happened in the intervening half-centuries. Like Australians today, the people of our chosen years were, in important ways, what their past made them, for every moment in time is at once the culmination of past events and the beginning of the future, and every generation is shaped by its own past—and by *its own* vision of the future. Slicing does not obliterate the long view backwards or forwards: instead, it tries to capture visions of the past and future as they seemed to earlier generations.

One book, we resolved, should examine the longest period of all in Australian history, the epoch in which Australia was occupied solely by Aboriginal people. The richest evidence about this ancient Aboriginal heritage often dates from initial contact with Europeans. For the people of the Sydney region, that took place in 1788; elsewhere, the experience of 1788 was re-enacted in various ways as European settlement spread. Where possible, archaeological, linguistic and other techniques of prehistory have been used in *Australians to 1788* to explore changes and continuities in Aboriginal society over thousands of years; nevertheless, the idea of '1788' as the point of contact rather than as a specific calendar year gives this first book something in common with the slice volumes. And if the concern to reconstruct Aboriginal society and culture at the coming of the European intruders involves a kind of slicing, the final chapter of *Australians to 1788* adopts the approach quite specifically. By exploring the first year of British settlement it enables the first four volumes of *Australians* to present a series of slices at half-century intervals. A twenty-year-old convict who knew the Sydney described in that chapter might, in old age, have known also the world of *Australians 1838*, just as a young woman immigrant of 1838 might, after fifty years in the colonies, have witnessed the centennial celebrations of 1888, or Aborigines alive in 1888 have watched their people incorporated into the sesquicentennial pageantry of 1938. Our slice years are thus linked by the living memories of several generations of Australians.

We decided to devote the fifth book—the last volume before the reference works—to the whole period from 1939, so that in the bicentennial year Australians old and new could read about the society they inhabited. In the pages of *Australians: a historical library*, as in all the other ways in which Australians will mark the significance of 1988, a future generation of historians may perhaps find evidence about the contemporary society. But as we write, that slice still lies in our future.

ALAN D. GILBERT
K. S. INGLIS

INTRODUCTION

AS EUROPEANS COUNT time, people have been living in Australia for more than 40 000 years. By 1788, the year we are remembering in 1988, at least 1600 generations had been born and had died here. This book is mostly about these people.

In 1788 the entire continent and many adjacent islands were occupied by Aboriginal societies. Note the plural: these societies probably differed as much from each other as did the states and countries of Europe at the same time. They differed in language, size, economy, technology, social structure, political organisation, art and religion. Although springing from one source, their long history in the contrasting environments of Australia had allowed diversity to develop. Our most important aim is to show the diversity that comprised the unity of Aboriginal societies in 1788. Thirteen chapters doing this form the core of the book.

To achieve this Australia-wide perspective, each author has focused on a specific region or a particular theme. Not all major regions and not all aspects of Aboriginal societies are portrayed, nor does the relative length of contributions imply a judgment about their importance. But we believe that, overall, these thirteen chapters demonstrate the range of traditional Aboriginal ways of life.

How did Aboriginal societies come to be as they were in 1788? Their history has been reconstructed only in recent years and is unknown to most Australians. Many different approaches have been used to prepare this section, including archaeology, the writings of early European settlers and Aboriginal oral history. Each of these approaches has contributed its own perspective on the past, which cannot always be reconciled with others. Archaeology yields the conclusion that Ancestral Aborigines came here at least 40 000 years ago and that humans have materially altered the face of the continent; Aboriginal oral history declares that the continent and its resources were created in their current form for the Aboriginal people, who also were created here. The perspectives of European science and Aboriginal memory have different purposes.

The European invasion began at Sydney Cove. Its launching place was England, on the other side of the world, and its original purpose was to solve some English problems and to forestall the creation of others. The modest beginnings of European Australian society constitute the last part of this book. In terms of population or land area used in 1788, this settlement should claim only a few pages. We give it more, foreshadowing that from the beach-head secured in 1788 and from other points of entry was to come a colonisation catastrophic for the indigenous inhabitants.

Readers may well ask why this book has not been written by Aboriginal people. We have sought Aboriginal involvement and taken as much Aboriginal advice as we could get in planning and shaping the book. Some potential Aboriginal contributors declined invitations to write because they considered that any bicentennial enterprise was necessarily a celebration of their people's dispossession, extermination and degradation. Some Aboriginal people believe that non-Aborigines should not try to study Aboriginal societies. This view we respect but do not share. In making this book we see its editors and authors above all as *translators*. Aboriginal societies were and are among the most different from European or Asian societies that have been recorded in the world. Their visions of the universe are widely at variance with those of non-Aboriginal readers. The history of their exploration and colonisation of Australia is at least as important a chapter in world history as Australia's last 200 years.

Our task here is to interpret that traditional Aboriginal world to contemporary Australians, and to portray the beginnings of the fateful encounter between the original occupants of the continent and the newcomers.

D. J. MULVANEY
J. P. WHITE

I

THE CREATION OF ABORIGINAL AUSTRALIA

Cave painting from Kakadu National Park. Reproduced by permission of the traditional custodians.
I.P. HASKOVEC

CHAPTER 1

CREATION AND DISCOVERY

J. PETER WHITE AND RONALD LAMPERT

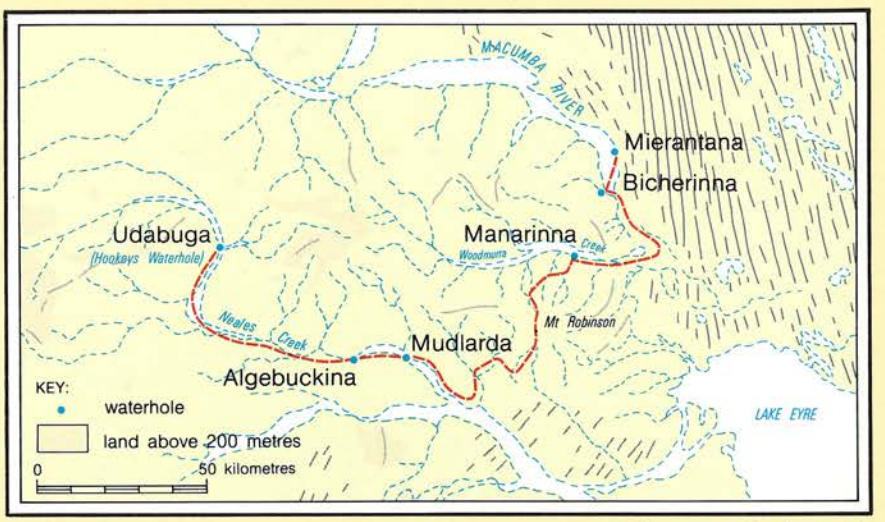
THE FIRST COLONISATION of Australia is one of the world's great adventure stories. Unlike the colonisation of 1788, it was undertaken by people who had none of the support systems of modern civilisation and no idea of the size and shape of the continent. Some must have died from the unpredictable climate, toxic plants, poisonous insects and perhaps ferocious animals. Those who survived such dangers built up their knowledge of the country, learned to live in it and turned its products to their needs. They became the first Australians, ancestors of the Australian Aboriginal people.

The first histories of Australia were told by Aboriginal people. Each group of Aborigines has its own histories. These are often the locally relevant parts of more extensive stories, other sections of which are known to neighbouring groups. These accounts are spoken, not written. They may also be sung, painted on bark or human bodies or sculpted on the ground. Such histories explain how the known world and its people came to be as they now are. They depend on belief systems that link specific places with Dreaming events and give every person, living and dead, a place within a physically and spiritually united world. The Dreaming is the time when the world, including Aboriginal people and their law, were created; Aboriginal people also continually renew it in ceremonies.

Histories written by Australians of European origin also explain how the country and its people came to be in their present state. They are based on beliefs about the basic importance of time and space, and the scientific predictability of the physical processes governing the world and its occupants. This chapter is written from that scientific viewpoint. It is based largely on archaeological research.

Thus Aboriginal and European Australian histories are not the same. They are told in different ways, draw upon different evidence and are used for different purposes. We cannot expect them always to tell the same story; each kind of history stands on its own and satisfies those who believe in its view of the world. But there is also diversity within each tradition. Conflicts of interpretation are common among European historians, who work with limited evidence and approach the

past from different perspectives. Aboriginal versions of the past may also differ from each other. For example, although many Aboriginal people believe that their ancestors have always lived in Australia and were created with it, some Aboriginal groups tell of spirit ancestors who arrived by canoe from lands to the north of Australia—a perception closer to the view of nearly all non-Aboriginal historians that the first immigrants came from southeast Asia.



The journey of the frog people.

YALDJA ULARAGA: THE FROG HISTORY

The Frog History belonged to a subgroup of the northern Arabana speakers. Their main totemic centre was at Ubabuga (Hookey's waterhole), about six kilometres from Oodnadatta, SA. Most of the people of this subgroup died in the influenza epidemic of 1919, and among the victims were all the old men who knew the complete Frog Song cycle and the curse associated with it. The story told here is the only surviving part of the cycle, told in the Arabana language by Arthur McLean, whose maternal ancestors belonged to this subgroup, in January 1971. He was helped by Mick McLean (not a relative), speaking in Wongkangurru. The translation into English is by Luise Hercus. Numbers refer to verses. For further accounts of this country and its people, see chapter 13.

1 MICK:
yaltja karna kari thangka-ka Uthapuka -nga
Big waterhole frog men they stay Hookey's

2 ARTHUR:
Uthapuka-nha ngura kari-kunha.
Hookey's home theirs.

3 MICK:
uka mathapurta yuka-rna thirriwa-ru, thidnamara mathapurta
He old-man go east small frog old man
yadnjngka mani-lhiku thiki-lhiku karu panti- lhiku wili
fighting men get take there fight like
kari-nha thidnamara nguru pirda-lhuku.
they little frog other kill
yadningka manda- libana Arabana yaltja manda- libana.
young men collect Arabana big frog collect.

The Big Waterhole-Frog (*Cyclorana* sp) men were staying at Hookey's waterhole.

That was their main camp, Hookey's waterhole.

