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The Bagundji of the Darling Basin: cereal gatherers in an uncertain environment

Harry Allen

Introduction

The Darling River, a tributary of the Murray–Darling drainage system of south-eastern Australia, rises in Queensland. It flows for 1,600 km. before it joins the Murray River. In its lower reaches it passes through the semi-arid plains of the Darling Basin (figs 15 and 16). Its discharge there is not determined by local climatic conditions but rather by rainfall in the distant Eastern Highlands.

Prior to the 1860s the Darling Basin supported a considerable Aboriginal population

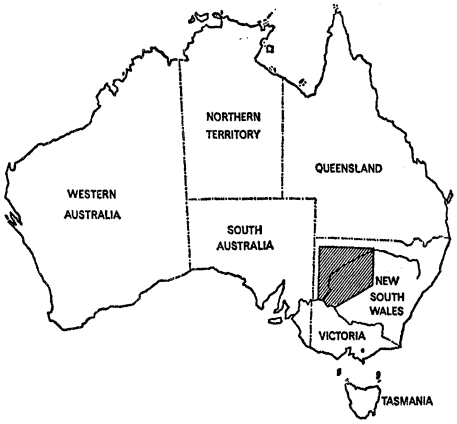

Figure 15 Location of the Darling Basin

belonging to the Bagundji linguistic group, which comprised a number of related tribes (Beckett 1958: 96). These tribes occupied separate geographical areas and possessed different ecological resources but movement from one area to another appears to have been quite informal. The Bagundji or 'river people', who lived on both sides of the Darling River, practised a predominantly riverine economy based on the exploitation of aquatic foods and the collection of cereals. Ecological fluctuations in the environment necessitated some seasonal movements away from the river and during these times the diet included many land foods. Before discussing their seed-gathering activities it is necessary to summarize both the environmental conditions and the seasonal movements of the Bagundji, in order to understand their subsistence patterns. Details of and evidence for these patterns come from Allen (1972: 1–20, 41–98).

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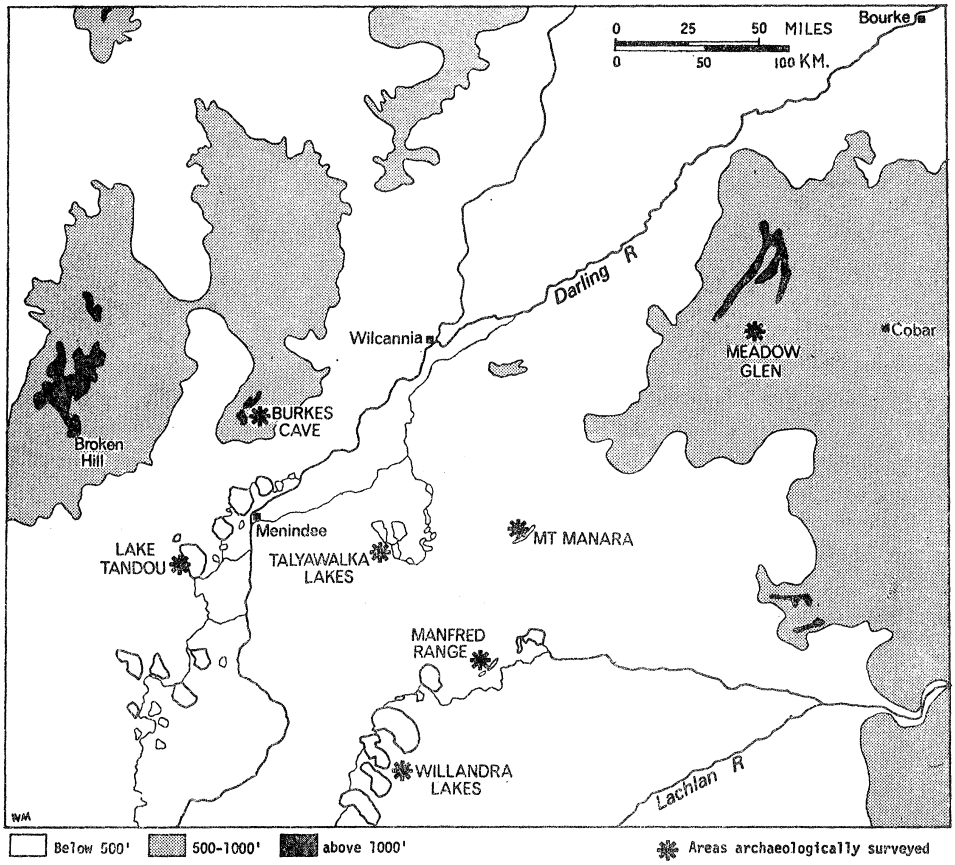

