

Celestial Lore of Some Australian Tribes

by Norman B. Tindale

abstract

The aborigines of Australia have ideas about celestial lore and consider that heavenly bodies reflect activities they know on Earth. Stars are distant campfires of food-gatherers and hunters like themselves. The Sun, Moon, and planets, because of their particular vagaries, tend to be linked with ancestral beings who also possess human attributes.

Available data suggest that aboriginal man may have been on the Australian continent for close to 100,000 years with roots well down in a simple paleolithic phase of modern man's cultural progress. Many of his ideas may have developed in relative isolation, but others appear to have been influenced by later incursions from the direction of Asia.

For many Australian tribes, the Sun is a fire-tending woman, while the Moon often is a male hunter interested in more than animals. Celestial bodies have powers over heat and chill, rain and drought. As celestial beings they evince qualities of greed, envy, and covetousness, and may behave with lechery and cruelty, and thus bring about fears and even death.

My field studies support a view that earlier Australian people had a belief in all-powerful creator beings who behaved much like explorers. Stories about them are widespread, especially in the southern parts of Australia. The New Moon Being of the Kaiadilt people is one to whom appeals are made for opportunities for food-gathering and for favorable conditions such as weather, tides, and rains.

Animal totemism, now linked in a complex manner with their kinship systems, has much influence on their beliefs about the heavens. The supposedly telling force of the correct performance of Increase Ceremonies still dominates the thought of the cultural life of the Australian aborigines.

Introduction

Evidence indicates the great length of the isolated sojourn of aborigines on the Australian Continent, thus their astronomical beliefs may be of

particular interest. At some time, probably during the earlier part of the first cold phase of the Wisconsinan or Last Ice Age, as long as 100,000 years ago, representatives of an early type of present-day man, who lived on the southeastern edge of Asia, must have developed sufficient command of water transport to be able to negotiate the sea barriers separating the Australian region from the mainland of Asia. As drifters from island to island and reef to sand bank in search of food, they may have attained the new continent without full realization of their achievement.

These firstcomers appear to have lived in relative isolation for many millennia, but changes which, in general seem to parallel those in mainland Asia, suggest that successively several major new influences were brought across the sea barriers by further visitors. These incursions were registered in changing tool forms and also affected the physical characteristics of the inhabitants who came to live in different parts of their new, vast, and ecologically varied land.

As an archaeologist, I have had a share in developing knowledge of tool kits which these early visitors seem to have carried, either physically or at least in their minds, and now are to be found, in archaeological deposits and on surface sites almost Australia-wide, as the Kartan stone implement assemblage. I also shared in the years of fieldwork which enabled Birdsell (1941, 1949) to observe and report physical differences in the living descendants, thus warranting an assumption that the gracile Barrinean negritoid folk still living in the Atherton rainforests represent the earliest type of people to arrive. Birdsell's conclusions were reached long before some of the bones of such gracile ancestral confreres of Mid-Wisconsinan time began to be unearthed at Mungo Lake in New South Wales by Bowler and others (1970).

Data now available suggest that heavier built, and rather hairy Southern or Murrayian aborigines may have arrived as a second wave of migrants, perhaps as late as near the beginning of the last cold phase of the Wisconsinan. Widespread stories in

Australia seem to indicate that, in the course of time, they competed with, overcame, and/or absorbed their more gracile forebears, save in some peripheral areas of refuge such as the rainforests along the eastern coast. They may have brought with them elements of what became the Tartangan culture phase with improved forms of discoidal cutting tools.

Birdsell has detected, especially in the tropical north, a further variant of Australoid man whom he has named as the Carpentarian-people who may have brought still more advanced microlithic stone tool implement designs which suddenly made their appearance as fully developed kits around 7,000 years ago.

In addition I have been impressed by another seemingly discrete group of people, the Bentinck Islanders, who today are inhabitants of the few remaining sterile island parts of the former vast Ice Age Sahul Shelf, which is now sunken below sea level as the great shallow Gulf of Carpentaria. These Kaiadilt people will receive some mention in the body of this article for their special beliefs about the Moon.

Throughout their sojourn in Australia, until at least well into the Recent Period, all these aborigines have been hunters and gatherers. Today they are divided into no fewer than 600 named tribes (Tindale 1974), virtually all of whom live within well-recognized bounds. In dry land areas they tend, seasonally, to roam widely in small clan-like groups on predicated routes in search of water and food. In other parts they may be semi-sedentary, especially where more abundant and readily available natural resources and more permanent streams are present. These people have developed very detailed nomenclatures for their country and many are now adopted by Western newcomers. Some tribes created static structures such as walled fishtraps, and these required constant attendance over much of the year.

In some of the vast featureless karst limestone desert areas open waters were so rare that the country was virtually without names. The inhabitants had to be nomadic, searching for their water in the long surface roots of the water-bearing mallee trees and constantly moving their base camps as they quickly exhausted such casual supplies.

Climatic changes since the beginning of Recent time seem to have encouraged the development of grasslands in parts of semi-desert Australia. Perhaps this is in part an artifact of the widespread use of the firestick to set grass-fires in gathering supplies of small mammals, lizards and even scorched insects as food (Tindale 1976).

Such grassed areas have encouraged some

hunter folk to develop a partial dependence on harvested grains, naturally sown, implying a trend approaching the dawn of an agriculture. These ideas may have been carried into Australia by some of Birdsell's Carpentarians who seem to have brought with them, among other material objects, the wild dingo dog which first made its appearance about 7,000 years ago. Behavior of the dingo is discussed in my review of some of the ideas of the aborigines on astronomy.

The primary purpose of this article is to give an overview of some of the ideas the Australian aborigines have about astronomy, and of the use they make of the movements they observe in heavenly bodies.

The Sun, Moon, several planets, and many of the stars appear in their mythology and link ancestral beings whom they visualize as having been once on Earth, but are now observable as stars in the sky.

One of the few astronomy-oriented studies is that of Maegraith (1932) who recorded astronomical data among the Aranda people of the MacDonnell Ranges in Central Australia. He noted a division of the heavens into two "camps" with the Milky Way representing a boundary between the Aranda on the east and Luritja on the west. Subsequent inquiries have revealed objections by Kukatja tribespeople to the supposedly derogatory term Luritja. Hence the heavenly river, matching the Finke River on Earth should be regarded as separating several Aranda-speaking tribespeoples of the east from the Kukatja people and the several other Desert folk, who speak languages of Kukatja type in the west (Tindale 1974). Maegraith confirmed the legends of the Sun and the Moon recorded by Strehlow (1907), but did not learn about the wanderings of the planets.

The Aborigines as Observers

Living in the open as they do for most of the year, protected only by a low breakwind shelter of tree branches, the Desert aborigines are keen observers of the sky. They are able to differentiate between the southern stars which remain above the horizon throughout the year and the northern ones which are seasonal. Both the nightly movement from east to west and the slow annual movement in the same direction are recognized. Stars appear to be divided in moiety fashion as to color—red and white—and also classified in accordance with sex and their sectional marriage systems. In their namings, the size or brightness of stars may be given less attention than other factors such as relative position.

A full view of Australian aboriginal notions

about the heavens, and I am not well versed in astronomy. However, I have had opportunities for gathering myths and have recorded ideas on many facets of the lives of aboriginal folk; thus I have drawn heavily on personal field work. Where useful I have drawn attention to parallel references. Virtually all of the published work has originated with persons interested in mythology rather than in astronomy.

Aboriginal stories are rich in beliefs about the sky and about supposed astral beings, many of whom performed outstanding deeds, usually beginning while on Earth and continuing after their translation to the sky. Some such beings did good but the actions of others were in various ways malevolent. Now in the heavens, they are often still believed to have auras or influences which affect present-day folk. Many of the stories begin with an account of the activities of the ancestral being while living on Earth in specific animal or in human form, perhaps even being regarded as the creator of the country in which the narrators live. Sometimes in song and dance there are recordings of their social activities and lives before arriving in a given tribal area, and also of their heroic or malevolent deeds while there, and of their departure from the narrator's country. Many of them move about the country like travelers, explorers or initiators of special activities. They may create, or modify natural features. Seemingly, as initiators of earthquakes, as in the Flinders Ranges in South Australia, some of these Beings can still live below the Earth's surface. They may shake the Earth when angry so that one cannot even stand up. Hills may break and water gush from the ground as they move beneath the Earth. They are skilled in performing miraculous deeds, and in times past contended with other Beings, often at specific named places which are still of vital importance to present-day people. Much of the nomenclature of their country may be based on the activities of these sky Beings when on Earth.

At times these beliefs are revealed to adult initiates only in secret ceremonies. At other times they are imparted to growing children. The stories seem obviously to be of importance in revealing and pinpointing the geography of their tribal lands, and imparting information on life ways needed by members of coming generations who must absorb such knowledge for successful living in their home territory.

Ancestral beings, in their terrestrial or human form, tend eventually to pass away. Sometimes they are thought to have gone directly into the heavens; in certain instances they accomplished this by walking to that distant edge, the horizon, where the sky

appears to touch the Earth. At other times and places they may enter the Earth near the border of the tribal territory and then disappear.