Then just one old man from among the Small Frogs (*Hyla* spp) came from the east to collect a band of fighting men, and to take them back with him so that they could kill a rival group of Small Frogs over there [in the east]. He got together the fighting men long ago, he got together the Big Waterhole Frogs from the Arabana country.

4
Uthapuka-nga pithi-na-yangu arkapa- ru marlka-marlka-
Hookey's paint ochre mark-mark-
pirla -ru yaltja yadningka panti-lhiku.
charcoal frog young man fight

The war party of Big Frog men who had painted themselves up at Hookey's waterhole had got themselves ready for the fight, putting on marks with red ochre and with charcoal.

5 ARTHUR:
ngura- nga wanka -yiwa-lhuku mardu nhampi-nta,
Camp rise string tie

arlarda thiri yuka-rnda. ngura -nganha thadlara-wanta
ready bold go. Camp -from frightened-feel

kari-kirndara. Uthapuka-ru kari parra -ka, yuka-rnda
them Hookey's they travel go

anari.
this way.

In their camp they tied on hair string to look really impressive, they were ready to go full of fighting spirit. The [other] camp people were frightened of them. From Hookey's waterhole they travelled, they went this way [to the southeast].

6 MICK:
thika- lhuku, thika-thika-lhuku karla-li Arriltji-paka-nha
return , go back creek-by yam -dig

karla-nga kari warni-rnda -nha.
creek they stay

They came and came and kept coming along the Neales, staying in the creek bed. This band [of Frogs] made a camp and settled down in the water in a waterhole.

7
nhakari ngura-nga kuni-kuni-kanha kutha-nga kutha-thupi-nga.
These camp settle water waterhole

kari-nha wiya-wiya-la-yirna kanhangarda-nganha yuwu-ru
Them laugh there -from person

Arriltji-pakanha-nganha :
Algebuckina -from :

Then the people belonging to that place, the people from Algebuckina laughed amongst themselves at these frogs:

8 BOTH (in Arabana):
'minha nhikiwarda wanka-rda marna-marna-padlji?
'What this lot rise mouth-mouth-wide?

minha-ku urkari yuka-ka ? indjara-nganha nharla
What you go? Where-from men

marna-marna-padlji?'
mouth-mouth-wide?'

'Why have you come up here, you with the great, big, wide mouths? Why did you go away [from where you belong]? Where are you from, you with the great, big, wide mouths?'

The dead people at Algebuckina.
L. HERCUS

9 ARTHUR:
yaltja gudniguna-yiwa-lhuku pitha-thupi kupa-kupa-nga
Frog camp box -hole tiny

palkura-palkura-nga kutha thupi kupa-kupa-nga. nharla
wattle waterhole tiny men

awanta-nganha ngura-nganha kari-nha wiya-wiya-la-ru :
there- from camp-from them laugh

The Big Frogs camped for a short while in a small box-tree waterhole, where there were also some wattle trees, in a really small waterhole, and the people of that place were [still] laughing at them calling out amongst themselves:

10
'minha-ku urkari kari-kari-rnda marna-marna padlji?'
'What you look-for mouth-mouth wide?'

'Why did you have to come where you are not wanted, you with the great big wide mouths?'

11 MICK:
yaltja kari kudlarnda. kari-ri thaka -ru ngura-nganha,
Frog they angry. They strike camp-from,

yarirda-ru wangka-ru kari-nha. kari ngura-nganha
poison sing them . They camp-from

kanhangarda-nganha
there -from stone
kadnha witji- rna yarirda-nganha.
become poison-from.

The Big Frogs were angry and with their magic they struck the people from the Algebuckina camp, they 'sang' them with their magic spell. The people from the camp all turned into stone from that magic.

12 ARTHUR:
partjarnda nharla purra-ka. Yuru-mapu partjarnda
All men die . People-mob all

purra-ka. Wadlhu pidla Yuru-purra-purrakanha.
die . Place name People-Dead.

All those initiated men died, the whole crowd, that is why the name of the country is now Yuru-burra-burrakanha 'People All Dead'.

Manarinna Hill.
L. HERCUS

Manarinna waterhole.
L. HERCUS

13 MICK:

kulpari kari nganka witji- rna. yaltja kari kanhangarda
Three they alive become . Frog they there

-nhari yuka -rna karla-li katha-witji- rna kari
go creek-along travel-become they

katji-rna -yangu. karu Mudlarda- nga -nhari thika-rnina.
turn. There Smithfield return.

Only about three of them came alive again. Then the Big Frogs set off, they started travelling along the creek, having turned slightly [to the northeast]. They came towards Mudlarda [The Cliff waterhole at 'Smithfield'].

14

untu ngurka-ra Wirarrani-nha ? kanhangarda ngarli-nga
You know Wirarrani ? There gutter

wanta-wanka-rda, karla- nga kari parra-thika- lhuku.
follow-rise , creek they travel-return .

parra -rna yaltja-mabu wila-wila witji -rna yadningka.
travel frog -mob multitude become young man.

pitha-yikara -nga kurda-thika -ru kari. parra- rna ngarli
Box-swamp sleep-return they. Travel gutter

ngaritji -rnda kari. Miltjikiri-nha Karili-nha karla- nga.
Descend they. Miltjikirina Karillina creek .

Do you know the Wirarаninha waterhole? That is where they [left the main creek and] followed up a gully. They were travelling in the [small] creek, they were being taken back [to his home by the Small Frog]. As they travelled along, the war party of the Big Frogs swelled to a great multitude, [because they were joined by local Big Frogs]. They came and rested for a while in a box-swamp, they lay down there. Then they travelled down [another] gully. The Miltjikirina waterhole is in Karillina Creek.

15

kutha-ruku kutha-ru kutha-ruku kutha-ru thika-ru.
Water water water water return

ukaliri wanka-lhuku karla-li karla-li parra -nangka-rda.
Then rise creek-by creek-by travel .

[They went there] and travelled from waterhole to waterhole. Then they went uphill and continued travelling along creek after creek.

16

kanhangarda wanka-rda Yaltja-wati-nga -li. yuka-rna
There rise Frog -Path . Go

Yaltja-wati aratja -li kanhangarda.
Mt Robinson straight there.

They went right up on Mt Robinson, going straight to the top. [That is why Mt Robinson is called Yaltja-wadi 'Frog-Path'].

17

Yaltja-wati -ri yadningka ukaliri thidnamara– ru
Mt Robinson young men then little frog ,

thiki-ngura Marnarranha.kari kutha-nga thangka-rda
take Manarinna. They water sit

yaltja ngalpara kutha puntha-rna-ya-rna. Marnarranha-ru
frog thirsty water drink . Manarinna

yuka-ka kari Pitjirri-ku.
go they *Bicherinna.*

From Mt Robinson the Small Frog took the war party to Manarinna waterhole. They stayed in the water there, they were thirsty and had a drink. Then they went on to Bicherinna.

18

thidnamara mudlu-nganha intjali intjali uka yuka-ka
Little frog sandhill-from where where he go

yadningka wara-ruku mani- li anhaku. mathapurda- kari-ri
young men who take not know. Old men -they

malka 'nha ngunta-kanha karikunha ularaka.
not me show their history.

Where he was going, that Small Frog from the sandhill country [the Simpson Desert], and for whom he was bringing a war party I have no idea: the old men never told me this history of theirs.

19

kanhangarda purrku-witji- ka partjarna, thidnamara
There finish -become all, little frog

njurdu uka kanhangarda purrku-witji- lhiku.
also he there finish-become

All the Big Frogs crossed over [the Macumba] and the Small Frog also managed to cross.

20

Mayarantanha irlinhara thangka-li yadla- li,
Mierantana thus sit close ,

Pitjirrinha thangka-ngura yadla-li. karla palji
Bicherinna sit close . Creek wide

They stayed close to Mierantana waterhole, the Bicherinna waterhole is nearby, where the river spreads out into a wide overflow. They went there and settled down to camp

witji -rna. kari kanhangarda-nari yuka-ngura Pitjirrinha
become They there -to go Bicherinna

kadnha midla-nga kudni- lhiku, kudni- thika -lhuku.
stone nose camp , camp-return

kanjakarla- nga kanhangarda purda -rna partjarna kari
Heat there burrow all they

thanga-rnda. warritha yuka- rinaru njari -njara yarda.
stay . Far go small-small too.

at the point of the Bicherinna tableland country. It was very hot and they burrowed down [into the wet ground] and stayed there and are still there now. They had come a long way, and after all, the Big Frogs were very small.

WHERE DID THE FIRST AUSTRALIANS COME FROM?

The earliest ancestors of all people living today probably evolved in Africa. There, proto-humans walked upright some four million years ago. Two million years ago those parts of the brain concerned with self-awareness, forward planning and speech started to enlarge, and the first stone tools were made. Soon after, the early humans we call *Homo erectus* colonised tropical Asia. Gradually, *Homo erectus* evolved into *Homo sapiens*, people who were little different from ourselves. Early forms of *Homo sapiens* are about 250 000 years old; modern forms are at least 90 000 years old. The first Australians were almost certainly a group of modern *Homo sapiens*.

Evidence from Asia, Africa and Europe shows that for at least the past 200 000 years, humans have used fire for heat and light, for cooking and for protection from wild animals. They used stones, carefully selected and broken into shape, as knives and choppers, as pounders of meat and vegetable foods, and to make wooden spears, digging-sticks and other tools. Within the past 50 000 years, they began to engrave designs on cave walls, and to use natural earth colours for painting. The dead were buried in many ways, all suggesting that people believed in a spiritual world beyond the physical one. The people who came to Australia brought one version of this common human culture with them.

The first Australians came from southeast Asia, but it is hard to be more specific than this because the evidence is sparse. In particular, few human remains have been found in the areas closest to Australia, the locations of finds have not always been recorded and thus their age is uncertain.

Fragments of skeletons from Ngandong on the Solo River in Java may well be those of Aboriginal ancestors. Eleven skull caps (cranial vaults) and two leg bones came from sediments deposited by a river on a bank beside it. They are probably between 250 000 and 400 000 years old, but may be as young as 150 000 years or as old as 500 000 years. The bones are heavy and thick, and these people probably had large faces and powerful jaws. In shape and size these skull fragments foreshadow those of Aboriginal people.