Figure 16 Darling Basin: relief map

The environment

Temperature variations are regular: summers (December to March) are hot (average mean 28° C) and winters (June to August) are cool (14° C). Rainfall, however, is highly variable, normally ranging from 150 mm. to 300 mm. annually, though on occasion there have been annual totals as high as 510 mm. or as low as 75 mm. Falls of rain are well distributed throughout the year. Droughts are common: they occur whenever rainfall is insufficient to stimulate either the spring/summer or autumn/winter plant growing periods. For the period of record (from 1880 to the present), there has been a drought of twelve months' duration or more about once every six years.

Eucalypt tree savanna occurs along the Darling River, but the predominant vegetation is open Acacia savanna with a shrub steppe of grasses and succulent xerophytic chenopods (Beadle 1948: 223–42). Since 1860 the area has supported a low intensity pastoral industry based on wool production – one sheep to 9 h. (Leeper 1970: 134). Rainfall is

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insufficient to support agriculture but some irrigation farming is practised. Pastoral settlement was confined to the river banks until technological innovations in the 1890s allowed subterranean water resources to be tapped and thus the country away from the river to be occupied (Heathcote 1965: 24).

'Freshes', or peaks in discharge, in the Darling River most often occur in early spring (August to September) and in summer; the river is at its lowest in early winter (May and June). As water is received from three different river systems the flow regime is highly variable. Major floods, inundating the countryside for up to 30 km. on either side of the river, occur every five to eight years. The floods fill river channels and lake depressions and the water may last for up to four years. On the other hand, the river has occasionally been reduced to a series of saline ponds with no discernible flow.

Bagundji subsistence

Subsistence activities were largely determined by fluctuations in river flow and in the environment of the surrounding countryside. Periods of high productivity in the river occurred when there was a fresh or flood during the hottest months of the year. Fish, waterfowl, shellfish, freshwater crustaceans, and aquatic plants were most abundant at these times. Commercial fisheries still record their best catches during flow conditions (Anon. 1968: 30–1) and this is the time when nomadic species of ducks and pelicans, herons, and cormorants fly into the river in large numbers to feed and lay eggs (Frith 1967: 169–237). Bulrushes, *Typha* sp. with large edible roots, only shoot during spring and summer if the swamps have been flooded. On the fertile soils of the river margins, the main seed-bearing ephemeral grasses germinate if these areas have been inundated or waterlogged by summer rains. These grasses require hot conditions to stimulate growth before they can seed.

In contrast, when the lowest water temperatures in the river coincide with low discharge as in winter, the productivity of the river is low. Fish are harder to catch and the ponds may be fished out. Aquatic plants die back leaving only an undetectable tuber, and frogs, snakes, lizards, tortoises and crayfish go into a form of semi-hibernation in burrows (Cogger 1960: 12; Eyre 1845, vol. 2: 252). Waterfowl leave the area. Freshwater mussels were probably present during the winter, but the cold conditions appear to have inhibited the Aborigines from collecting them in any great numbers.

The plains country away from the river, like most arid habitats, probably showed neither a summer increase in food nor a marked winter decrease (Klopfer 1969: 73). Provided sufficient rain fell, some plant foods were always available in the back country. (Allen 1972: 71–4). Much of the plains country, however, was inaccessible to the Aborigines during summer as the high evaporation rates of this season quickly dried up any ponds of rainwater. Travel was made possible only by carrying water in kangaroo skin bags (Tindale 1959: 41) or by digging out the roots of water-storing plants (Bennett 1883: 214). Lower evaporation rates in winter meant that pools of rainwater lasted for some months and the Aborigines could traverse the entire region.