The Pitjandjara of the Mann Ranges in the northwest corner of South Australia believe such beings go [*'tarupano*]*, that is they change state, or pass into and travel through the Earth to a new emergence place where they may reappear to relive their lives, either by having further adventures in the territory of some adjoining tribe, or in the sky. For totemic beings in animal form such as the kangaroo, eagle, turkey-bustard, rockwallaby, or dingo such translations are "normal". In the south and southeastern parts of Australia ancestral beings tend to have been originally of human form. By magical means they have become the Sun, the Moon, or some other heavenly being. There are often either dramatic or miraculous means of getting them into the sky. Once in the sky their phases of going *tarupango* and coming again into sight have varied effects on the lives of the aborigines and may be interpreted in more than one way. Sometimes the light seen is the mark of the flickering campfire of the Being now in the sky. At others, especially in the case of some of the planets, they are the wanderers themselves, moving about and still having adventures.

The Sun

In the case of that stupendous female being, the Sun, the light comes from a pair of gigantic firesticks she carries daily across the sky. They are the ones she needs to rekindle her campfire when she goes *tarupango* in the west. People see the red glow at dusk as she prepares her night fire for sleeping below in the cold earth. She then re-lights her firesticks, as evidenced by the red light of the dawn sky seen hours later as she prepares to begin her journey across the day sky. "Traveling through the Earth," is common to all creatures; it enables the Sun woman to rest and then to replenish her supply of kindling before emerging again to repeat her journey on the morrow.

Among the Tanganekald of the southeastern part of South Australia [*'Wange*] was a Sun woman, a being who, in ancient times, climbed into the heavens where she carried firesticks; but these firesticks did little for people on Earth in keeping them from being cold. The light from her firesticks was too bright. Another all-powerful male being

* In this paper when individual aboriginal words are introduced they are transcribed in International Phonetic within square brackets. If repeated they are then written in the closest possible conventional (Geographic II) form.

still on Earth, named [*Nu're:le*], magically forced her to be less vigorous in waving her firesticks; instead of affording much bright light there was a greater amount of red glow. Thus people could remain warm.

The pattern for this heavenly drama is based on a regular method used by an old woman held responsible for keeping firesticks burning when aborigines are traveling. She holds dry sticks, each alight at one end, in one hand with only their flaming tips touching together. As she walks she waves them gently from side to side in front of her waist. With due care the heat from the touching points of the sticks warms her whole body through the wall of her abdomen. Too vigorous an action causes much flame but is less effective for warmth than a steady glow. In the Western Desert on a cold day every person may carry such a pair of firesticks. During travel, halts are made several times an hour to replenish these portable fires.

In tribal life it is the older women who are held responsible for care of fire. To lose it would in some circumstances be fatal for them when men are angry. The making of new fire often can be difficult, especially in times either of rain or of winter chill when in the southern lands all wood is damp. In times of unexpected winter rains in the desert, loss of fire among the Pitjandjara often necessitates retreat to a cave shelter where attempts can be made to develop new fire by rubbing one dry stick against another hearth piece in the hope of rekindling the fire. Tinder, which forethought had placed there long before, in dread anticipation of such an event, often is available for such use. The weapons they carry, being wet, cannot be used. In normal times a sawing action against a dry piece of wood using the edge of a man's *atlatl* or spearthrower is usually employed and is effective.

Among the Kurna people of Adelaide, heavy winter rains sometimes caused loss of fire. Hurried journeys had to be made for upwards of 130 km. along a tribal boundary to Morgan on the Murray River to offer skin cloaks and precious rugs to the Ngaiawang in trade for renewal of their fire.

In mundane life it is the woman who is up at the earliest streak of dawn and whose duties include trying to keep alive the waning embers of the night fires of her husband and of her children. In areas where water has to be carried, it is she who trudges to the source and with available containers attempts to satisfy the thirst of her waking husband and children.

More than 230 discrete terms for the name of the Sun have been gathered by me, chiefly during

fieldwork, from different tribespeople. The name, often linked with appropriate terms for "rising" and "setting," determines the general directions of the cardinal points and the orientations of huts and shelters in accord with kinship rules within the clan and tribe.

The sex of the Sun Being is at times an embarrassment. Thus even among the matrilineally oriented southeastern tribes, where male-dominated initiation ceremonies take place for their youths, a special secret term may be used for the Sun. In the rites elevating boys into manhood the Sun Being may be represented temporarily by her brother, who for the purpose takes over the role of carrying the paired firesticks representing those which light up the Earth.

Eclipses of the Sun occur at intervals sufficiently infrequently that when they happen they may create great fear among the aborigines. [*Tindu 'korari*] is a Mandjindja tribal term, used also among other Western Desert tribes, for a solar eclipse. Men with whom I talked in 1934 had seen one for the first time in their day when they were at [*'Pundjalu*], an as yet unlocalized place northwest of Ooldea, and probably in western South Australia. It was at a time before they had ever seen Westerners. Although it had caused them great fear they had not come to any harm from the experience. Seemingly the eclipse they had witnessed was one which passed over Ooldea and Port Augusta and was almost total at Angaston in South Australia on July 30, 1916. My informant said that his people were not frightened by eclipses of the Moon, [*'pira 'korari*]. They had seen one not too long before at Wynbring after white men had built the Transcontinental Railway which passes through Ooldea.

A Ngadjuri tribe story of the Flinders Ranges, linked with a total solar eclipse in South Australia, tells how an old female being came from the northwest accompanied by two dingo dogs, one animal with reddish hair and the other black-furred. These dingo beings behaved as men. Two brothers of the lizard totem, named [*'Wulkinara*] and [*'Kudnu*], succeeded in killing them. They also burned the old woman. A serious result of this killing at Parachilna was that the Sun, somehow linked with the old woman, disappeared, causing fear among the Ngadjuri people who, after trying to fetch it back and exhausted from crying, fell asleep. Kudnu awakened during the darkness and threw boomerangs into the sky. Three of them failed but the fourth, cast towards the east, was successful and the Sun appeared again. The late G.F. Dodwell, formerly the South Australian Government Astronomer, informed me that the latest eclipse of the Sun tied to Parachilna, was a total one on March 13, 1793. Any other total eclipse there

would have been several centuries earlier. Aboriginal “evidence” for the “reality” of the event is that in Parachilna Gorge today the bodies of the two dingoes still remain. One is a much-treasured, and widely used trade deposit of a very brilliant red ochre, much sought-after for its supposed medicinal qualities, and used, especially for body decoration during initiation ceremonies for young men. The remains of the second dog lie as a deposit of intensely black wad, or manganese dioxide, also used in decorating the body. It happens that the red ochre has a mercury content which helps to accentuate its red color. Its compounds may have had some real therapeutic value.

The Moon

The Moon and the planet Jupiter are both considered to be of the male sex, and to be related; both are intimately linked by the aborigines with the phenomenon of fire and its making. Over much of the continent today men generate fire by friction, often using one or two particular types of wood and following a rotary drill method in which a vertical stick, held between the palms of the operator’s hands is pressed down on a split hearth stick and rotated back and forth. Alternatively, there are sawing methods, particularly in the south and west of the continent, in which a piece of wood, or the edge of a weapon such as a spearthrower, is sawn back and forth over a softer hearth piece of wood, sometimes a shield, or even the dry branch of a tree, so that hot wood-dust accumulates and eventually ignites in a groove. In the eyes of these aborigines the fire resides in the wood and is induced by friction to escape.

An older technique for engendering fire, reflected time and again in their mythology, and surviving into modern times in parts of southern Australia, took fire directly from the same stone as used in making their tools and the chert or flint heads of their weapons. The method can be illustrated by the Portaruwatj and Tanganekald practices in the southern part of South Australia. It required prior provision of a package of suitable dry teased-out tree bark [*tulanggi*] to act as tinder, a shell block of stone such as iron pyrites [*paruki*], and a piece of flint of appropriate size. The last named often has been trimmed to a subrectangular shape, or tends to develop such a form from repeated use. They may be about 3 cm. in diameter with much battered margins. Called by them [*paldari*], literally “fire,” *paldari* have been little noticed as implements, and uninformed archaeologists call them “fabricators”! The powdered

bark of *Eucalyptus obliqua*, the stringy-bark gum-tree, traded as [*moroi*] from the Mount Lofty Ranges, was needed, especially in damp weather, when ordinary *tulangi* bark could be ineffective in catching the fiery sparks engendered by striking *paldari* against *paruki* and capturing them in the *morthi* package. It seems that conflict based on the selfish use of such equipment was one of the important themes for stories about fire in more than one part of Australia.

There were endeavors by possessors of fire to deny its use to others and attempts at drowning the fire-engendering flints in the ocean to deprive others of their use. In the southwestern corner of Australia the Pibelmen tribespeople tell of the greed of [*Mi:ka*], their Moon Being, who, as a selfish man on Earth, wished to retain exclusive possession of such fire. Although people could see that he had fire he kept it always to himself. Thus no warmth came to them. It happened that [*Kwetalbur*], an ancestral Hawk Being joined with [*Wata*], a Bronze-wing Pigeon Being, to steal this fire from Miika and secrete it amongst forest trees. Thereupon Miika in great anger sent [*Wad:arn*], the Sea, spreading over the land in a spiteful attempt to destroy this fire. He failed in doing so. Ever since then Pibelmen folk have been able to take any fire they need out of the trees growing in the forests instead of from flint. Today they rotate a grass-tree flower stem on a split half of another piece to make fire. Bates (1927) gave the earliest Pibelmen version of this story of *Miika* and told of his greed.