Somewhat later, from within the past 100 000 years, a number of skulls from Indonesia and China are more like those of modern people, including Australian Aborigines. These finds show that Aborigines are related to southeast Asian people, but more precise links with particular areas are still difficult to demonstrate.

Something of the way of life of these Asian forerunners is demonstrated by discoveries at Zhoukoudian, near Beijing in China, dating from 400 000 to 200 000 years ago. Stone tools were made of flint, vein quartz, rock crystal and sandstone, flaked by any one of three different methods. The tools included choppers, scrapers, points and awls. They were probably used for making wooden tools and perhaps skin clothes and baskets. Fires were used for cooking, especially the many deer that were hunted. Other food included fruits, seeds and probably roots.

Three methods of flaking stone (after Bordaz). Top: Flakes are removed from a core held in the left hand by hitting it with a hammer stone. Cores are usually of a fine-grained rock such as flint, chert or silcrete, since this ensures that large, sharp-edged flakes can be removed. Hammers are often of tough rock such as basalt or granite that will not shatter upon impact. Centre: If a core is too large to be held it may be placed on the ground. Bottom: A core may be placed on a stone anvil and hit with a hammer. Flakes will be removed from both ends of the core.
J. GOODRUM

In the nineteenth century, Australian water craft were of two main kinds: rafts and canoes. The kalwa, *a log raft (left) was used in the waters of northwestern Australia. Canoes made of sheets of bark sewn together (right foreground) were used in Arnhem Land and Cape York. Dugout canoes (right background) were copied from those used by Macassan fishermen in northern Australia during the last thousand years. Rafts and canoes could transport a family and some possessions. They were rarely used for trips of more than five kilometres, and were safe in calm waters. Nonetheless, craft like these must also have been used by Australia's first immigrants. Photographed by E.J. Stuart (left) and H. Basedow (right).*
SOUTH AUSTRALIAN MUSEUM/MUSEUM OF AUSTRALIA

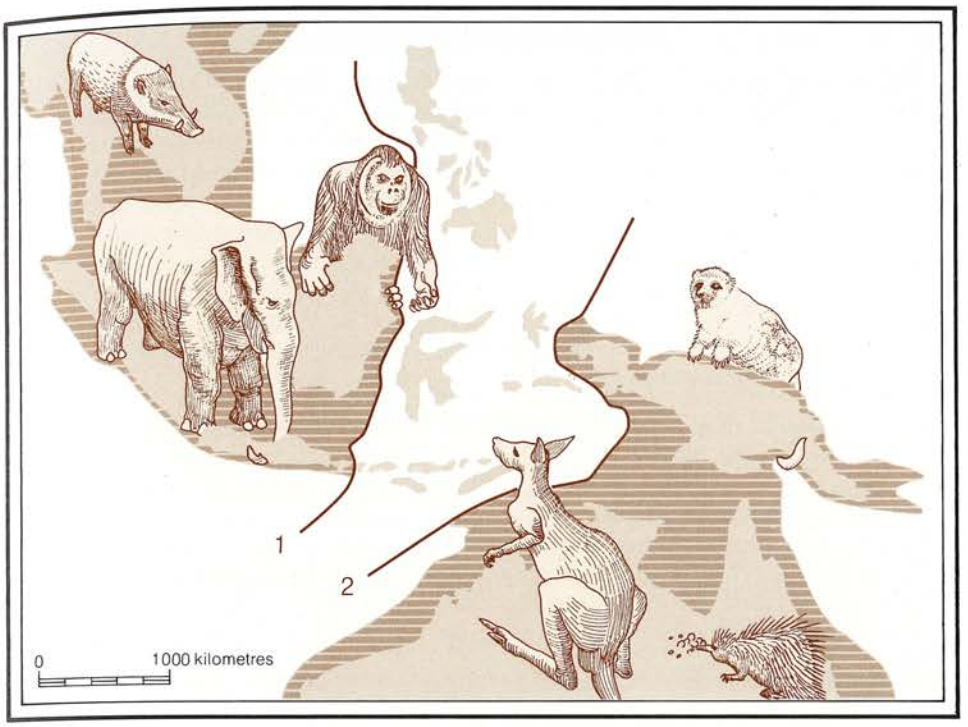
In the tropics of southeast Asia, early humans probably also gathered food, such as fish and shellfish, from the sea's edge and river estuaries. Simple water craft such as rafts and canoes were probably part of their equipment, as were fishing nets and spears. Because these items were made from organic materials such as bark, wood and string, they have rarely survived until the present day.

Because the stone tools made in mainland and island southeast Asia are more durable, they must be used in examining early human cultures. The tools are simple: sharp-edged flakes used for cutting and heavy cores from which the flakes have been struck off, which were probably also used for chopping. Their shapes are not very distinctive, but in Sulawesi, Sabah and Palawan some dome-shaped cores with overhanging edges, and other stone tools known as scrapers, look rather like those found in Australia. All known finds are less than 40 000 years old; since they are not older than the Australian examples, they indicate close links rather than direct ancestry.

Although we will never know their exact departure point, the people who arrived in Australia must have come by sea. The first Australians could not have walked here, because there has not been dry land between Australia and Asia for many millions of years. This is clear both from geological history and from the great differences between Asian and Australian animals of all kinds. The earliest sea voyages were probably less than one hundred kilometres, but that is a long and dangerous journey on a small raft or in a simple canoe.

European scholars do not believe that Aboriginal people evolved or originated in Australia. No early forms of human, such as *Homo erectus* or its ancestors, have ever been found here, nor are there other animals such as apes or monkeys that are closely related to humans. All native Australian mammals such as kangaroos, possums and koalas are marsupials, which are more distantly related to humans than are placental mammals such as horses, bears or elephants.

Australians did not come directly from Africa, India, Japan or other distant countries. This has been shown by detailed studies of bones, blood and other physical characteristics of modern and ancient inhabitants in those areas. No cultural links, such as particular forms of tool, have been shown to exist, either. It is also difficult to see how people could have made such a long journey, by sea or land, so long ago. Nor did Aborigines come from the Americas, either directly or via the Pacific Islands. These areas were first settled more recently than Australia, and the people there are not closely related to Aborigines.



The most dramatic faunal change in the world occurs between Sunda and Sahul, each of which was a single continent as recently as 10 000 years ago, but which have not been joined together for millions of years. East of line 1, all the native mammals are of Australian type; west of line 2, all native mammals are of Oriental type. Between Sunda and Sahul lies an area where the islands have existed for millions of years; this is often called Wallacea. Its animals came originally from the adjacent regions, but have now evolved some unique specialisations. This area had to be crossed by people who came to Sahul from Sundaland.

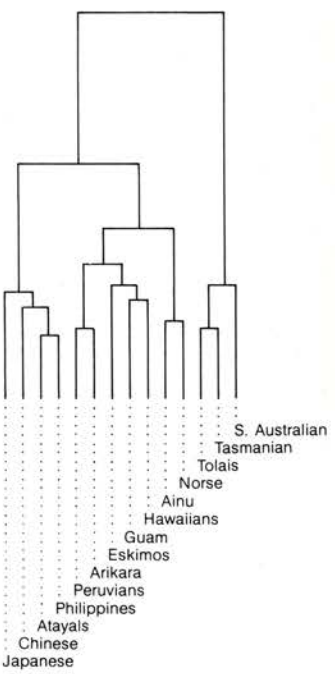
W. SHAWCROSS/J. GOODRUM

WAS THERE MORE THAN ONE MIGRATION TO AUSTRALIA?

Prehistorians have not yet agreed on the pattern of migration. Conclusions differ according to the weight given to different pieces of evidence and to the kind of evidence considered, such as physical characteristics, languages or prehistoric material culture such as stone tools. At present, some biological anthropologists who study prehistoric human bones believe there is evidence of two groups of migrants, whereas most students of other kinds of evidence conclude that there was only one migration.

Before examining some of these theories, we need to consider what a 'migration' is. The complexity of this question is obvious if we try to decide how many migrations have reached Australia only in the past two centuries. For prehistoric times, the usual definition is that a migration comprised people who came from the same general area, were physically similar, had basically the same material possessions and arrived at about the same time ('about' in this case may mean within a few thousand years). As only small societies are involved, each migrant group almost certainly consisted of a few families at most. It is very unlikely that a fleet of large canoes ever carried a migration to prehistoric Australia.

The first migration theory was developed in the nineteenth century to explain the visible differences between Tasmanian and Australian Aborigines. The Tasmanians were seen to be somewhat shorter in stature, to have tightly curled hair and rather darker skin. There were also cultural differences. The Tasmanians greased their skins to keep out the cold and did not sew animal skins into cloaks, they did not use boomerangs, spearthrowers or ground stone hatchets and they had no dogs. They ate marine foods such as stingray and shellfish and would not eat any fish with scales, although the reasons for this prohibition are unknown.



Physical relationships of Australia's Aboriginal people based on various measurements of prehistoric skulls and analysed by W. Howells, Harvard University.

J. GOODRUM

TASMANIAN LANGUAGES

Non-Aboriginal scholars have been writing down lists of words spoken by Tasmanians since the early nineteenth century. The most complete collection of these lists was published in 1976. These lists all suffered in being transcriptions by people who were not trained linguists, and who therefore did not know how to write down accurately the sounds that they heard.

In 1900, wax cylinder recordings were made of Mrs Fanny Cochrane Smith's songs and speeches, but these are so indistinct that nothing useful can now be heard on them. The only known useful recordings were made by Terry Crowley in 1972. He recorded five words, a sentence, and a fragment of song from Mrs Heffernan and Mrs Mundy, granddaughters of Mrs Smith. These recordings help check earlier transcriptions. The sentence Mrs Heffernan remembered was:

táebanti nínana múmara pjobábi padjú: la
go get wood put fire
Get a bit of wood and put it on the fire.