The unpredictability of important climatic events, such as floods, droughts, or even abundant rainfalls, meant that Bagundji subsistence activities had to be both opportunistic

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and flexible. However, regular variations in temperature and river regime did create predictable variations in the exploitable environment, and consequently allowed regular seasonal movements. From explorers' accounts and historical records, I have built up a model of Bagundji subsistence activities (see Allen 1972: 21–40). This model, which is presented below, details movements that would be made during an average year. The effects of drought will be discussed at the end of this section.

During spring and summer, or whenever there was a fresh in the river, the Aboriginal population of the Darling Basin congregated along the river banks and lagoons. Specialized techniques involving the use of nets and traps were used to exploit the riverine environment. Fishing nets of up to 90 m. in length and a metre wide, with a 75 mm mesh, have been recorded as being used either as seines with floats and weights or as fixed nets attached to stakes (Beveridge 1883: 44–6; Sturt 1833, vol. 1: 92). Stone pens and wickerwork weirs were also used for fishing (Mathews 1903: 152; Mitchell 1839, vol. 1: 100–1). Nets between 45 and 90 m. long and 18 m. deep were strung across watercourses (plate 1) to catch ducks and other aquatic birds (Krefft 1866: 368–9); poles were set up where trees were not available (Sturt 1849, vol. 2: 140). Duck hunting was a communal activity. Women drove the ducks down stream while the men set the net and induced the ducks to swoop into it by throwing boomerangs and sticks and imitating the calls of hawks (Eyre 1845, vol. 2: 283–6). Women generally collected the shellfish, crayfish and reptiles and the men speared fish, but some other activities, like duck hunting involved the entire community. These included net fishing, the collection of bulrush roots (Mitchell 1839, vol. 2: 61) and the collection of grass seeds (Howitt MS. 1862: April 17–21).

Winter was described as a period in which it was difficult to obtain food (Beveridge 1883: 27, 62). During this lean period the Aborigines appear to have split up into smaller groups. Aided by the fact that standing water remained in the back country during the colder months, they spread themselves across the entire expanse of Bagundji territory and while some groups stayed close to the rivers others would be as far as 80 km. away. The red kangaroo, *Macropus rufus*, follows a similar seasonal pattern as it is most abundant near the river in summer or after a fresh, but moves on to the plains and rocky ranges after rainfall in winter (Frith and Calaby 1969: 92–3).

In winter the Aborigines collected the seeds of the Acacia, of saltbushes, *Chenopodium* sp. and of flax plants, *Linum* sp. Fruits and tubers were also collected. Animal foods replaced fish and shellfish in the diet. Some animals were dug from burrows but larger animals such as wallabies, kangaroos or emus were caught in nets or traps. The nets used were similar to fishing nets in length and width but had a wider mesh (300 mm.). They were fixed across rocky ridges or in valleys and the animals were driven towards them either by a team of beaters or by a few men firing the grass (Berndt 1947–8: 76; Bonney MS. *c.* 1881; Brock MS. 1844–6). Emus were lured into nets by use of a decoy horn which imitated the call of a female (Bonney MS. *c.* 1881; Dunbar 1943–4: 175; Parker 1905: 106–7). So specialized were the hunting techniques in use that early observers remarked that the men seldom carried spears (Howitt MS. 1861, September 24; Wills 1863: 180).

The hypothesis that the Bagundji clustered along the banks of the Darling River in summer and dispersed across their entire territory in winter is not easy to test. Some

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idea of the seasonal variation in group size comes from observations made by the earliest European expeditions (Allen 1972: 60–5). In summer the residential groups seen had a mean size of forty-five individuals ($N=10$, $\bar{x}\pm s=45\pm23$). These groups were groups were separated by distances of about 45 km. and represented an average density on the river of about one Aborigine per kilometre of river frontage. Smaller groups were on the river during winter, the mean being thirteen individuals per residential group ($N=17$, $\bar{x}\pm s=13\pm13$), but the distance between groups was not significantly smaller. The density of Aborigines on the river in winter was only one for every 3 km. of frontage. These figures suggest that the river was a much less productive habitat in winter than in summer. Comparable figures are not available for other areas, but Eyre's estimate (1845, vol. 2: 372) that there were three Aborigines per kilometre of river for the more favourable environment of the Murray River allows some comparison. Population density in the Murray–Darling riverine area appears to be many times greater than densities recorded for non-riverine inland areas (Meggitt 1966: 62).