This *Miika* story is paralleled by a widespread series of ceremonies and associated songs linked with a native flint mine at [*Kandiljara*] on the Great Australian Bight. The flint beds there are being directly attacked by the storm waves of the Indian Ocean. In their most southern Kokata tribal form the ceremonial cycle of songs and dances is associated with a Bustard Bird Being named [*Keibara*] and with several [*Paniingka*] or Small Falcon Beings. The ceremony provides an account of the chain of difficult-to-find watering places needed in order to traverse the otherwise dry limestone surface of the Nullarbor Plain to reach the place where the local Mirning people can provide flint for tools. In *Keibara* ceremonies held still further north among the Ngalea, Nakako, and Ngadadjara people the itinerary becomes submerged in increasingly mythical accounts of the intentions of the Bustard Being to deprive people of fire by secreting the fire-engendering flint, even to the extent of submerging it in the sea, or further north, where the concept of an ocean is unknown, to drown all fire in the water of a gigantic clay pan. Among the Nakako and Ngadadjara, secret

ceremonies, not allowed to be seen by women, are performed to increase the possibilities of obtaining flint. They are performed by men at shrine-like places where arrangements of standing stones are painted with red ochre and spattered with blood drawn from incisions made in men's arm veins and from stabbing the urethra with sharpened sticks. The gist of the story linking these ceremonies of the *Keibara* totem is the successful attack of the *Paningka* on the *Keibara* as it was finally about to drown the flints in the ocean. As their evidence for the reality of the event, the physical body of *Keibara* lies, as a great mass of fallen cliff, about a hundred meters off in the ocean at *Kandiljara*, and *Keibara*, having gone *tarupango* is now the planet Jupiter in the sky.

Similar stories of conflict over possession of flint and of fire are present further east at Encounter Bay in South Australia. There a Whale Being was cheated by a Shark Man who stole the flints upon which Whale depended for his fire. Transformed from human to animal form, the great shark still carries as large teeth in his jaws the flints he stole. A similar story records quarrels between the emu and brolga. When these birds also were living as humans, the Brolga Being took revenge by causing a vast lowland plain in the Robe area of Australia to be suddenly engulfed by the sea, to the discomfiture of the Emu Man. This area also is one where flint is obtained by aboriginal tribes.

In view of the evidence available in southeastern Australia showing that racial memory of once active volcanic events can survive upwards of 4,000 years, the stories of the *Miika* Moon, *Keibara* Jupiter, as well as the floods near Robe may have foundations in events of the Flandrian rise of sea level, when, according to Glover (1975), aborigines in parts of southwestern Australia may have been deprived of access to certain choice chert rocks used in making their tools, by the flooding of the continental shelf as the sea level rose to its present height and even beyond, especially during the Peronian higher sea levels prevailing between 5,000 BP and about 3,700 BP.

Origin of the Moon

The *Kokoimudji* people, who are mixed Barrinean negritoid tribesmen living immediately north of the Endeavour River in Queensland, have a story, first told to me in 1938, of how the Moon came into being in the sky. It differs from other stories in that both the Sun and the Moon are regarded as of the male sex. The narrator was an old man who had spent some years wandering among white folk but was

steeped in the lore of this people. The story outlines one of the ways in which his people believe potential heavenly bodies may attain their positions in the sky.

In olden days [*Warigan*], the Moon, was a man. One day he climbed up a tall Swamp Tea tree. Another man, named [*Ngalan*], who later became the Sun, set fire to the bark of the tree, which blazed up, burning *Warigan*, who shouted "I want to come down!" Eventually *Warigan* dropped down and was cremated. Little but ashes remained, but *Ngalan* found four ribs still whole. The first he threw towards the east, another to the south, a third to the north. These, like boomerangs all returned to him. The fourth he cast to the west, and it flew straight, away over the horizon. It stayed there for several days. Then *Warigan* gradually came to life again. He climbed up into the clouds, becoming the Moon. Now, every month he grows big, he becomes burned and turns again into charcoal and ash. Then his rib again appears in the west at sunset. As "authentication" of the happening there is a big swamp at *Warigan*, the place in their country where the Moon was burned by *Ngalan*.

In many other stories ancestral beings were said to use boomerangs as aids in their creation of the country in which their people now live. A Western Desert male explorer-being, armed with a special [*wananu*] hunting boomerang, as used today in throwing directly at an animal such as the kangaroo, may have cast it to cut a long valley or fashion a sandy creek bed. Again perchance, armed with a [*kali*] or returning boomerang, he cast it to fly in a circle and return to his feet, thus in one throw bringing into being a billabong or great claypan such as those that fill with water after rain.

The Moon as Provider of Food

As stated in earlier paragraphs, the aborigines appear to regard the Moon usually as a being of the male sex. Often he causes trouble. He is a selfish hoarder of fire-bearing flint stones, he fights with other star beings, and he is thought of as an unpredictable wanderer about the heavens. Sometimes he is starved for food and at other times fills himself to repletion. On occasion stories about him are linked to ones about the planet Jupiter, who in some stories is a younger brother of the Moon. More than one story about the Moon is of lecherous behavior. In one tale he is blamed for raping one of the Pleiades Women Beings, thus bringing about the birth of a son (evidence, incidentally, of aboriginal understanding of the association between coitus and conception, denied by some writers).



Figure 1: Invocation of *Balundein*, the New Moon, at Njinjilki, Bentinck Island, Queensland on May 27, 1960, by the *dolnorodangka* of Baltae, Kaiadilt tribe.

There is at least one important exception to the idea of the Moon man as a troublesome being. Among the Kaiadilt of Bentinck Island, in the Gulf of Carpentaria, he is a great benefactor, one to be appealed to, month by month, for help and sustenance.

The Kaiadilt are an isolated group of people (Tindale 1962a, 1962b, 1977). Their Bentinck Island home is one of the few remnants of a once vast lowland shelf named Sahul Land which, at least during cold phases of the Last or Wisconsin Ice Age in the Late Pleistocene, extended as land and mangrove-lined swampy shores northward to join Australia and New Guinea by what may have been once a desert wasteland. Not only are the Kaiadilt strikingly different from other Australians in some of their physical characteristics, but they also possess a singularly primitive culture. Today they are the only people on Earth who still make and preserve the use of, as their principal stone implements, bifacially fashioned fist axes (or *coup-de-poing*), similar to those of the earlier Paleolithic inhabitants of Asia and Europe. They also use elongate-oval knives called [*nara*] fashioned from large pieces of *Melo diadema*, or Saler shell. Each *nara* is trimmed by the user, who bites the potential cutting edge to shape by levering with his teeth to give it a cutting edge. This type of tool otherwise is known only as an archaeological object of “unknown significance” from the late Pleistocene of the Sundaland side of

Malaysia. The Kaiadilt live in eight clan-sized groups called [*dolnoro*], each of around 20 or more persons, whose members are all descended from a common male ancestor. The senior man in each *dolnoro* has some authority as a [*dolnoro'dangka*], almost a chief.

The ordinary name used by the Kaiadilt for the Moon is [*waldar*] or [*waldari*], a term they share with the Janggal of Forsyth Island and the Jokula of the mainland. Their special name for the Moon is [*Balu*].

When the *dolnorodangka* sees, in the western sky at dusk, the slim curved margin of [*Balundein*], the New Moon, he calls loudly to it, gesticulating with his arm held high. Each leading man may have his own invocational introduction. After repeating it in a loud voice he goes on to enumerate the special needs of the people of his *dolnoro* during the coming month. Figure 1 shows the leader of the *dolnoro* of the Baltae area of Bentinck Island standing on the seashore at [*Njinjilki*], close to a small freshwater lake first seen by Matthew Flinders, the English explorer, over 180 years ago. He is appealing for help to *Balundein*, the controller of their well-being. They are hopeful of favorable weather—the absence of chilling southerly winds. In other seasons they plead for bountiful rains needed to replenish the dome of fresh water which underlies their sterile sandy island and seeps slowly away to the sea at low



Figure 3: Distribution of the term *giwong* and cognates for “Moon” among tribes of southeastern Australia.



Figure 4: Scattered distribution of the term *balu* and cognates for “Moon” as found among individual tribes between Bentinck Island in the Gulf of Carpentaria and the Ualarai people of northern New South Wales.

coastal tiers of tribes, is an equally well-linked block of tribespeople who use the term [*'giwon*] or [*'giwar*] and cognate forms (Figure 3). Scattered over this wide area are also twelve occurrences of the term [*'balu*], and supposed cognates, of which the southernmost so far known is among the Ualarai tribespeople of New South Wales, 1,500 km. to the south (Figure 4). Their distribution suggests that they tend to have been preserved especially among some peoples whose living areas are refugee ones such as in rainforests or the more inaccessible mountainous parts of the Great Dividing Range. There may be valid grounds for deducing that survival of the word *balu* so deeply into Australia may point to the Kaiadilt belief in the Moon as a controlling factor in their lives as being a rather old concept. The Ilba people, who live on the Upper Cape River on the Great Australian Divide have ideas which seem to support this conclusion. According to Chatfield (in Curr, 1886) they use both [*'bul:anl*] and [*'kugera*] as their names for the Moon. They have a vague tradition that their country once belonged to another people whom their ancestors “conquered.” Chatfield’s data includes the statement that the Natal Downs people were of “tallish stature with generally straight hair, occasionally with curly hair, tending to be “wooly.” They had the southern method of cooking, using heated stones and also made use of opossum skin rugs, a practice common further south. It is thus possible that they replaced or partly absorbed a negritoid people with curly to wooly hair and that they themselves were of Murrayian stock.