Although much of Mrs Heffernan's pronunciation was similar to Australian English, there are some aspects of the pronunciation that are clearly non-English and that help to link Tasmanian languages to those of the rest of Aboriginal Australia. However, it cannot be shown that the Tasmanian languages were Australian: the best that can be said is that there is no evidence that they are not of regular Australian type.

We now know that these differences do not imply different origins for Tasmanians and Australians, but arose through physical and cultural evolution while the two groups were separated by Bass Strait during the past 12 000 years. Positive evidence for rejecting the idea of a separate migration to Tasmania comes from several sources. Analysis of prehistoric skulls and skeletons shows that Tasmanians are closely related to southeastern Australians; the few recorded fragments of Tasmanian languages probably belong to the same family as mainland ones; and up to 12 000 years ago, when it was possible to walk to Tasmania from the southeastern mainland, the tools and weapons used in both areas were essentially similar.

Another migration theory, usually referred to as the 'trihybrid origin' theory, is still quoted in some popular books and school texts. Originally formulated in the 1930s by an American anthropologist, Joseph Birdsell, the theory attempted to explain some of the visible physical differences between Aboriginal people living in different parts of Australia. Birdsell suggested that measurable differences in body and head shapes derived from three separate migrations. Descendants of the first migration could be found in the north Queensland rainforest and in Tasmania; descendants of the second lived in the southern part of Australia, especially the southeast; descendants of the third lived in the north, especially around the Gulf of Carpentaria. The first migration was thought to have occurred 20 000 to 30 000 years ago, and all three were completed by about 10 000 years ago. Birdsell also considered that the three groups had intermarried a good deal after arriving in Australia, so that the original groups became less clearly distinct.

Recent research has caused most prehistorians to reject the 'trihybrid' theory, for varying reasons. The original sample was very small and the measurements taken are of characteristics such as body size, which can change quickly if local conditions are suitable; no evidence of any of the three groups has been found in prehistoric skeletons; geographical differences in tools, economic life, paintings and other archaeological materials do not occur throughout Australia in the patterns we

would expect if the theory was correct. Thus, although there are distinct physical differences among Aborigines, these are now seen to be the result of local evolution due to isolation and genetic drift. They may also be related to environmental and dietary factors. There is at present no reason to believe that such variations derive from separate migrations.

The third migration theory has been developed during the past fifteen years to explain differences in prehistoric skulls found in various parts of Australia. Some prehistorians think that all human skeletons more than 6000 years old can be divided into two groups, one similar to modern Aborigines and the other more 'archaic' or heavier in appearance. They suggest that these two groups derive from two migrations into Australia. The 'archaic' type arrived first from Indonesia; another group came later from China.

Such claims have been strongly contested. Are there really two distinct groups of skulls and, if so, do they provide evidence for two migrations? Those who reject such claims point out that the modern-looking group have, on present evidence, been in Australia longer, which is strange in the context of world prehistory. They suggest that some of the apparent differences between the two groups may occur because the samples are so small and will disappear as more skeletons are studied; or perhaps the two groups did exist but are the result of changes within Australia after arrival.

At present it is almost impossible to choose between these two views of the skeletal evidence. So far, no ancient human remains have been found north of the tropic of Capricorn or on the island of New Guinea. Evidence from these areas will be important in considering this problem.

Other kinds of evidence tell against the two-migration theory. Studies of Australian Aboriginal languages show that those now spoken in Australia are related to each other (with two possible exceptions), and no clear links have so far been found with languages from anywhere else in the world. But as languages change naturally through time, their study is not a good guide to very ancient history. More important is the fact that there are no clear cultural traces of two migrations. The stone tools, methods of obtaining food, and aspects of social and religious life such as art and burials preserved from early times do not divide neatly into two groups.

Excavations at Kenniff Cave (top) and Kosipe (bottom).

Kenniff Cave, Qld, is a large open shelter that has been used as a camping place for 19 000 years. The oldest material is at the bottom. The different visible layers were produced partly by human activity, which added such things as charcoal and ash from fires to the soil which had accumulated by natural breakdown of the cave walls and blown-in material. Only charcoal and stone artefacts have been found: soil acidity from the cave sandstone had destroyed all other organic remains.

D.J. MULVANEY

Kosipe is a hillside in the highlands of New Guinea on which people occasionally camped from about 26 000 years ago. The soil here is all volcanic ash from Mt Lamington, 140 kms away. The black layers are topsoils formed at different times. Stone artefacts including waisted blades and charcoal were excavated, but no animal remains.

P. WHITE

When Did People First Arrive In Australia?

The earliest actual dates, which are radiocarbon dates of charcoal from fires and food remains left by early Australians in southeastern and southwestern Australia, are between 35 000 and 40 000 years ago.

Sites of this age in New South Wales were all camps on the beaches of large freshwater lakes. To these camps people brought the marsupials, birds and reptiles they hunted and the shellfish and emu eggs they collected. Sometimes they also brought quantities of fish which, because they are of one species and about the same size, were probably netted. We can guess that plants such as bulrush (*Typha*) roots were gathered for food too, but no remains have survived. At these camps, people used stone tools. To judge from their shape and the way they have been worn, these were used mainly for making wooden artefacts such as spears and digging-sticks. Sites that also date between 35 000 and 40 000 years ago have been found near Perth; only scattered charcoal from campfires and some stone tools have been found there.

Although these are the oldest actual sites, dating human arrival to about 50 000 years ago is more likely for several reasons. The first depends on ideas about rates

RADIOCARBON DATING

Radiocarbon dating relies on the fact that radioactive carbon-14 decays, like all radioactive materials, at a constant rate. Radioactive carbon-14 occurs in all organic materials, such as wood, bone and shell. By measuring the proportion of carbon-14 in any specimen, the date of its death can be found.

The basic principles of the method are:

- Cosmic radiation from space collides with the atmosphere and produces neutrons, which react with nitrogen to produce carbon-14;
- Carbon-14 forms carbon-14 dioxide, which mixes with the stable carbon dioxide already in the atmosphere and oceans;
- Plants take up carbon dioxide and convert it to tissue with trace levels of carbon-14; animals obtain carbon through the food chain. All living matter begins with very nearly the same concentration of carbon-14 (around one part per million million parts of stable carbon);
- Once carbon is bound into a material, the carbon-14 begins to disappear by radioactive decay. It takes about 5730 years for half of the carbon-14 in any particular sample to disappear, another 5730 years for half the remainder to decay, and so on until the amount left is too small to measure (after about 50 000 years);
- Each carbon-14 atom emits a fast electron as it decays to nitrogen. Measuring the very low level of carbon-14 radioactivity in any old sample, after careful laboratory preparation, and comparing it with a modern standard sample, allows its age to be estimated.

Radiocarbon dates are always approximate. Because of the statistical nature of radioactive decay over a one or two day measurement period, and instrument variations, radiocarbon dates are given in the form: x +/– y years before present (BP). An actual example is: 39 500 +2300/–1800 (SUA–1500) radiocarbon years BP.

- This is one of the dates from one of the oldest Australian sites, near Perth.
- SUA identifies the University of Sydney laboratory, 1500 the sample number.
- 39 500 is the age in radiocarbon years which is the central point in the possible age range.
- +2300/–1800 is the laboratory's estimate of the unavoidable uncertainties involved in measuring this date. Statistical theory tells us that there are two chances in three that the true date (in radiocarbon years) lies between 41 800 (39 500+2300) and 37 700 (39 500–1800). There are 95 chances in 100 that the true date lies between 44 100 and 35 900 (that is, within two error spans).

The use of BP (radiocarbon years before present) reminds us that radiocarbon dating does not measure in true calendar years, mainly because of past variations in cosmic ray intensity. Various corrections must be made to radiocarbon dates to convert them into BC or AD dates. That conversion can never be an exact one, but it is accurate to within ± 10 per cent.

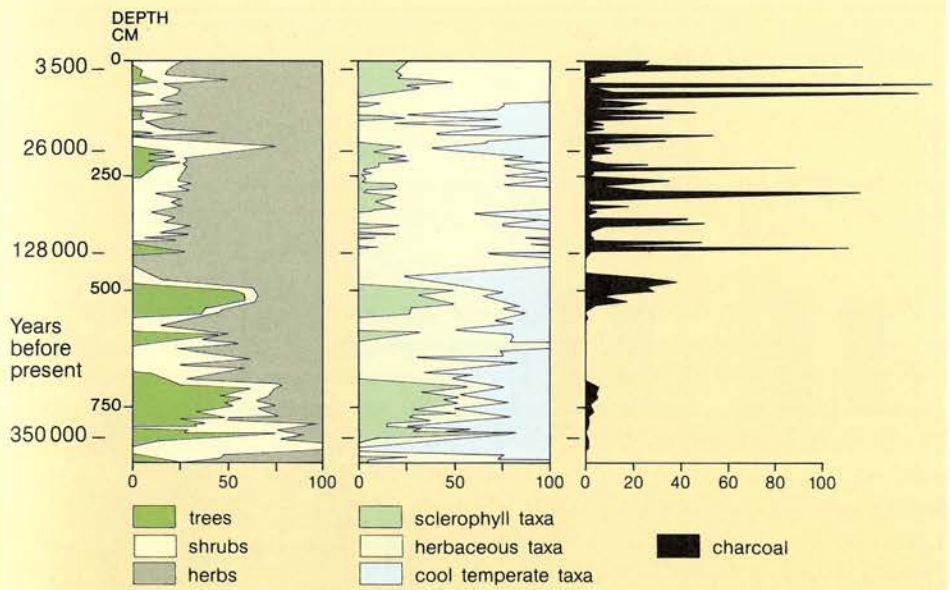
Archaeological research into Australian prehistory relies almost entirely on radiocarbon dating. This means that all ages given are correct only to within a few hundred years. Often we can be no more precise than to say that an event occurred within a particular 1000-year span.

of human spread and population growth. People arriving in Australia came from the tropical environments of Indonesia to similar ones in north Australia. Since they were few, they had little incentive to explore the whole country immediately. Only gradually, as numbers grew and people learned about the different resources of the non-tropical areas were the cooler parts of the country settled. It is believed that to settle Australia's fifteen million square kilometres would have taken as long as 10 000 years. The oldest sites so far discovered are in the southwest and southeast of the continent, far from the point of entry, dating from the end of this period of

spread rather than from its beginning. Moreover, it would be a very lucky chance to find the very first human campsite in any area, so it is probable that people had been there well before the oldest radiocarbon dates.