During a drought scarcity of water restricted seasonal movements. The Aboriginal population was forced to remain near permanent water sources such as the river. While newborn children were killed during bad seasons (Bonney 1883: 125), there is no evidence that drought caused mortalities in the rest of the population. It seems that the Bagundji had adapted their population density to the extent that strenuous efforts would support most people during bad seasons. This implies that little effort was needed to support the entire population during normal and good seasons.

Seed collection

Seed collection in Australia is predominantly an arid land adaptation (Meggitt 1964: 30). In the collections of the State museums most grinding stones are from the dry interior, areas receiving a rainfall of 300 mm. or less. In well watered areas like eastern or northern Australia, plants were utilized more often for their fruits, nuts or tubers than for their seeds (Meggitt 1964: 30). The major difference between the riverine economies of Aborigines inhabiting the adjacent Darling and Murray River valleys was that seeds were collected on the Darling, whereas tubers were the vegetable staple on the Murray.

In order to avoid seed losses, the seed was gathered before it was fully ripe and was later either sun dried or roasted. Parker, a long-term resident on the northern Darling, observed (1905: 1, 8) that native millet (*Panicum* sp.) was collected in large quantities while the seed was full but the grass still green. The grass was stacked and later burnt and the seed collected off the ground. Threshing was done by trampling on the seed in a square hole and husking by pounding it with a log in a round hole. Shaking the grain in long bark dishes sifted the dust and dirt to one end where it could be blown off. It was then stored in skin bags. When Mitchell was travelling down the Darling River in 1835 at one spot he found that the grass had been pulled up and piled into hay ricks:

> the ricks or haycocks, extended for miles . . . and not a spike of it was left in the soil, over the whole of the ground. . . . The grass was beautifully green beneath the heaps, and full of seeds. (1839, vol. 1: 238–9, 290–1)

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On the Darling River, *Panicum decompositum*, or native millet, is an annual that grows in summer and seeds between December and March (Cameron 1961: 234–5; Leigh and Mulham 1965: 20–1). Mitchell's observations were made in July and what he saw was almost certainly a method of 'in field' storage of the grass seeds, one that had kept the seeds fresh for at least two months. Mitchell saw similar heaps of *Panicum* grass on the Narran River, a tributary of the Darling, in 1846 (1848: 90) and also heaps of *Portulaca* (1848: 98). Putting the green grass in heaps also had the function of concentrating the seed into one spot before it fell. The method was as follows

> the natives obtain large quantities [of *Portulaca* seed] by pulling up the plants, throwing them in heaps, which after a few days they turn over and an abundant supply of seed is found to have fallen out and can easily be gathered up. (Maiden 1899: 121).

Dried heaps of grass with the seed threshed out were reported from wide areas in western New South Wales. Sturt found quantities of *Panicum decompositum* 'spread out on the sloping bank of the creek to dry, or ripen in the sun' in a number of places. (1849, vol. 1: 285). Most references are to the collection of grass by hand, either pulling it out by the roots, pulling the stalks off or else pulling the seed off into a bark dish. This latter method was also in use in other areas. Only one reference mentions cutting the grass with a stone knife and this observation was made, not in the Darling Basin, but in south-west Queensland:

> On Cooper's Creek, the natives reap a panicum grass. Fields of 1,000 acres are there met with growing this cereal. The natives cut it down by means of stone knifes, cutting down the stalk half way, beat out the seed, leaving the straw which is often met with in large heaps; they winnow by tossing seed and husk into the air, the wind carrying away the husks. The grinding into meal is done by means of two stones, a large irregular slab and a small cannon-ball-like one; the seed is laid on the former and ground, sometimes dry and at others with water into a meal. (Gregory in Ling Roth 1887: 132).

There is some evidence that large groups of people might subsist almost entirely on seeds:

> Mr Poole and his party met with a tribe of about 60 in number engaged in collecting grass seeds. They behaved very civilly . . . and were all living on the seeds of a kind of rice (*Panicum effusum*) which grew abundantly on the flooded lands near the creeks. . . . At this season of the year (summer) the natives live principally on seeds both of Acacia and grass. [North-west New South Wales] (Browne MS. December 1844–6).