It appears then that the term *balu* may have had a long cultural history, carrying it 1,500 km. (over 900 miles) southward and that it remains among the Ualarai tribespeople in New South Wales. These folk live among others who recognize *giwong* and its cognates as names for the Moon; all appear to have retained ancestral Sky Beings of the Daramulun type among their beliefs. My inference is that *balu* may have had a long tenancy, perhaps even extending back to before the last intense cold phase of the Wisconsinan, and could have been one known even among ancestors of Barrinean negritoid type who, according to Birdsell (1941, 1949, 1967) are an old present-day rainforest refugee survivor-group representing the earliest Australians.

The Planet Jupiter and Fears of Drought

In the grasslands of the eastern riverine corridor west of the Great Dividing Range, peoples of several

tribes have stories based on the idea that Jupiter is a young boy wandering about the heavens. He is much disliked by his mother, the Sun, so much so that she sends men to spear him at a time when he is moving low down in the western sky. A Kamilaroi tribe version is outlined by Fraser (1901).

In general the fear of people is that in dry years the grasses may not set seed, and if the Sun woman succeeds in injuring her son this will be sure to happen. An even greater fear is that if the boy were “killed” all people would become ill, would develop blindness, and many would perish. Even [*'Kukura*], their Moon man, could go blind. Such ideas appear to reflect their own experiences with drought and with the effects of severe malnutrition caused thereby.

Those who gather information from Australian aborigines using English must be aware that the terms “dead” and “kill” have almost always the additional meanings of “insensible” and being “stunned,” hence their Austral-English descriptive terminology includes the phrase “dead finish” for real death. Their ideas on eventual reincarnation led some of them to welcome the first Western visitors as their own kin, returning from the grave. In this regard one of the most drought-resistant *Acacia* trees in Australia has acquired the name “Deadfinish” from its remarkable ability to recover even from apparent real death, and fits in with the aboriginal idea of the persistence of the spirit and its ability to return through entry into a woman who chances to pass by its resting place.

Mars and Marital Problems

The planet Mars is known as [*'Waijungari*] among the Tanganekald and Jarildekald. Their countries are near the mouth of the Murray River in South Australia. *Waijungari* was the younger brother of [*'Nepele*], one of the deity-like beings similar to Daramulun, Baiami and other powerful ancestral figures believed in by the people of the southeastern parts of Australia, and mentioned in earlier paragraphs.

Nepele, like several others of these earlier beings was very human. He suffered marital problems which led to a younger brother’s stealing his wives and then escaping his wrath by climbing with them into the sky. This is supposed to have happened in a mythical past for which some anthropologists have adopted the Aranda tribe word [*'altjira*], which has been translated rather romantically as a “Dream time” or the “time of the Eternal dream,” when heroic beings are envisioned as moving across an ancient landscape,

one of the flattest on Earth. They were endowed with miraculous powers and thus could raise mountains, cleave rocks to form valleys, and create sources of water. In more mundane terms they appear to have been firstcomers who, after traveling over wide flatlands, approached and saw higher lands appearing over the horizon. By their magical powers these new living places were lifted up or created. An abbreviated outline of a text I published (Tindale 1935), holding rather closely to its original form, may be given here with some relevant comments.

Nepele sat at his watching place on a hilltop at [*Gawuluwaru*]. His two wives sat beside him. It happened that the women both desired to walk towards [*Wagarawar*] on the shore of Lake Alexandrina which they had been forbidden to do. While intent on gathering fresh-water mussels in the lake they noticed that they had arrived there. It happened that there sat at [*Parlowe'wangk*] a newly-initiated and therefore red-ochred and still "sacred" young man named Waijungari. He also chanced to walk towards *Wangarawar*. There he drank water through a reed-stem, being compelled to do this because he was still a red-ochred initiate. The water became reddened from ruddle which fell from his body.

It happened that the two women noticed that the water surface had become red. They said to each other, "Why has the water become like this?" Then they perceived the red-ochred man standing on the bank. The two thought him very desirable. "Ah! He is the man we want." *Waijungari*, who had not seen them, walked back to his camp. Both the women followed. They watched.

"Ah! He has entered his hut." Then the two women walked nearer to the camp. They saw the entrance. The elder sister said, "Stand over there, younger sister, and place your bag of mussels noiselessly down so that he may not hear you. I will stand here." Then the two imitated the noises made by an emu. He mistook their calls.

"Ah! There is food for me." He took up his spear. He commenced to sneak out very quietly. As he emerged, the two women seized hold of him by his penis. Then the elder sister said "This man belongs to us. Hold him firmly." *Waijungari* yielded. The three entered the hut together. The Sun set. They slept. They covered themselves with kangaroo skin rugs.

Nepele was suspicious and looked for tracks. "Where are my two wives?" Then, guessing their intention, he walked towards *Parlowewangk*. He saw that they were all asleep together. He seized a firestick. He plucked some grass. The grass he placed

over the camp where they slept. He spoke to the fire in this strain: "Burst into flame when you hear them snoring." They snored and it ignited. It burned their camp. They fled. They carried with them their kangaroo skin water containers. They ran at first south-eastwards towards [*Tjenbartag*]. One of the kangaroo skins fell from their grasp. The fires still raged behind them, but the water from the kangaroo skin container came out on the ground. The kangaroo skins fell one by one as they fled. The scrub fire still raged behind them. They came out of the scrub at [*Malbindjerag*]. They dived into the mud. The fire raged about them. They stooped down. They were covered up to their teeth in water and mud. Then *Waijungari* said to the women, "See where the fire is raging now." Then they answered him, "The fire still burns near us." Therefore they remained cowering for a further space of time. The fire became dead. They came out from under the water and mud. They walked about examining the country and sought a way to escape. Then *Waijungari* looked up towards the sky. He said, "We will go up there." So he untied one of his spears. He speared the sky. The spear fell back. He untied another spear. He threw this other one up towards the sky. The spear held fast. Soon the sky fell downwards (towards the Earth). He was able to reach up to his spear. He climbed up into the sky. He examined the land in the sky. "This is good ground. Climb up. You two must also climb up." They both climbed. They still remain there in the sky. You may see three stars there now. "The middle one is *Waijungari*."

Interpretation of the heavenly scene had to be within the range of their own experience. Models were the campfire itself, the distant view of fires at night, the massive fires started by hunting parties and those caused by lightning strikes. These were linked with thoughts engendered by the flight of birds. When *Waijungari* and his stolen women fled in haste they dropped several skin cloaks. These became the salt lakes which the Tanganekald and the Jaralde use as places to peg out their skins during tanning processes in preparation of skin rugs.

Having fled to the sky, the three escapees became wanderers. The late G.F. Dodwell, with whom I discussed the story, suggested that the *Waijungari* having become the planet Mars, his two stolen wives were likely to have been Jupiter and Venus. Both "wives" stray over the heavens, come into conjunction with Mars and together are overwhelmed by the Sun, reappearing as evening stars. The red hue of Mars is due to the red ochre of his earlier initiatory decoration and his isolation from women can also be explained by the movements

of the planets.

It has been suggested to me by Von Del Chamberlain that Mars, Jupiter, and Saturn, which behave the same, might be the three planets rather than Mars, Jupiter, and Venus, which behave differently. I do not have any additional information which might explain Dodwell's logic in assigning Mars, Jupiter, and Venus to the mythical world of *Nepele*, but am prepared to accept it as my error in recording.

Venus, Water Supply and the Heavens

In the desert interior of Australia, water supply is the key to the survival of the aborigines and in this aspect of life the planet Venus is held to have much influence.

My first encounter with beliefs about Venus was in company with H.K. Fry in 1930 at Lilatara near MacDonalld Downs in the southeastern part of the Northern Territory. We listened to ['*Alalda*'], an elderly man and his companion, both of the Iliaura tribe, who named the Milky Way as ['*Ulpaia*'], literally "The Creek." In the time of big rains it just floods out to flow across the sky. From it comes the water which replenishes the pools and the underground supplies in the beds of their normally dry and sandy riverbeds.

['*Arunbun':a*], the planet Venus, has control over this water. In the northwest, far beyond the bounds of their western and northern neighbors, there is a place, also called Arunbunna, where malevolent people live. At times they become angry with the Iliaura. These enemies sing magical songs whereupon Arunbunna, as the planet, responds by drying up all the available waters held in the sands of the Sandover River which normally provides their needs. When such anger extends also to the adjoining Kaititja and Anmatjera tribal areas those peoples may retreat westward to more permanent waters, but the Iliaura folk are much discomfited. In bad droughts they are forced, with much trouble, to obtain most of their water from the roots of plants. It is, of course, the vagaries of the Northwest Monsoonal rains of the Australian subtropical summer, here close to their southern limit of influence, that causes such periodical troubles with Arunbunna.

The two elderly Iliaura men did not tell us then of any recourse they had against the wrath of Arunbunna, but I learned from ['*Altanolba*'], a man of some 30 years of age, that the elders had given him the responsibility of watching for trespass, by women or by any other persons who might go into a forbidden area near a hidden water, present under the sand, at

['*Atnorata*']. This was a secret rain-making place near Bundy Creek. He had not been taken to the actual special place itself but when he was older he would be permitted to see and take part in rites that older men performed there.