The second reason for preferring an older date is that about 50 000 to 55 000 years ago sea levels throughout the world were about one hundred and fifty metres lower than they are today. This meant that more land was exposed. Gaps between the Indonesian islands were shorter and the Australian continent stretched out towards Timor. Travellers in canoes or on rafts would have had a better chance of completing their voyages at this time.

A few scholars claim that people have been in Australia for 100 0000 years or more. These claims range from scientific ones based on an increase in charcoal fragments in a fossil lake bed to fantasies about discoveries of proto-human skeletons or footprints in sandstone. No evidence that stands up to critical examination has been found for such antiquity.



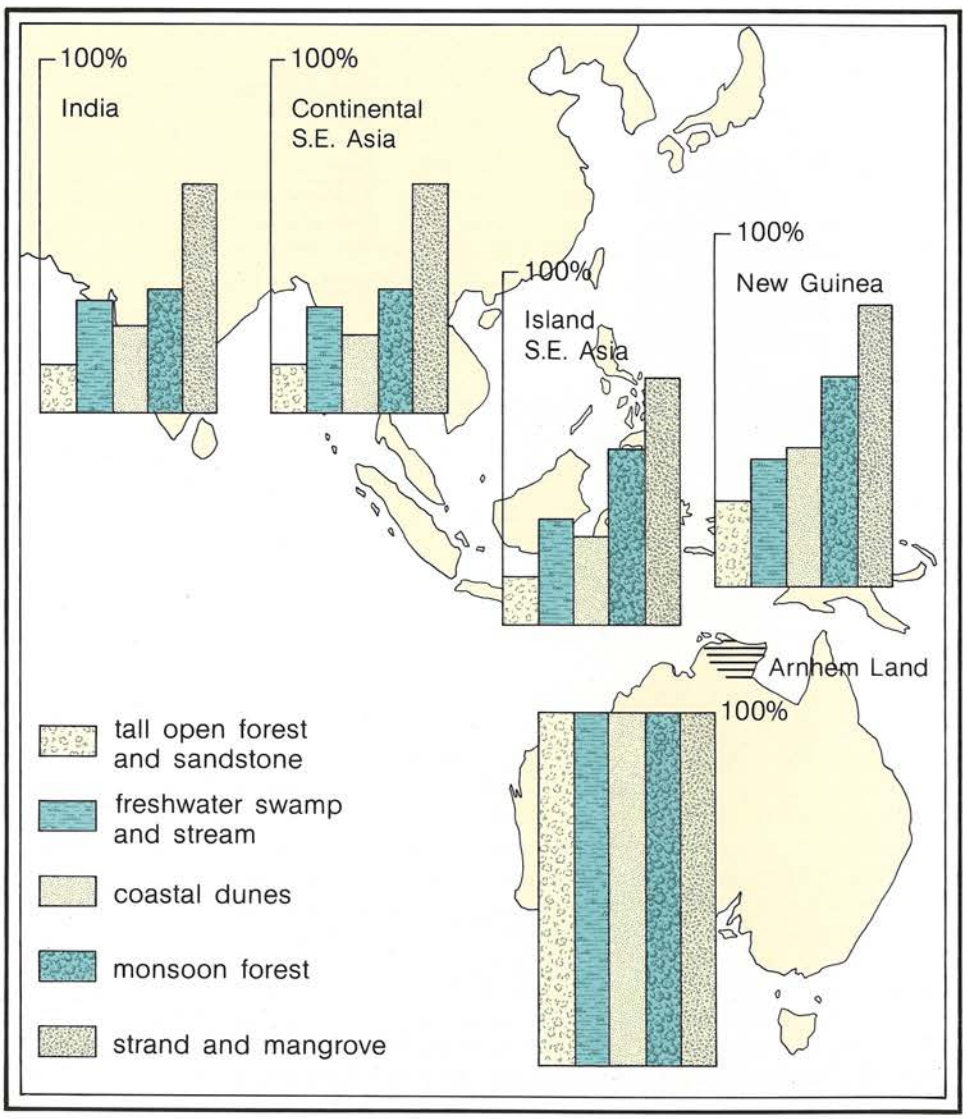
100000 YEARS OF HUMAN PRESENCE?

Pollen and charcoal from Lake George, NSW. The lake, about 25 kilometres northeast of Canberra, is a lake basin without an outlet. Whether or not there is water in the lake depends on the climate—the rainfall, runoff and evaporation. Because it has no outlet, the lake floor has remained undisturbed for a million years or more, and during this time, soil, charcoal and vegetation fragments have washed or been blown into it. The lake floor has been built up more than thirty metres by this accumulation. Most of the vegetation, such as leaves, twigs and flowers, has decayed, but pollen grains, which have an extremely tough skin, have been preserved. The pollen grains that come from each species of plant, although microscopic in size, are different in shape, size and surface configuration. By examining the grains found at different depths in the lake bed, we can gain a general idea of the vegetation that surrounded the lake at that time. The diagram shows that

the vegetation has varied greatly in the past. Most recently, it consisted of eucalypts, acacias and grasses but 25 000 years ago there were many more casuarinas and fewer other trees.

The right-hand side of the diagram shows the quantity of charcoal (measured as the surface area of particles per unit volume of sediment) that was incorporated into the lake floor varied from time to time. Dr Gurdip Singh, who has studied Lake George intensively, has argued that the increase in charcoal from about 120 000 years ago is so large that naturally occurring bushfires cannot have been the cause. He considers that humans setting fire to the forest must have caused this increase. Other scientists disagree, pointing out that there are long-term trends in the importance of different trees in the area, and that fires in different kinds of forests will produce different amounts of charcoal. They also note that in more recent times fires caused by humans in other regions do not produce distinctive changes in the occurrence of charcoal in lake sediments.

No other evidence of human occupation older than about 25 000 years has been recovered from near Lake George.



Much of the flora of northern Australia would have been familiar to the first immigrants, since many plants are like those of southeast Asia. This diagram shows the levels of plant similarity between Arnhem Land and lands to the north and west in each of five major environments. The number of species in Arnhem Land is taken as 100 per cent and the number of similar species in similar environments in each area is then calculated as a proportion of that. Similarities are greatest in coastal and monsoon forest environments. (Based on data collected by R.L. Specht on the American–Australian Scientific Expedition to Arnhem Land.)
J. GOODRUM

TO WHAT KIND OF COUNTRY DID PEOPLE COME?

Research provides an ambiguous picture of natural environments and how they changed during this period. Ice age fluctuations in both sea level and climate affected landforms and the distribution of such useful resources as plants, animals and inland waters. These changing patterns in natural resources through time brought new challenges and opportunities to early colonists (see chapter 2). But in its basic features, Australia 50 000 years ago was not very different from today—it had the eastern chain of low mountains, the drier centre, the marsupial animals, colourful birds, and vegetation dominated by eucalypts and acacias. However, there were differences that would have been important to the newcomers. Fifty thousand years ago, when sea beds were about one hundred and fifty metres lower, Australia was some 20 per cent larger than it is today. New Guinea and Australia were linked by a large area of land across Torres Strait and the Arafura Sea. Tasmania also was joined to the mainland. The presence of extensive inland lakes in the southeast and the north suggests that rainfall over the whole continent may have been greater, although average temperatures were probably much the same as they are now. Similarly, rivers of the Murray–Darling system were larger, flowing at up to four times their present rate of discharge. It seems likely that areas of savannah woodland and rainforest were much larger and the desert was smaller.

The northwestern coastal plain to which people came was flat and swampy. Indeed, many of its swamp, stream and rainforest plants are the same as those found in Indonesia, so that colonists would have found some familiar environments in northern Australia. Most plants, especially roots such as yams (*Dioscorea*) and fruits such as *Terminalia*, eaten in recent times by Aboriginal people in Arnhem Land, still come from this environment.

To the settlers, the animals would have been different, with strange forms, habits and even ways of moving. Some very large animals and birds lived in tropical and temperate environments, including diprotodons (Diprotodontidae), the size of large cows, that ate leaves and grasses; several kinds of large kangaroo (*Sthenurus, Procoptodon*), some browsing on shrubs while others ate grasses; the wombat (*Vombatus*), the echidna (*Zaglossus*) and the koala (*Phascolarctos*) half as large again as the animals of today; at least one emu-sized bird (*Genyornis*); and a meat eater related to the possums (*Thylacoleo*), about the size of a Labrador dog. These animals were here when the first colonists arrived, but died out less than 40 000 years ago. They were probably the subjects of spoken histories and stories, and their pictures or tracks might have been painted or engraved on rocks. Only ambiguous evidence of this has survived to the present, and only a few bones of any of these animals have been found at early campsites. The colonists brought no animals with them. The dingo, Australia's dog (*Canis familiaris dingo*) arrived much later, only about 4000 years ago, and it never reached Tasmania.

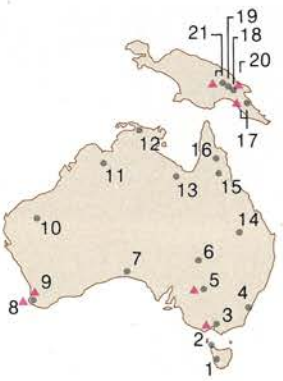
THE OCCUPATION OF AUSTRALIA

Knowledge about the first half of our history is very limited, because few archaeological sites are dated before 25 000 years ago. These sites, with their stone tools, radiocarbon dates and food remains, show that by 30 000 years ago most of the continent was occupied. People lived in the southeast and southwest and in the highlands of New Guinea, which then formed the northern part of a larger Australia. But how many people were there, and by what routes had they spread through the continent?