The Aborigines of western New South Wales and Central Australia stored seeds. North-west of the Darling River, Howitt (MS. 1862: April 2) found one such store of portulac seeds. The seed was wrapped up in grass and coated with mud: He estimated that the parcel would hold a bushel and a half of seed (54 l.).

Skin bags, made from the whole skin of a wallaby or small kangaroo, held seed after good harvests (Bonney MS. *c.* 1881) and large quantities were described as being stored in this manner (Newland 1920–1: 13). In Central Australia, one such store of seed in seventeen wooden dishes each a foot deep and five feet long was estimated to hold nearly a ton (1,000 kgm.) of grain (Ashwin 1932: 64). One author suggested that the Aborigines could have collected and stored sufficient wild grain to last them through a drought

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(Withnell 1901: 23). He went on to state that the quantities gathered were in fact small, sufficient only to last them for shorter periods.

The seed was ground on large flat stones with either a single or double depression. Grinding was generally done with water and the resulting dough was eaten raw or cooked in the ashes of a fire. During the seed harvest season the grindstones were carried by the women from camp to camp. At the end of the season they were left at a favourite camping ground (Bennett 1897: 3).

Prehistoric economy

During the Pleistocene, conditions in the Darling Basin were more favourable for hunter-gatherers than under present climatic conditions. While precipitation probably remained close to today's values, lower temperatures and evaporation rates appear to have doubled the discharge of the rivers flowing through the region (Bowler 1970: 291–7). From prior to 40,000 B.P. to about 15,000 B.P. the increased discharge maintained large lake systems, like the Willandra Lakes (fig. 16), in areas which today are virtual deserts (Bowler 1971: 59–61). River discharges dwindled and the lakes dried up about 15,000 years ago. They have remained dry ever since.

Apart from an abundance of water in the rivers and lakes, supplied from outside the Darling Basin, conditions in the terrestial habitats may not have been very different. Faunal evidence suggests a continuity of the semi-arid conditions characteristic of the area today. The Mungo site, the oldest residential site in the Darling Basin, dating to 25,000 B.P. (Bowler *et al.* 1972: 50) was occupied during spring and summer when the inhabitants were living on fish and shellfish, supplemented by the collection of small mammals, reptiles, birds and emu eggs. The species collected by the Aborigines at Mungo were still present in the Darling Basin in the nineteenth century (Jones and Allen in Bowler *et al.* 1970: 52–6). From the evidence at Mungo and other Pleistocene Willandra Lakes sites (Allen 1972: 281–318), it is apparent that the diet of the Aborigines who camped around the lake shores over 15,000 years ago was not different, except for seeds, from the summer diet of the Bagundji who camped along the riverbanks and lakeshores of the Darling Basin only one hundred years ago (Allen 1972: 329–44). There is no evidence that seeds were collected there prior to 15,000 B.P. The oldest dated grindstone ($12{,}530^{+1630}_{-1350}$ B.P., ANU-705) was excavated at Lake Tandou (Allen 1972: 232–5) (see fig. 16). This is slightly older than one excavated at Kenniff Cave by Mulvaney (Mulvaney and Joyce 1965: table 3) which was associated with a C^{14} date of 10,280 ± 180 B.P. (Gak-646).

No grinding stones have been recovered from the oldest shell midden sites around the Willandra Lakes such as the Mungo site. They are, however, associated with shell middens dating to the terminal phase of lacustrine activity which occurred between 13,000 and 15,000 B.P. (Allen 1972: 301–15). This suggests that the collection of seeds has been a part of the subsistence pattern in the Darling Basin for most of the last 15,000 years.

The decline in the productivity of the Darling Basin which occurred at the end of

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the Pleistocene when river discharges decreased and the lakes dried up may have been partly balanced out by the collection of hitherto untapped food resources such as seeds. It is likely that the seed-bearing grasses and trees were present in the area for a long period before the Aborigines began to exploit them for food. The addition of cereals to the diet at about 15,000 B.P. created an economy based on the collection of fish, shellfish, small mammals and cereals. Such an economy is indistinguishable from that practised by the Darling River Bagundji during the last century.

Given such a long period of utilizing wild seed plants the question raises itself: why did the Darling River Aborigines not attempt to husband these resources more than they did? In fact many of the factors which have been put forward as explanations for the development of cultivation in other parts of the world were present in the Darling River area where no cultivation took place.