Ceremonies linked with the planet Venus are present also in the heart of the Western Desert. There, as among the Pitjandjara and Ngadadjara, they are performed to hasten and encourage the coming of the rains that are controlled by their sky being ['*Katanja*'], sometimes called ['*Kata*'], and also identified as Venus.

In July 1933, at Poka in the Mann Ranges, Cecil J. Hackett and I, became aware of some very secret rites. We already had spent several weeks witnessing Increase Ceremonies for several different animals, and had taken part in an initiation ceremony when two youths were circumcised at a place called Konapandi. One day we were, in the role of initiates, taken to see three progressive stages in a ['*Inma'laka'tjela*] linked with the replenishment of water in important native wells or ['*tjela*'], upon which the Pitjandjara aborigines depend for life in the driest times. Following is a brief summary of what took place.

At the approach of dusk we were led to see rites known only to fully initiated older men. Our eyes were shielded. At a first halt we saw a group of five men seated around a sixth. All were decorated alike with white bird-down affixed over streaks of blood in lines on their shoulders and down their backs. Each man had on his chest a concentric-circle design painted alternately in white and red, with strips of color passing over the shoulders to another concentric circle on his back. Each of the five performers was holding a small fresh twig of *Eucalyptus* leaves in one hand and all sat, heads down, as if in a trance. The designs on their backs and chests were called ['*enhelja*'].

Another group of men moved in behind us and began to sing, whereupon the seated men appeared to waken and began slowly to twirl their twigs. Then, still seated, the performers on the periphery slowly shuffled towards the central one, becoming increasingly active in the twirling of their twigs as they did so. The song was repeated several times when suddenly they seemed to come out of their entranced state, embraced the central figure, and then each other. The rite was over and they became relaxed as men of the chorus also embraced them.

We were then led further on in the gathering darkness, again with eyes shielded. In the half light we saw, on a smooth-swept area of sand, a five-meter long and a half meter wide construction of human-

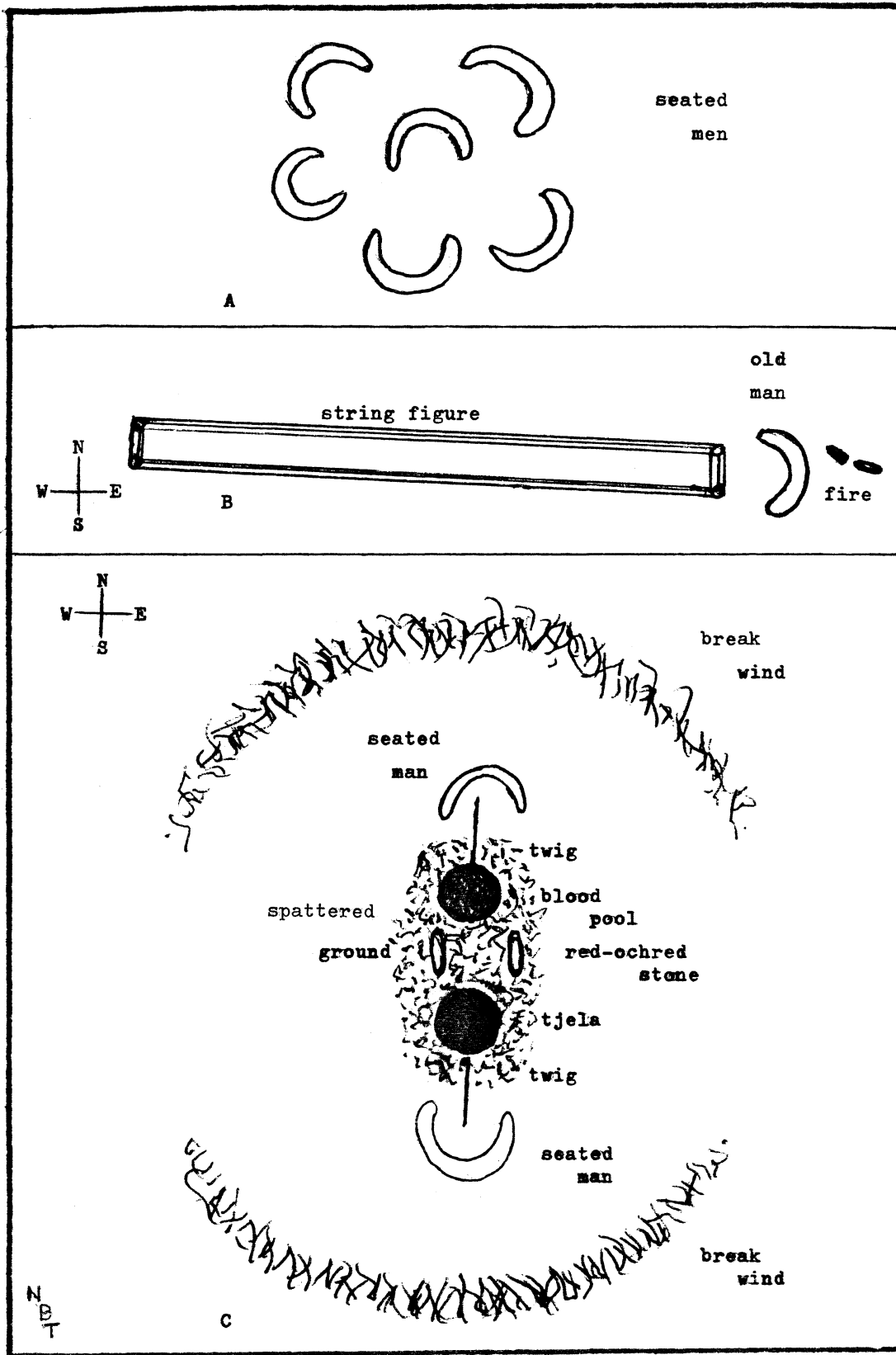


Figure 5: Ground drawing as used in learning about *Kata* (the planet Venus), the *Inma Tjela* ceremony, and its role in exerting control over the rains of the Northwest Monsoon season.

hair and animal-fur strings. It was like a thread-cross, but of rectangular form, supported several centimeters above the ground on sticks firmly planted in the sand. At the eastern end of this vari-colored string figure sat an old man decorated in the same manner as the earlier six had been, with blood streaks on his back and the same concentric *enkelja* decoration on his chest. In each hand he held upright a substantial forked stick, the other end pressed vertically into the ground. A small fire was burning just behind his back to provide illumination.

As a song began the elder merely moved his head gently from side to side. After several chants by a group of men, who had silently come behind us, one of them touched the old man who suddenly appeared to relax from his state of tension.

Again, with our guides' hands held to shield our eyes, we were taken still further on in the now increasing darkness to see what evidently was a climactic stage in the proceedings. Small fires were kindled and they revealed two seated men, their chests also decorated with the concentric circle design. They faced each other on a patch of smoothed earth which had been liberally spattered with blood. Before each of them was a circular hole some 20 to 25 cm. in diameter and perhaps half as deep, partly

filled with blood, representing *tjela* or wells of water. Seeming to be in a state of trance each man held a new-leaved twig of *Eucalyptus* in his hand with the tip lightly touching the surface of his pool.

Further small fires were lit and as the light increased a song [*'Njinandula 'njina*] began coming from a chorus of men half-concealed in the dark. The two central figures began slowly to stir their respective pools. They seemed under tension, moving their bodies slightly from side to side, and then compulsively shaking themselves. This continued through several repeats of the song and then all the singers moved forward and touched the principal performers who suddenly appeared to relax, although they still remained rather dazed. As I learned afterwards, those who had stepped forward had absorbed the virtue of the rite by touching, and at some future time they themselves would be able to use this virtue again.

The proceedings seemingly over, we were hurried to where the string figure already was being dismantled by several middle-aged men, but as we looked back we saw the older men kneeling down around the two *tjela* and, with their hands lapping up the blood, of which there may have been more than a liter in each basin. At earlier ceremonies we already



Figure 6: Ngalea tribesman wearing an *enkelja*, a treasured pearl shell ornament symbolic of the planet Venus, traded from northwestern Australia, and used in *Inma Tjela* ceremonies. Photograph at Ooldea, South Australian Museum collection.

had seen such blood being obtained from donors who were taking part in preparations for other performances. Binding the arm with fur-string and using a flint flake the suppliers opened a vein in their upper arm, allowing a stream of blood to pour on to the backs and shoulders of the performers and collecting amounts of it in bark dishes for use as adhesives for the design features on their bodies.

Using ground drawings like Figure 5 we learned a little about the *Inma Tjela* we had witnessed. It was intended to compel Venus, Katanja, to hasten the replenishment of their all-important water supplies by bringing about the onset of the Northwest Monsoonal season. Correct performance of the ceremony was necessary since even the smallest departure from former practice could result in failure of the rains. Disclosure of it to the uninitiated would lead to death. It was an [*Inma'pika'mereinka*], where [*mere*] signifies death. It was an [*Inma'bulka*], their Great Ceremony.