Answers to these questions come from the carefully constructed theories that scientists call 'models'. To model the peopling of Australia, scholars make assumptions about the ease with which early Australians learned about the new

Top to bottom: mangrove and beach strand; monsoon forest; coastal dunes; freshwater swamps; tall open forest on sandstone.

A. FOX/I. MORRIS/A. UPITIS



Sites in Australia and New Guinea in the time span referred to in this chapter. Sites older than 30 000 years are marked with a triangle, those older than 18 000 years with a circle. 1: Kutikina; 2: Cave Bay Cave; 3: Keilor; 4: Burrill Lake; 5x: Willandra Lakes; 6: Lake Yantara; 7: Koonalda; 8: Devil's Lair; 9: Swan River; 10: Mt Newman; 11: Miriwun; 12x: Oenpelli; 13: Colless Creek; 14: Kenniff Cave; 15: Walkunder Arch Cave; 16: Early Man Shelter; 17: Kosipe; 18: NFX; 19x: Nombe, Kiowa; 20: Huon Peninsula terraces; 21x: Mt Hagen, Kuk, Yuku. x: more than one site is located here.

environments, about the speed at which populations grow (birth and death rates), about life expectancy, and about the relative importance of hunting and plant gathering in providing daily food. The scholars' models vary widely.

One popular model suggests that, because the first Australians arrived by sea, they were accustomed to living in coastal environments. They would therefore have spread along the coastlines, living off shellfish, fish and plant foods, rather than immediately moving inland. In this model, the larger river systems such as the Murray–Darling, where the oldest dates for human habitation are about 35 000 years ago, were occupied only after people had spread right around the coasts, finally reaching the river mouth. This happened perhaps thousands of years after the first landing, after people had made their way from the tropical northwest to the colder southeast. Testing this model is difficult: the coasts that people are presumed to have occupied are now well under the sea because of the late rise in the sea level.

Another model suggests that Australia was occupied rapidly, and that by 30 000 years ago perhaps 100 000 people were scattered across the country. In this model the first settlers arrived in a continent where animals and plants were completely unused to humans. Food would have been plentiful and easy to obtain, and people would thus have been encouraged to explore the country rapidly while being able to support more children. This 'rapid spread' model is strongly favoured for some similar situations in other parts of the world such as the Americas (occupied less than 20 000 years ago) and New Zealand (occupied about 1000 years ago). If it is also true for Australia, there should be little difference between the oldest dates found throughout the continent. This may not be easy to test. At present all the oldest dates are in the south (southeast and southwest), probably because that is where most archaeological research has taken place. But it may be difficult to find very early dates in the north and northeast, where so much land that was then coastal has been drowned by rising seas.

While most of Australia was occupied 30 000 years ago, the central arid core of the continent appears to be an exception. There, the earliest sites are only about 10 000 years old and evidence for the use of some areas is even more recent. In the Cooper Creek–Lake Eyre region an intensive survey of old lake shores, river banks and other favourable areas failed to find a single site older than 5000 years. But more than one hundred sites used within the past 5000 years were found.

Around the margins of the desert, in the southeastern highlands and the Victorian Mallee, humans were apparently rare. Although there are some places where people camped at least 20 000 years ago—at Mount Newman in Western Australia, near Camooweal on the Barkly Tableland in Queensland, on the Nullarbor Plain, in shelters near Canberra and in the Blue Mountains near Sydney—these are not common. The lack of sites in these areas may be explained in several ways. Perhaps there were not many people in Australia, and they were concentrated in the better-watered areas. People might have taken many years to develop the tools and—even more important—the knowledge to live in stressful climates. They had not only to learn about the environment but also to develop the right kinds of social relationships. Interdependence, with close linkages between people over very large areas, is a basic requirement for coping with an erratic environment. Part of the answer may also lie in the lesser time given to searching for sites in drier areas and in the destruction of those that did exist. The intensely arid period of 17 000–15 000 years ago, with its windstorms and reshaping of dune fields, would have destroyed or covered many of the desert sites at least. Modern erosion is responsible for uncovering many sites, such as the ancient campsites at Lake Mungo in western New South Wales.

However it was done, most of Australia was occupied by 30 000 years ago and probably all of it by 20 000 years ago. In Tasmania and the New Guinea highlands, people lived within sight of major permanent ice sheets; around the desert fringes, people were able to cope with erratic rainfalls and scattered food supplies. In the north, wet and dry seasons were part of the rhythm of life, while across the south winter and summer, with their variations in food and other supplies, had become a part of life to these once-tropical people.

THE IMPACT OF OCCUPATION

Many modern Australians, Aboriginal and non-Aboriginal, still believe that until 1788 early Australian societies lived off the land and did not change it. 'An unchanging people in an unchanging land' is the phrase that was often used. This is now known to be untrue. Pre-European Australians may have contributed to the extinction of some animals and in the alteration of vegetation patterns.

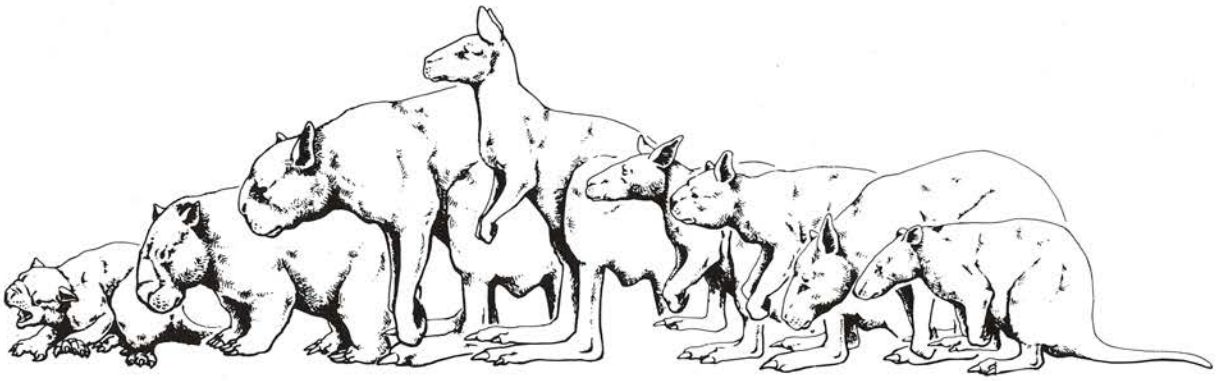
Some animals that used to live in Australia became extinct between 30 000 and about 10 000 years ago. Their bones have been found in a few sites, together with stone tools, hearths or other signs of human occupation. So far, however, there are only a few examples of this association in sites in different parts of Australia. They date to between 30 000 and 16 000 years ago. There are also some sites, such as Devil's Lair in Western Australia and the Lake Tandou area in western New South Wales, where there is clear evidence of human occupation 20 000 to 30 000 years ago, but where no bones of these extinct animals are found among the food remains. At some sites, such as Lancefield in Victoria, dated to 26 000 years ago, there are many extinct animal bones but almost no signs of human activity.

To add to the puzzle, some animal species did not become extinct but rather evolved into smaller forms during this period. A striking example is the modern grey kangaroo (*Macropus giganteus*), the present adult males of which are about 1.7 metres tall and weigh about 75 kilograms. This species is the direct descendant of *Macropus titan* which lived some 20 000 years ago. Its adult males were over two metres tall and weighed almost half as much again as their descendants. Other animals that became smaller included the Tasmanian devil (*Sarcophilus*) and the wombat (*Vombatus*).

Some scholars explain the extinction and dwarfing of animals in climatic terms, others attribute it to human action. Both approaches, we may now suggest, have merit, each factor having varying importance in particular regions. Because the animals were large, we can assume that, like large animals everywhere, they were not very numerous in any one area. We can assume that the actual number would have varied naturally. From time to time, some would have been killed by hunters. At a time of climatic stress, such as the very arid phase in western New South Wales about 17 000 years ago, animal numbers would have declined. At the same time, people who were short of other foods would have hunted more of them. This combination of causes would have been sufficient to reduce the population of a particular species in an area to a level from which it could never have recovered, and so that species would have become extinct. How some animal species became smaller rather than dying out is still not clear, but they, too, must have been the prey of human beings.

How far people permanently altered the vegetation by using fire is another case in which a precise picture cannot yet be drawn, but in 1788 Aborigines throughout Australia used controlled burning as a management tool. Burning increased the productivity of some food plants. It was used in hunting, not only to flush game from cover but also to create patches of green regrowth that attracted such

Percentage similarities in vegetation between Arnhem Land (100 per cent) and other areas in Australia and nearby areas. Whereas tropical areas are quite similar, subtropical ones (southern Australia) are much less so. (Based on data collected by R.L. Specht on the American–Australian Scientific Expedition to Arnhem Land.)
J. GOODRUM



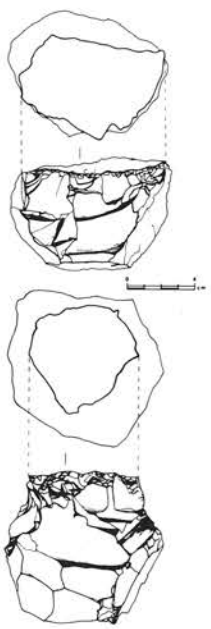
Extinct animals of Australia, shown here with an early Australian hunter from Arnhem Land. These reconstructions by Peter Murray are, left to right: Thylacoleo carnifex; Phascolonus gigas; Procoptodon goliah; Macropus titan; Protemnoden anak; Simosthenurus occidentalis; Sthenurus andersoni; Propleopus oscillans.

browsers as kangaroos, making them easier to hunt. It was used to make fire breaks to protect areas of fire-sensitive but useful plants and trees, such as rainforest. Practices of this kind helped to spread more fire-tolerant plants.

While we have no record of the precise uses of fire in the remote past, some evidence for Aboriginal burning is present in the earliest occupation levels of a number of sites. These show an abnormally rapid build-up of sediments washed in from surrounding hill slopes and sometimes containing amounts of charred wood; for example, at Burrill Lake in New South Wales. The evidence suggests that the early occupants of these sites fired a landscape unaccustomed to regular burning. Hill slopes were denuded of fire-sensitive plants and trees, allowing soils to be washed away by rain and deposited elsewhere, some within the sites themselves. Later, with continued regular burning, the hill slopes became stable again as angles of slopes were readjusted and fire-tolerant shrubs and trees became established.