Australian Aborigines and agriculture

Previous discussions of reasons for the Australian Aborigines' remaining hunting, gathering and fishing peoples instead of becoming cultivators have concentrated on Aboriginal societies from Northern Australia. There, in fertile tropical areas such a Cape York or Arnhem Land, Aboriginal hunter-gatherers were in direct contact with Papuan and South-East Asian horticulturalists. As neither environmental nor technological deficiences can account for the absence of horticulture from North Australia, explanations have been sought in terms of Aboriginal culture (Golson in Walker 1972: 389) or in terms of the relative efficiency of hunting and gathering and of agriculture in a fertile environment (White 1971: 184–5). This is, however, a problem relating to diffusion of an economic strategy, not to the independent development of a new one. Explanatory hypotheses are difficult to arrive at in either case, for they seek to account for the absence of cultural developments rather than their presence. An attempt to explain why domestication did not occur in some areas where conditions were suitable is nevertheless useful. It can contribute to an understanding of why it *did* occur in some other areas, by demonstrating that conditions which may be necessary are not always sufficient. Three factors have been put forward to explain the absence of agriculture from Aboriginal Australia.

The first is that suitable plants were not available (Worsley 1961: 178, quoted in White 1971: 182). However, the Darling River Bagundji were in intimate association with plants capable of being domesticated. Two of the main grasses utilized, *Panicum* sp. and *Setaria* sp., are closely related members of the same families that produced the domesticated common panicum, *Panicum miliaceum*, and Italian millet, *Setaria italica* (Brothwell and Brothwell 1969: 97). Plants belonging to families domesticated elsewhere, such as *Cucumis* sp., *Ipomoea* sp., *Chenopodium* sp., *Solanum* sp. and *Linum* sp., were also collected. There is no doubt that the wild millets gathered by the Bagundji were brittle-rachis grains (Flannery 1969a: 295), which allowed rapid dispersal of seed once the grass was ripe. The Bagundji overcame this problem and avoided the necessity of genetically modifying the grasses in order to obtain tough-rachis grains, by gathering

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them before they were fully ripe. This method of harvesting may decrease the productivity and fertility of the plants, but it does not prevent them from being cultivated or eventually being domesticated. Spelt (*Triticum spelta*), a domesticated brittle-rachis wheat grown in Europe, is harvested there before it is fully ripe (H. N. Jarman 1972: 18). The Bagundji were certainly not unconsciously selecting for tough-rachis grains but I doubt that in this case harvest methods affected the plants' suitability for domestication (H. N. Jarman 1972: 18–19), though they may in some cases (see Wilkie *et al.* 1972: 203–9 for a discussion of harvest selection).

Another explanation put forward is that the Aboriginal totemic religious philosophy maintained the economic *status quo* by providing ritual substitutes for practical action and also by morally discouraging technological innovation (Meggitt 1964: 35; White 1971: 184–5). Cultural change, however, is a basic fact of Australian prehistory (Mulvaney 1971: 369; see also Mulvaney 1969: 100–13). At about 2000 B.P. in the Darling Basin, a new range of stone implements including backed flakes or microliths, flake adzes and stone projectile points were added to the existing Aboriginal tool kit (Allen 1972: 199–201). Further, the tribes belonging to the Bagundji linguistic group exhibited considerable cultural variation in terms of rituals and beliefs. It is clear that changes in the totemic religion and social organization of the Bagundji were taking place quite rapidly (Allen 1972: 128–31). Meggitt (1962: 168–70; 1966–7: 31–5) found that changes had recently occurred in Walbiri ritual and social organization in Central Australia. Australian societies were neither static nor uniform and were sufficiently flexible to accommodate considerable technological or social change.

The third explanation suggested, and the only one which has any application to the Bagundji situation, has already been mentioned above in regard to horticulture in Northern Australia. This argument states that the returns from highly-developed hunting and gathering techniques are so great as to make the expenditure of additional labour on agriculture and husbandry unprofitable (White 1971: 184). Binford (1968: 327; see also discussion in Lee and DeVore 1968: 90) has extended this argument to suggest that hunter-gatherers establish an equilibrium system whereby populations are homeostatically regulated below the carrying capacity of the local food supply. Unless they were under some form of environmental or population stress, there would be no adaptive pressure on them to find means of increasing the food supply. Binford's argument is not supported by the evidence.