Some 30 years later I met some of the men who had taken part in our introduction to the *Inma Tjela*. I was greeted then by the special name [*Kado:kiri*] they had given me so many years earlier. I learned that in a preparatory stage we had not seen, scrapings of white powder had been used, derived from the edge of a hard-to-come-by pearl shell pendant, also called [*enkelja*], like the paintings on the old men's bodies. This had been obtained by trade from [*kaieli*], the northwest. The scrapings had been blown into the air to make the white clouds of the Northwest Monsoon. Such powder and human semen had been included seemingly in the pools of blood central to the rite. The virtues of *Kata* (or *Katanja*), the planet Venus, were in these pendants which came so rarely to them. Figure 6 shows a Ngalea tribesman wearing one of these *enkelja* at Ooldea while on a visit to the country of the Kokata tribe. The asymmetries evident on its margins are witness to its earlier use in more than one ceremony such as we had seen. Such pearl shells are used as phallocrypts in northwestern Australia and come by way of trade to Ooldea across the desert for up to 1,800 km. (1,100 miles) from the vicinity of Broome in Western Australia.

While most of the naked eye planets have been mentioned in the above paragraphs, I regret that I do not have any personal data on either Saturn or Mercury.

Stars and Food

Often in Australia there is linkage between food and food-gathering and specific stars or groups of stars. Among the Iliaura mentioned earlier in this

paper two unidentified stars in Sagittarius are youths named [*Unditja'tara*] who are engaged in spearing a kangaroo, represented by a bright patch in the Milky Way. The brighter of the two stars is the elder brother who is stalking the animal from behind while the younger is slowly and silently approaching it face to face, moving only as the animal puts its head down to feed. Their efforts to gain their quarry are thwarted by two other star beings who are to be seen, close together in the same constellation, and are named [*Terkeri'terkeri*]. They represent a pair of Willie-wagtail birds (*Rhipidura leucophrys*). On Earth the busy chattering of these birds often warns game of the presence of hunters, and they are also disliked from their supposed complicity in spreading gossip and disturbing people as they noisily flutter about the camping places of the aborigines.

Among the Tanganekald people of the Coorong in South Australia the appearance of [*Lawarikark*], a star identified as Vega, in the constellation Lyra, tells elders and "doctor men" of the coming of the time, late in winter, when the [*lawari*] or mound-building mallee fowls (*Leipoa ocellata*) would begin to scratch together leaves and forest debris and prepare their large incubating mounds. Hunting of the birds would be forbidden as they anticipate the coming of the season-long supply of eggs provided by the birds.

A basis for the birds' name is the fact that they utter harsh sounds as they scrape together the leaves with their powerful claws. They "scold" and are thought to be quarrelsome, hence these attributes are ascribed also to the Woman Being who, once on Earth, had displayed the same character and still does as *Lawarikark*, the star.

Stars and Social Control

The [*Wati 'Kutjara*], or "Two men" Beings, play an important role in Australian Desert mythology. They have special names among the Ngadadjara tribespeople of the Warburton Ranges in Western Australia. These folks have a four-section kinship system for which there are six terms, two being synonyms, as used by contiguous tribes. One Being is [*Mu:mba*] of the Iparuka marriage section, now represented in the sky by α Gemini, the other [*Kalaia*], represented by the dark area in the sky close to the Southern Cross and near β Centauri. *Kalaia* is visualized as a male emu bird of the Taroro section, sitting on a nest of eggs which are the faint stars within the area. In Ngadadjara tradition men who possess the [*tarkobere*] totem, their secular name of the *Kalaia* emu, are permitted to marry their



Figure 7: A memorial rock at the mouth of the granite dome rockshelter at Owalinja, South Australia, representing the phallus of *Njiru*, or Orion's Belt, as injured by dingo dogs defending the *Kungkarungkara* women of the Pleiades.

own sisters, i.e., persons of the same section as themselves. This traditional recognition of an incest situation, while often only terminological, has happened in fact in at least one Ngadadjara marriage within an immediately past generation, before white contact. These two ancestral men take part in the activities surrounding the women of the Pleiades, the [*Kujka'rujkara*], beliefs about whom play a big part in the Western Desert of Australia. A detailed account of the *Wati Kutjara* Beings is given elsewhere (Tindale 1936). They seem to act like explorers as they wander across the heart of the Australian deserts.

Stories of the Pleiades

The Kamilaroi people of western New South Wales, whose beliefs about the Moon have already been mentioned, believe the cluster of stars known as the Pleiades to be [*Wor:ul*], a bee's nest (the stingless honeybees of the Australian bushlands). Elsewhere, under many different names, the Pleiades are featured as a group of young nubile women who are attempting to escape the attentions of men and are protected by dingo dogs. Stories about these reluctant women are widespread and seemingly well ingrained in aboriginal mythology, as well as in the nomenclature of places, and the ceremonies of the various tribes. Early recorders noticed them in many

places extending from the coastal regions of New South Wales and Victoria to the Kaurna tribe in Adelaide, South Australia. They appear widely throughout the Western Desert. In one Jangkundjara version of the myth [*Njiru*], a Being who is now represented by the stars of Orion's Belt, was a youth filled with desire, who had just undergone his initiation. He approached the Pleiades women as a man but was driven away by the dingo dogs which protected the girls, but only after he had assaulted one of them. She in due course gave birth to a son [*Jula*], who in other stories became a heavenly body who similarly suffered from the attacks of the dog defenders. Figure 7 represents a memorial stone for *Njiru* at Owalinja. In two papers (Tindale 1935, 1959), accounts were given of the annual ceremonies performed by the Desert peoples and attention was drawn to the cave paintings (Figure 8) depicting these women, created in successive layers in the granite dome at Owalinja by members of the Jangkundjara tribe during annual re-enactments of the story. In their version the [*Kujkarukara*] women, as ancestral beings, coming from a northerly direction, arrived at Uluuru, now named as Ayers Rock, a spectacular formation, and one of the scenic wonders of the Australian inland. After unsuccessfully trying to kill a Snake Being who controlled the water supply there in order to deter their male pursuers,



Figure 8: Palimpsest of paintings of the *Kungkarungkara* women in the concealed rockshelter at Owalinja on the border of South and Central Australia and developed over centuries during the annual Increase Ceremonies for dingoes of the Jangkundjara tribespeople.

they had further encounters and finally came to Owalinja.

In this Jangkundjara version of the myth the *Kungkarungkara* women ultimately traveled southward to a place called [A'kandjudula] where they entered the ground. Changing state, (*tarupango*), the girls then went into the heavens above, where, in the beginning of the season of cold, [*njija*], they made their appearance in the dawn sky and “walked” across the heavens. Figure 9a shows a [*tjuruja*] displayed during enactments of the Pleiades story among the Kukatja people west of Hermannsburg, while Figures 9b and 9c represent similar objects displayed at ceremonies to increase the supply of dingoes among the Walmadjari of northwestern Australia.

In the Western Desert the importance of the Pleiades is based on the heliacal appearance of the group near the beginning of the cold season. This marks the whelping time, once a year, for their wild dingo dogs. At this time, following a cycle of performances of Dingo Increase Ceremonies and conduct of rites of initiation for any available youths, the Pitjandjara disperse in small family and larger clan-like groups to hunt in their recognized dingo-hunting areas for the rich food supplied by the dingo pups. At this time most of the pups are killed as food, but some particularly marked and semi-albinic

animals may be kept, often to be reared on the breasts of women, and in due course these animals become part of the horde of mixed breed dingo dogs which accompany them in their wanderings around their country. Dingoes serve as aids in hunting, as scavengers around their camps, and most importantly, become living blankets against the great chill of winter (*njinga*).

Much could be written about the variations of the *Kungkarungkara* story. It seems to belong to an early phase in aboriginal life, appearing in the southeast of the continent, usually without mention of dog defenders of the women, but in the west dingoes take a key role in the activities. From this it may appear that the basis of the stories was determined before the advent of the dingo in Australia about 7,000 years ago. However, the early recordings of stories in New South Wales by Archdeacon Greenway (1901) and in Victoria (Smyth 1878) made comparisons with the mythology of the Mediterranean and thus tended to draw undue attention to parallels which may have been adventitious.

Meteors and Meteorites

Other astronomically oriented stories of the southern aborigines are linked with supposed events on Earth. In the country near the mouth of the Murray

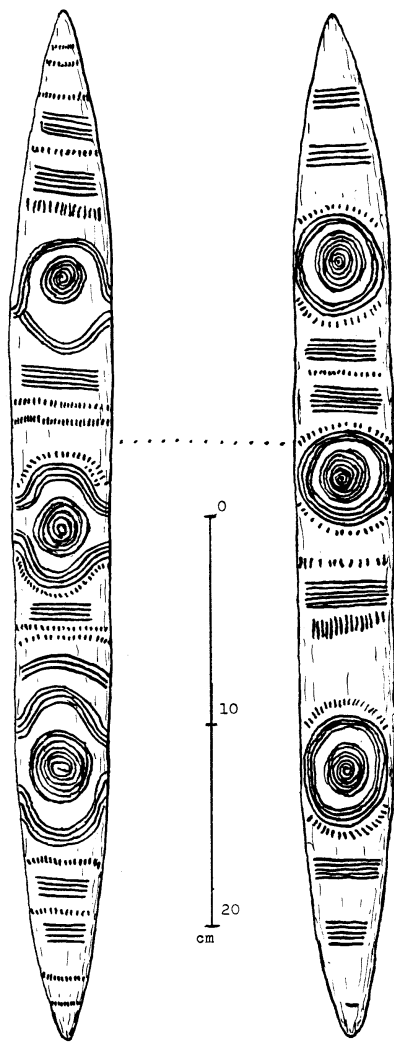


Figure 9a: Two views of *Acacia* wood *tjurunga* of the *Kuralja* or Pleiades totem of the Kukatja tribe, from west of Hermannsburg. Specimen No. A.51979 in South Australian Museum.