People probably changed the vegetation not only by firing but also by harvesting certain plants. Some edible seeds and roots were inadvertently regenerated around the campsites to which they were taken, while the very act of digging for roots improved the soil and spread pieces of root for regeneration over a wider area.

But whatever the effects in particular localities, no human actions could prevail against the changes caused by climatic alteration. About 15 000 years ago, for example, the Tasmanian rainforest spread out from the southwestern valleys to which the cold had restricted it and covered the southwestern landscape. These lands, formerly grass- and shrub-covered and the home of ancient wallaby hunters, soon became almost uninhabited forest. Similarly, on north Queensland's Atherton Tableland, rising temperatures and rainfalls about 8000 years ago allowed the rainforest to spread, with no detectable resistance from people living in the area.

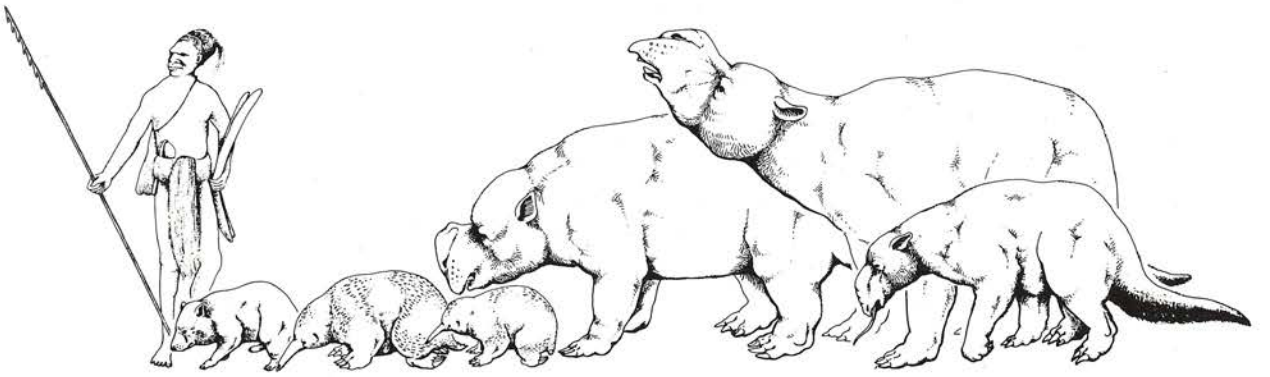


Horsehoof cores from southeastern Australia. Cores of similar form, but smaller in size, have been found in Sulawesi.
M. KOETTIG

EARLY AUSTRALIAN TOOLS

While we may guess that early Australians, like later Aborigines, used a wide variety of tools such as wooden digging-sticks, spears and carrying-dishes, woven nets and baskets, none has survived. What have survived are numbers of stone tools used both to make other items and to gain livelihood.

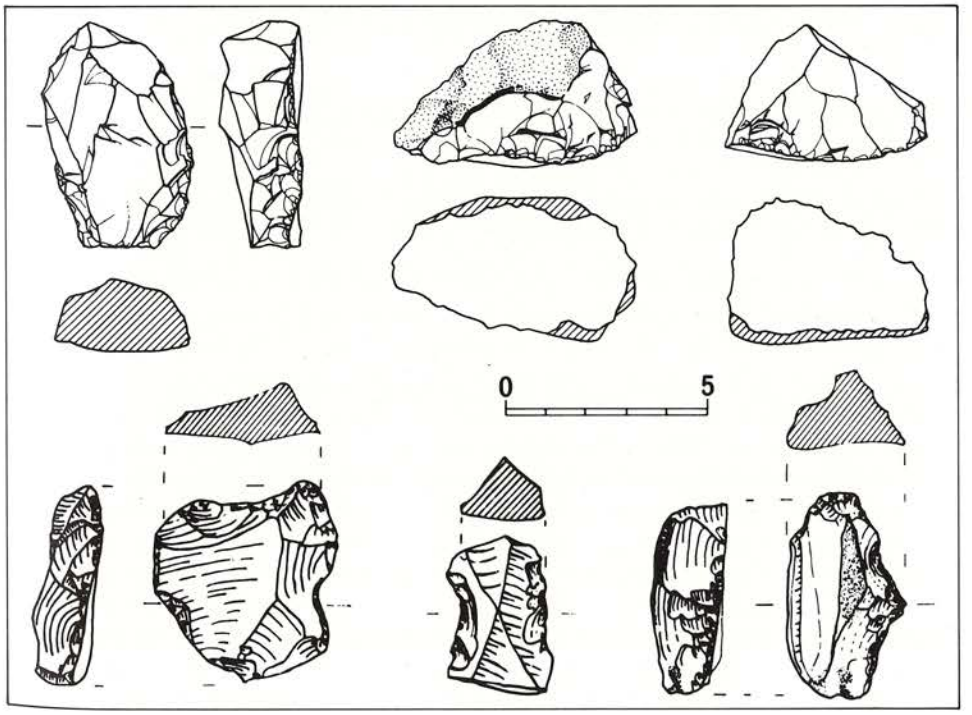
From the time of the earliest occupation until only a few thousand years ago, the common stone tools were cores with steeply flaked edges, steep-edged scrapers made on thick flakes and sharp edges of flakes. While not all varieties of these tools are found at all sites, similar forms occur throughout Australia. Across the entire continent and over thousands of years, the tools did not vary greatly in shape. This



(left to right):
Sarcophilus laniarius;
Zaglossus hacketti;
Zaglossus ramsayi;
Zygomaturus trilobus;
Diprotodon optatum;
Palorchestes azeal.

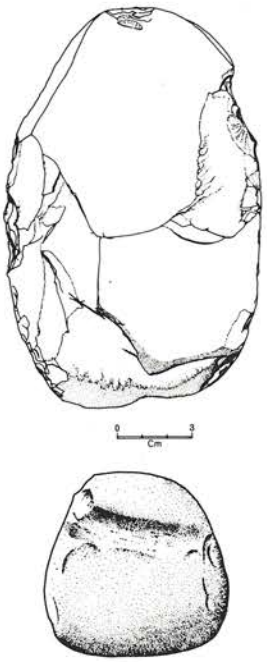
uniformity may be attributed in part to the fact that the uses of tools varied little: they were used for planing, scraping, cutting and chopping. At a few sites where many tools have been left, they are seen to have become smaller and more varied in form with the passage of time. Some of these changes seem to have resulted from making tools more specifically for particular tasks, but this is clearly not the whole explanation.

In the tropical north of Australia, and also in New Guinea, stone hatchet heads (often miscalled axes) date back at least 25 000 years. These stone blades have cutting edges shaped by grinding rather than flaking. They are among the world's oldest examples of this technique, which allows tools to be rapidly and easily resharpened. Although only the stone blades have been found, we can infer that they were hafted, for some have a groove across one or both faces and they are similar to modern tools. The northern Australian tools are believed to be hatchets, swung with one hand as in recent times. However, very early hatchet heads are found only in tropical Australia, and elsewhere they date back only 5000 years.



Flaked stone tools from Lake Mungo (top) and Sulawesi, Indonesia (bottom). Tools like these are used for scraping and cutting wooden artefacts. The scale is in centimetres.
I. GLOVER/J. GOODRUM

Stone axe head (top) and hatchet head (bottom). The axe head has a bevelled cutting edge that has been ground into shape and small notches at the side for hafting; the hatchet head has been ground over both faces and has a groove over one face for hafting. The axe head is from Nombe site, Papua New Guinea, and is about 26 000 years old; the hatchet head is from a site near Oenpelli, Arnhem Land, and is about 20 000 years old.
B.J. OSBORNE/W. MUMFORD



Their late spread is surprising, because hatchets were recently used for such common tasks as possum hunting and toolmaking, but it seems likely that early Australians in southern areas did not regard them as essential tools.

Similar to the ground stone hatchets in shape and size is a more unusual group of tools known as waisted blades. Their distinguishing feature is a notch flaked into either side producing the 'waist', presumably for hafting. They may have been used for tasks similar to those for hatchets. In Australia they have been found only in north Queensland and on Kangaroo Island off the coast of South Australia, but they have been found in several places in New Guinea, where there is also more variation in shape and size. Such tools date back at least 26 000 years in New Guinea, perhaps as far as 40 000 years, but appear to be more recent in Australia.

Bone tools are much rarer than those of stone, most having survived from this period only in limestone and other deep caves. Stout bone awls, made from the fibula (small leg bone) of a wallaby or a kangaroo, have been found at a few sites in southern Australia. These have a glossy polish at the tip, suggesting they were used for piercing a tough but pliable material such as skin or bark. Some archaeologists believe that bone awls were used to pierce and sew skins to make cloaks. In the nineteenth century, Aborigines living in colder southern regions made such cloaks, using awls almost identical to the archaeological finds.

LIVING OFF THE LAND

The early Australians occupied a wide range of environments, from the tropical north to the cold temperate Tasmanian peninsula. Between these extremes the resources available for livelihood varied greatly. The general pattern of subsistence was probably similar to that practised by more recent Aboriginal hunters and gatherers, who were seen exploiting a wide range of foods overall, though they often concentrated briefly on one resource, usually when seasonally abundant. This seems to have been the pattern in western New South Wales, where some sites around old lake shores contain remains of fish, shellfish, emu eggs and land animals, while others contain only large quantities of freshwater shells. In other parts of the country a smaller range of remains occurs. At first sight the thousands of wallaby bones at Kutikina Cave (Tasmania) or the quantities of burnt animal bones at Devil's Lair (Western Australia) suggest a highly specialised economy. But these sites may contain the remains of only short periods of activity within a more diverse subsistence pattern. They might also have originally contained other food remains that have now decayed, such as root vegetables and fruits.