The Bagundji population was probably in some form of equilibrium with the food supply, their relatively low numbers being largely determined by the frequency of droughts. Such a balance implies under-utilization of resources during most years. However, pressures towards increasing the food supply were present. These were created by seasonal variations in the productivity of the environment which forced the Aborigines to split their semi-sedentary summer camps and to move in small groups across wide areas. Sufficient food was available in winter but only at the expense of additional labour. They lost the economies of labour which accrued from the large-scale gathering techniques employed during summer and they were also separated from friends and relatives. Cultivation of the available grasses and storage of the surplus could have provided a constant food supply throughout winter and allowed the Bagundji to maintain permanent residence on the river banks.

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In a recent paper on the origins of domestication in the Near East, Flannery (1969b: 77–8) listed three 'preadaptations' which set the cultural stage for domestication. These were (*a*) 'the trend . . . from exploiting a more "narrow spectrum" of environmental resources to a more "broad spectrum" of edible wild products'. Such a subsistence base would include foods like fish, water turtles, land snails, migratory waterfowl and possibly wild cereal grains; (*b*) 'the development of a ground stone technology' . . . ; and (*c*) 'the development of storage facilities'. All three of these changes took place in the Darling River valley in prehistoric times, yet the Bagundji remained hunter-gatherers. Thus Flannery's argument is supported, that these are necessary but not sufficient conditions for the development of agriculture.

The Darling River environment is not more arid or even more unpredictable than the climates of some areas where domestications took place, like Greater Mesopotamia (Flannery 1969a: 284–6) or the Tehuacan Valley (Byers 1967: 48–65). There are some differences: the latter areas are regions of high relief where different altitudes create a juxtaposition of environmental zones within a limited geographic area (Flannery 1969b: 73), while the Darling Basin is largely flat and has a uniform environment. The Bagundji were, however, in cultural contact with Aborigines living on the more humid slopes and highland areas to the east; goods such as raw materials for stone axes were traded into the Darling Basin (Binns and McBryde 1972: 90). The western slopes of the Eastern Highlands of New South Wales seem to have been a less productive environment for Aborigines than the Darling Basin and the population was less dense and more mobile (Allen 1968: 34–7). The Aborigines of that region did, nonetheless, gather wild cereals (McBryde 1968: 82). The humid slopes and semi-arid river basins of western New South Wales offer environmental and demographic conditions comparable to any area where cereal domestications took place (Binford 1968: 329–32).

The advantages that the Bagundji would have gained from cultivating cereals rather than simply collecting the wild ones was that the products of cultivation could have shielded them from the stresses of droughts and the winter lean periods. The disadvantages in terms of the labour necessary to clear the fields and possibly irrigate them in poor seasons may, in this case, have outweighed the advantages. Without proof one way or the other, we must assume that the Bagundji found, after a long period of experimentation, that by hunting and gathering a wide range of foods and by using a sophisticated array of highly specialized techniques, their labours ensured a maximum return of food (Higgs and Jarman 1972: 12). An answer to the problem of whether or not this was the most efficient subsistence strategy for the Darling Basin could only come from a rigorous cost–benefit or input-output analysis of Bagundji subsistence activities (cf. Lee 1969: 47–79 for an input–output analysis of !Kung Bushmen subsistence). It is unfortunately nearly a century too late to carry out such a study in the Darling Basin.

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Abstract

Allen, H.

The Bagundji of the Darling Basin: cereal gatherers in an uncertain environment

Until the 1880s the semi-arid Darling River Basin, in western New South Wales, was inhabited by Aborigines belonging to the Bagundji linguistic group. The Bagundji economy was primarily riverine in character based on the collection of aquatic foods and wild cereals. Seasonal variations in their subsistence activities can be related to seasonal variations in the productivity of their habitat. Despite a long period of association with wild cereals, the Bagundji remained hunters and gatherers and apparently made no attempt to cultivate these cereals. Possible reasons for this are examined. No simple explanation can be put forward to explain either the specific problem of the absence of agriculture from the Darling River Basin or the general problem of the absence of agriculture from Aboriginal Australia as a whole.

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