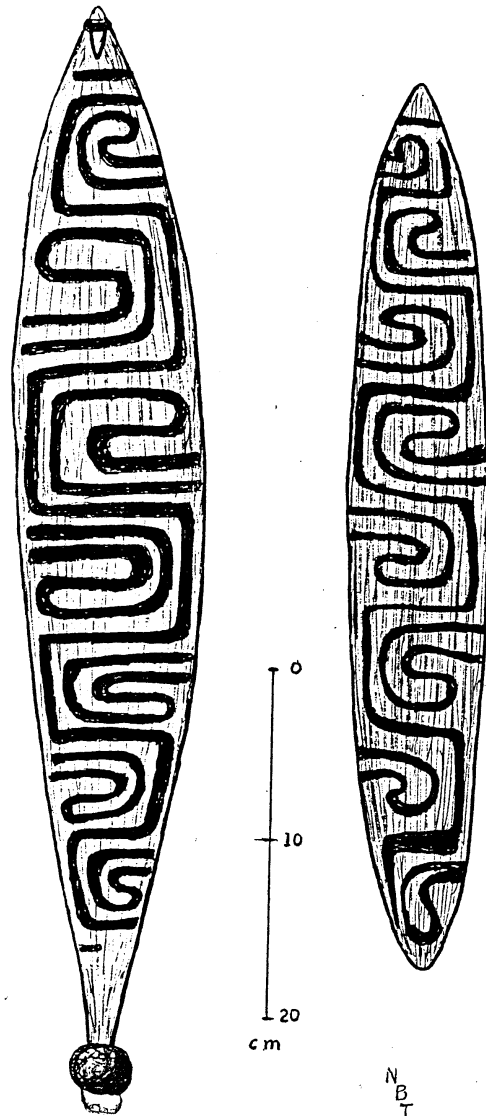


Figure 9b: Spearthrower, with peg and adzestone restored, as stored in the secret hiding place of the Walmadjari tribespeople at LaGrange, Western Australia.

Figure 9c: *Tjurunga* with the same design, preserved with it, as shown to the members of the U.C.L.A. and University of Adelaide Anthropological Expedition in 1953.

River, a Tanganekald male Being named [*Kuldalai*] flashed a great light across the sky, the effects of which the narrator likened to his pointing a magic bone or [*neildjari*] at his people. By this malevolent action *Kuldalai* caused a great pestilence. The effects were likened to those caused by smallpox, and many people died of the “sickness of *Kuldalai*.” It is not clear whether or not this was a fireball. *Kuldalai* had beckoned to them with his “pointing bone” and they “had to die.” I have recorded two *Death Fear* songs about this great flash of light (Tindale 1937).

The sickness may have been real since Stirling (1911), while trying to account for a find of multiple graves of over 100 aborigines at Swanport on the Murray River, learned the story of an aged woman named Karpani, with pockmarked face, who in her childhood in the early years of the 19th century, had survived a supposed pandemic before white settlement had taken place. The gathering of burials at Swanport, however, is now considered to be a result of many generations of living, dying and burying by a sedentary local population displaying a

remarkable uniformity of bodily form.

In another tale of the Tanganekald people of the Coorong the focal point of a story is the presence of a great hole in the ground at [*P'rupa'jawand*] near Macgrath Flat. In the opinion of the geologist, the late Sir Douglas Mawson (personal communication), the hole is a meteorite crater and the aboriginal account preserves a record of its fall. The aboriginal story of *Parupa ngawand* was recorded by me in native text (Tindale, 1938). I give here a brief outline, following as far as possible the style of the original, affording a picture of the event as preserved in folk tale. The story may contrast with the lack of detail about the far larger and probably far more ancient Wolf Creek Meteorite Crater in the northwest of Western Australia, known to Djaru aborigines only as [*Kandimala*], a place where emus congregate after monsoonal rains have filled a temporary pool marking its center.

In the Tanganekald story [*Po'rupe*] and [*Koromarane*] were two Marntandi clan sisters living on the landward [*tejgi*] shore of the great Coorong Lagoon. They possessed the same totem, or [*naitje*], the [*marntandi*] mosquito. The older one lived at a place just inland from the present-day Macgrath Flat homestead.

The aboriginal narrator of the story was first shown *Parupa ngawand* when he was a boy. It is a big hole in the ground. The younger sister lived more than a kilometer away to the west on [*Kurumarajk*], now called Rabbit Island. Earlier *Parupe* had had good eyesight but began to go blind. She became a savage cannibalistic person who ate all the children in the country. Her sister *Koromorange* had care of a son's daughter, [*Koakangi*] who, because of these depredations was almost the last child remaining in the area. Hoping to prevent the old woman's coming to her camp, *Koromorange* suddenly began taking her offerings of fish, herbs, and grasses. *Parupe* became suspicious.

"Once I used to go down to see *Koromorange*. She is very good to me. I will go and see what she is doing. I feel she has a son's daughter there." Thus on an occasion she went across to Kurumarangk. *Koromorange* saw her and rushed out with an offering of fish.

Parupe eventually lost her eyesight altogether and desired more than ever to catch the child, for, by exchanging eyes with her, she would be able to see once more. *Parupe* went down again. *Koromorange* was away fishing with nets. The little girl cried out for water. *Parupe* gave her water, then seized her and returned to her own camp at *Parupa ngawand*.

Missing the child, *Koromorange* tracked *Parupe* to her camp. She arrived as her sister was about to gouge out the child's eyes. She pretended to be pleased that *Parupe* had found the infant and asked her to fetch water for it since she herself was tired from fishing. With a spear she poked a hole in a human skull water dish. Thus the dish leaked. *Parupe* was a long time obtaining the water at [*Peitumank*]. Meanwhile *Koromorange* prepared a snare and gave a deceiving cry, pleading for the water. *Parupe* hastened back to the camp. *Koromorange* had fled with the child. *Parupe* had been tricked. She rushed out, was snared and, in her excitement, kicked the fire. The fire blazed up, destroyed her and also her camp. A great pit took its place. *Koromorange* had fled, crossing the Coorong to [*Jungurungbar*], a high scrub-covered clan watching place, or overlook, for the [*jurli*] or ocean beach side of the Coorong Lagoon. She looked back and saw the big fire blaze as her evil sister perished.

For those interested in meteor showers it may be placed on record that when one of the older aborigines was being anthropologically measured by members of the Harvard and University of Adelaide Anthropological Expedition, at Mullewa in Western Australia in 1939, it was learned that his father's mother was a baby when "the stars fell." From this statement we gathered that at some time in the 19th century some kind of a spectacular shower may have been seen there. I have been told that the greatest recorded meteor shower (not a meteorite fall event) was in 1833 — observed world-wide. Perhaps this was the event the Mulewa woman had remembered.

Comets or Fireballs

In the Western Desert the first sighting of [*Wu:na*], (a Star Being who throws a shower of spears as he wanders across the heavens), is a cause for great concern, especially for aboriginal women. It is *Wuuna* who is re-appearing in the sky, a great male hunter who is about to kill off all their dingo dogs. At first sight, amid much wailing and concomitant howling of their dogs, hasty preparations ensure that each animal is coated with a protective covering of red ochre to ward off the power of this evil hunter in the sky.

Epidemics spreading among dingoes, supposedly linked to the evil of *Wuuna*, are much feared by Desert aborigines because of the great use made of dogs as living blankets against *njinga*, or cold with dry frost as already mentioned in another context. Weight considerations prevent the carrying of any forms of animal skin rugs in their travels. Thus

they suffer much as winter ground temperatures occasionally fall as low as 12°C. They have to lie naked behind low breakwinds of brush, protected only by small log fires close to their chests and with two or more dogs each to shelter their back and feet. It is only in the wetter, cold south that animal skins were used as coverings.

Incidentally, to the members of the U.C.L.A. and University of Adelaide Expedition of 1953-1955, in northwestern Australia, Halley's Comet proved to be of vital interest as a marker in determining the ages of more mature aboriginal subjects for anthropometric study. Birth order with respect to others of their tribe, combined with descriptions of their physical maturity in 1910, and other indications, did give useful suggestions of their probable age.

Afterlife in the Heavens and in the Earth

There are many differing beliefs about life after death in Australia. Two are rather general. One idea is that as a man becomes old he is preparing to return to the womb, thus enabling his spirit to escape and be free to go, either to a mythical sky land over the sea, as among the lower Murray River tribes, or, as among the Pitjandjara of the Mann Ranges in the Western Desert, to go *tarupango* or change state by entering the Earth. Within the Earth, his spirit remains dormant, in some totemic place, prepared to re-enter the body of some woman who may chance to pass by. In view of the original coming of man across the seas from Asia perhaps the trans-marine tradition may be an older one, and that after inland areas were occupied and direct knowledge of the sea was lost, a newer idea of going into the Earth may have come to prevail.