PHYSICAL APPEARANCE OF EARLY PEOPLE

Few remains of early human beings have survived for us to examine. There is only one reasonably complete skeleton from the whole of Australia clearly dated beyond 20 000 years. This is from Lake Mungo, in western New South Wales and was found in 1975. The man, Mungo III, dates back some 30 000 years. There are also the broken-up remains of a woman (Mungo I) cremated about 26 000 years ago. Compared with modern Aborigines these early people had small skulls and delicate bones. Other remains, dated between 15 000 and 6000 years ago, show that anatomically similar people continued to inhabit southeastern Australia.

However, as already mentioned, there appears to be another group of ancient Australians. The Kow Swamp site in the Murray valley, Victoria, dated to between 9000 and 13 000 years ago, reveals a population of at least twelve individuals with physical characteristics unlike those of the Mungo people. The Kow Swamp people are robust, with large, thick skulls, massive jaws and palates, pronounced brow

ridges and receding foreheads. Other scattered finds show that people with similar features lived throughout southeastern Australia and perhaps elsewhere, from 15 000 to perhaps 6000 years ago. Some of the physical characteristics of these people were outside the range of modern Aborigines. So we have evidence for an early group of delicately built people and a later group of heavily built people, neither exactly like present-day Aborigines. We can easily comprehend that modern Aborigines could result from a fusion of these two groups. But when we try to match this information with the worldwide evidence for human development, we have a problem. Whereas members of the 'gracile' Mungo group are unquestionably modern in form, those of the robust Kow Swamp group, while all *Homo sapiens*, have a number of archaic features generally regarded as belonging to more ancient forms of humanity. These traits, mostly in the facial bones, indicate descent from *Homo erectus*, the fossil human that predates *Homo sapiens*. We thus have a paradox in which humans with more archaic features appear later than those of the fully developed modern type.

The paradox may be resolved in one of several ways. First, we may find evidence that there were two migrations to Australia, the first of archaic-looking people, coming from Indonesia more than 40 000 years ago, or we may find that the archaic look is the result of local evolution or diet. Some aspects of it may be not physical, but cultural: the backward-sloping foreheads common among the archaic-looking group could be the result of mothers intentionally moulding the skulls of their infants: this was certainly done by people who lived at Coobool Crossing, also in the Murray valley. But whatever the origin of these differences, it is clear that both groups contributed to the modern population. This development seems to have occurred about 6000 years ago, when there was increasing social interaction and a large increase in population. While the reasons for this change remain unclear, it probably brought together previously separated groups of people, allowing them to blend, through intermarriage, to form the modern Aboriginal people.

THE RITES OF DEATH

Burials older than 10 000 years exhibit a striking range and complexity of procedures for disposal of the dead. At Mungo, the man known to archaeologists as Mungo III was laid out in a grave some 30 000 years ago, then covered liberally with powdered red ochre. Mungo I, the young woman, was treated even more elaborately. Her body was cremated, the charred skeleton (especially the face) was then deliberately smashed and finally the bone fragments were buried in a small pit. At Kow Swamp, most bodies were buried crouched, kneeling, or sitting or lying with their knees bent up under their chins. Stone tools, flakes or freshwater shells were sometimes placed beside them, and one had been buried with powdered ochre.

There are remarkable similarities between these burials and the elaborate and varied ways in which tribal Aborigines still dispose of the dead. Cremation, decorating the corpse, smashing the bones and reburying them have all been observed in recent times. These mortuary rites form part of ceremonies that usually aim to severe connections between the living and the spirit of the dead person and sending it on its way to the spirit world, to reside among the great creative spirits of the Dreaming. This is not merely care for the dead but also concern for the living; Aborigines believe that a disgruntled spirit, not properly dispatched by the correct rites, can cause havoc. Moreover, the ceremonies imply a belief in the indestructibility of the human spirit, a concept shared by most other religions. From the traces of red ochre and charred fragments of human bone recovered by

archaeologists, can we accept that people at Mungo held such beliefs more than 20 000 years ago? To do so stretches the material evidence to its limits. However, because such beliefs are universal throughout Aboriginal Australia in recent times, accompanied by mortuary practices that are almost identical to those used at Mungo, this interpretation is probably correct.

THE BEGINNING OF ABORIGINAL ART

Part of an engraved frieze from the Early Man site in Cape York. Part of it runs below ground level (marked – – · – –), and the lowest parts (about 60 cm below ground) are covered by occupation deposit about 13 000 years old. This is the oldest definitely dated artwork known in Australia. At the far left are trident figures, sometimes called bird tracks: similar engravings have been found in many parts of Australia.
J. GOODRUM/A. ROSENFELD

For Aborigines today, traditional art is not simply a matter of following artistic inclination. Much art is directed towards portraying Dreaming histories and is therefore a means of religious expression. These stories are explained not only through the visual arts of painting and sculpture, but also through music, dancing and spoken stories. Some stories are so sacred that information about them is restricted (including the right to reproduce them); others may be told to everyone. Tracing forms of art backwards through time is difficult. The best chance of discovering the early history of art lies with designs that have been engraved indelibly into rock surfaces. Some of these must be very old, simply because the rock surfaces have become deeply weathered since the engravings were made. An outstanding example of this early art is in the Cleland Hills, about three hundred kilometres west of Alice Springs, where sixteen engravings resemble human faces. At Panaramittee in South Australia and Mootwingee in New South Wales, deeply weathered engravings portray animals, human figures, circles and animal tracks. The amount of weathering suggests that these engravings are old, but we do not know how old. More precise dates are obtained where engravings are covered by archaeological deposits that have been radiocarbon dated. At the Early Man shelter near Laura (Queensland) engravings consisting of circles, animal tracks and other designs are dated in this way beyond 13 000 years. At Koonalda Cave, a vast underground limestone cavern beneath the Nullarbor Plain in South Australia, some engravings on boulders lie beneath a hearth more than 20 000 years old. These engravings are similar to some on a vast frieze found near Aboriginal mining debris. This frieze includes meandering patterns made by dragging fingers along the soft limestone and designs incised with a stone or sharp stick. Almost certainly the art of Koonalda was the work of people who mined flint there between 20 000 and 15 000 years ago.

Except for engravings on rock, Aboriginal art tends not to last for a long time. This is assumed to be true for most paintings on rock surfaces, although some in Arnhem Land are quite old. There, four superimposed art styles have been detected. The earliest, in faded red ochre, is well bonded on to the rock. In places it is protected from the rain and wind by a skin of natural silica which has formed on the rock surface.

By 15 000 years ago the people whose ancestors came from southeast Asia tens of thousands of years earlier had established a new and unique culture and way of life. They had made their way to every corner of Australia, if not to its geographic centre. Although physically more variable than modern Aborigines and culturally somewhat different, they were the ancestors of the Australian Aborigines.

My name is Wandjuk Marika, and my father's name was Mawalan. I am going to explain the meaning of these two paintings, one my father painted and one I painted. When I was about eleven years old my father taught me how to paint, how to use the brush made with human hair. This painting [top right] I did when I was about fourteen years old. At the same time my father taught me how to paint he taught me the meaning of the painting, the story. He taught me how to hold the brush, how to use it to make the lines straight, and at the same time he taught me the story from our ancestors.

The story is about Djankawu, our spirit creator. When Djankawu arrived at Yalangbara, which you call Port Bradshaw, he walked along the beach with his two ceremonial walking sticks, one in each hand. The two sticks have names, important names, and my father had the names. One of the names is Mawalan. Djankawu walked along and he saw this track that you see in the painting. He asked his two sisters, Madalatj and Bitjiwurrurru, who were with him, 'My sisters, what is this track?' And his sisters replied, 'Brother, this is Djanda's track, the track made by the goanna.' Then Djankawu composed the chant about Djanda. Then they walked further along, and they saw two Djanda, two goannas. Again Djankawu asked his sisters, 'My dear sisters, what are these two animals, male and female?' And his sisters replied, 'Brother, these are the two Djanda, male and female.' Then Djankawu sang the chant, Djanda. This is our totem, our special, sacred goanna. When we go through this sacred area Yalangbara and we see this goanna, we are not allowed to kill it. We are not allowed to kill any goanna there or eat it. And still today it is the same.

You see this mark here, the line and cross-hatching? This is the mark of the goanna, and the cross-hatching is the sand falling down the sandhill as the goannas were crawling along, playing together, male and female. The male is on the right in this painting and the female is on the left. You can see at the neck the black on both sides of the neck: that is the hole they are digging, looking for sand crabs or insects to feed themselves. The cross-hatching is the sand falling down from the sandhills. Djankawu started singing about the sand, the sand falling down from the hills, from this middle one here, and the hill on each side of the painting, and on the top and the bottom. This is a very special painting, and I am teaching the same thing as my father taught me. I'm teaching my son, telling the story as my father taught it to me.

This is a big story on this little bark here [bottom right], my father's painting. These are our symbols, our holy and special symbols, for all our people, from generation to generation. We still carry on our story, our ceremony, our painting, forever. On my father's painting you can see, in the middle of the bark painting, the waterhole under the sea at a place near Yalangbara. There are six or eight tunnels from the waterhole, and the *dharripa* [*bêche de mer* or *trepang*] are the short lines you can see in the tunnels. We have a song and a ceremony as well as this painting; it is part of the story of Djankawu. Only old men are allowed to go close to the well. When the tide is low you can see the well and all these straight lines under the water just as the painting shows them here.

That is my special place at Yalangbara which I have the right to paint. This is my father's painting, and the symbols are those of all my clan, all my people, my children. (I have a son with my father's name.) I am teaching, as the next one in line; I am the next one and I've taken over my father's spirit and my father's work because I learned from my father, when I was young. So I am the next one, and my father taught me; I know the story, I know the song, I know the dancing, and I am going to teach all my children.

When Djankawu came to Yalangbara he saw the *dharripa*, and he saw the well and the water marks under sea at low tide. And he sang. So we have a song for *dharripa*, and for the water coming in and going out, and all the things there. We also have a dance for the water coming in. This is a very special painting for our people, the Riratjingu clan, Dhuwa moiety.

The two goannas, male and female, that Djankawu saw.
MACLEAY MUSEUM/WANDJUK MARIKA

What Djankawu saw at Yalanypara.
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