The basis for these ideas is that as a person grows old his body shrinks, his back becomes weak, he sleeps curled up, and he walks the same way. He becomes baby-like in his behavior. Almost as soon as his spirit leaves his body, especially in the south, his body is bound with fur string into a curled-up bundle, to maintain the flexed position which once he had assumed in his mother's womb. Among the Tanganekald of the Murray River estuary a man's body so trussed was decorated with red ochre and white paint, and placed on a triangular raft such as he had used in his travels about the estuary. This raft-like structure was elevated on poles, enabling the kindling of smoke fires beneath. The dried body afterwards would be carried about his country. A sign that the spirit had finally left the dried body

came when the mummy began to disintegrate. In the Austral-English which was developed after white men's arrival the body went "crack-a-back."

In the Tanganekald area of South Australia the early ancestral Being [*Ju'runderi*], when he became old, traveled west to Cape Jervis and crossed over to Karta or Kangaroo Island, whence he climbed into a mystical place in the heavens where he is still living. The spirits of all other Tanganekald people, once freed from their bodies, joined him there.

In the Ramindjeri tribe version of the story, at Encounter Bay, farther west, the same being, known as *Nurunduri*, having lost touch with his son, prepared a long string from a fishing line and laid out a track, thus preparing a path so that his lost son's spirit could follow (Meyer, 1846:15). Such strings still guide the spirits of men to *Nurunduri*. Incidentally, the Ramindjeri were one of the peoples who welcomed early Western visitors as their own dead spirits returning from this mythical residence in the sky beyond the sea.

The Lardiil people of Mornington Island on the northern side of the continent place the dead man's body on a bier fashioned from an old triangular raft of poles lashed together. Special care was taken in doing this when the deceased was one who had claimed in life to have had magical powers. They would not want his spirit to linger and perhaps cause trouble. One end of a long string was passed through his pierced nasal septum, the other end of the string was tied to a stick placed some distance away in an easterly direction. A very vigorous series of songs accompanied these preparations. The spirit of the dead man passed eastward along this string, departed across the sea, and ascended to the heavens. Only then would his spirit cease to worry those left behind. His body, minus its spirit, was disposed of by burial. In another version (Berndt and Berndt, 1964) at Caledon Bay, among the Tjamburupingu people, a long pole with feathered strings attached led the spirit directly up to the Star, represented by a ball of white feathers.

At other places in the northern extreme of the Australian continent there also are beliefs in the departure of the spirits of the dead across the sea. They are guided to a spirit land by the Morning Star [*Ba:numbir*]. *Barnumbir* once was a Young Woman Being on Earth who became associated with death. Legends about her follow a pattern which appears widely among the people living along the shores of the Gulf of Carpentaria. Men's spirits are still lured into the heavens by *Barnumbir*.

I am indebted to Louis A. Allen for Figure 10. It depicts an Arnhem Land version of the Morning

Star myth as visualized by the aboriginal artist [‘Bininjuwi]. The star, as *Barnumbir*, is shown shining white as a young celestial girl. She is allowed to appear only briefly at dawn under the control of two other stars, the [‘*Djangawul*] sisters shown at the bottom of the painting, who keep control of her with long strings. Details of the myth are given by Allen (1975: 229-232). In the bark painting the *Djangawul* sisters are shown in human form as well as in star form. The spirits of the dead are visualized as like the flies which appear from the bodies of the dead. The earthly version of the pole depicted as a central feature in the painting is the decorated hollow log in



Figure 10: *Barnumbir*, the Morning Star girl associated with death; a totemic painting on stringybark by aboriginal artist Bininjuwi of eastern Arnhem Land. Two older women stars, *Djangawul*, control her with strings. L.A. Allen collection, through his courtesy.

which the bones of the deceased are gathered for the final ceremonies enacted in remembrance of him.

Concluding Remarks

This paper has touched briefly on a wide range of ideas linked with the beliefs of the Australian aborigines about the sky above them and its supposed influences on man and his daily life. Ethnoastronomy is a subject well worthy of detailed study and there is wide field needing to be examined before the older ways of life in Australia are forgotten.

The literature on the link between aboriginal ideas and astronomy is scattered, and few studies have been attempted. There should be a fertile field for study and comparison with ideas of other peoples. Some of the earlier records made by laymen unfortunately were colored by their knowledge of European myth and story. One of the romanticists, Ramsay Smith, even had “chariots of fire” racing across the Australian heavens in his verbal attempts to impart interest in the subject.

I have brought together a list of titles which have come to direct attention in this paper. There is a good listing of astronomical references in J. Greenway, 1963. *Bibliography of the Australian aborigines*. Angus and Robertson, Sydney, and the *Australian Institute of Aboriginal Studies* in Canberra provides lists of more recent papers in an *Annual Bibliography*. The location and details of the several tribes mentioned in this paper are given in Tindale (1974).

Where items are not given reference citation, I am responsible. Such data in very large measure have come from my years of field work extending from 1921 to beyond the 1960’s.

References

- Allen, Louis A.
1975 *Time before morning*. Crowell, New York.
- Bates, Daisy M.
1927 “Legend of the firestick.” *Perth Sunday Times*, December 25, 1927.
- Berndt, Ronald M. and Catherine H. Berndt
1964 *The world of the first Australians*. University of Chicago Press, Chicago.
- Birdsell, Joseph B.
1941 “A preliminary report on the trihybrid origin of the Australian aborigines.” *American Journal of Physical*

- Anthropology*, 8:6, Wistar Institute, Philadelphia.
- 1949 "The racial origin of the extinct Tasmanians." *Records of the Queen Victoria Museum*, 2: 105-122, Hobart, Tasmania.
- 1967 "Preliminary data on the trihybrid origin of the Australian aborigines." *Archaeology and Physical Anthropology in Oceania*, 2(2): 100-155, Sydney, Australia.
- Bowler, J.M., Rhys Jones, Harry Allen and A.G. Thorne
1970 "Pleistocene human remains from Australia: a living site and human cremation from Lake Mungo, western New South Wales." *World Archaeology*, 2(1): 39-60, London.
- Chatfield, William Jr.
1886 *The Australian race*. In Government Printer, 2:468-479, edited by Edward M. Curr, Melbourne, Australia, (*Eneby* is a misreading of *Eleby*).
- Fraser, A.
1901 "Jupiter: an aboriginal star myth." *Science of Man*, 4(1): 8-9, Sydney, Australia.
- Glover, J.E.
1975 "Aboriginal chert artifacts probably from quarries on the continental shelf, Western Australia." *Search, Australian and New Zealand Association for the Advancement of Science*, 6(9): 392-394, Sydney, Australia.
- Greenway, C.
1901 "The constellation Pleiades — Mei-mei." *Science of Man*, 4 (11): 190-191, Sydney Australia.
- Greenway, John
1963 *Bibliography of the Australian aborigines*. Angus and Robertson, Sydney, Australia.
- Maegraith, Brian G.
1932 "The astronomy of the Aranda and Luritja tribes." *Transactions of the Royal Society of South Australia*, 56: 19-26.
- Meyer, Heinrich A.E.
1846 *Manners and customs of the aborigines of the Encounter Bay tribe: South Australia*. Adelaide, Dehane.
- Simmons, R.T., Norman B. Tindale and Joseph B. Birdsell
1962 "A blood group genetical survey in Australian aborigines of Bentinck, Mornington and Forsyth Islands, Gulf of Carpentaria." *American Journal of Physical Anthropology*, 20(3): 303-320, Wistar Institute, Philadelphia.
- Smyth, R. Brough
1878 *The Aborigines of Victoria*. 2 volumes, Government Printer, Melbourne, Australia.
- Stirling, Edward C.
1911 "Preliminary report on the discovery of native remains at Swanport, River Murray; with an enquiry into the alleged occurrence of a pandemic among the Australian aboriginals." *Transactions of the Royal Society of South Australia*, 35: 4-46, Adelaide, South Australia.
- Strehlow, Carl
1907 *Die Aranda und Loritja-Stamme in Zentral Australien*. Sydney, Australia.
- Tindale, Norman B.
1935 "The legend of Waijungari, Jaralde tribe, Lake Alexandrina, South Australia, and the phonetic system employed in its transcription." *Records of the South Australian Museum*, 12(5): 261-274, Adelaide, South Australia.
- 1936 "Legend of the Wati Kutjara, Warburton Range, Western Australia." *Oceania*, 7(2): 169-185 Sydney, Australia.
- 1937 "Two legends of the Ngadjuri tribe from the middle north of South Australia." *Transactions of the Royal Society of South Australia*, 61: 149-153, Adelaide, South Australia.
- 1937 "Native songs of the south-east of South Australia." *Transactions of the Royal Society of South Australia*, 61: 233-243, Adelaide, South Australia.
- 1938 "Prupe and Koromarange. A legend of the Tanganekald, Coorong, South Australia." *Transactions of the Royal Society of South Australia*, 62: 18-23, Adelaide, South Australia.
- 1959 "Totemic beliefs in the Western Desert." *Records of the South Australian Museum*, 13(3): 305-332, Adelaide, South Australia.
- 1962a "Geographical Knowledge of the Kaiadilt people of Bentinck Island, Queensland." *Records of the South Australian Museum*, 14(2): 259-296, Adelaide, South Australia.
- 1962b "Some population changes among the Kaiadilt people of Bentinck Island, Queensland." *Records of the South Australian Museum*, 14(2): 297-336, Adelaide, South Australia.
- 1974 *Aboriginal tribes of Australia*. with map, University of California Press, Berkeley.
- 1977 "Further report on the Kaiadilt people of Bentinck Island, Gulf of Carpentaria, Queensland." *Sunda and Sahul*, Allen, J. and others, editors, 247-273, Academic Press, London.