

The Role of Animals and Plants in Maintaining the Links¹

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Abstract

Survival in the bush is dependent on knowledge of the animals, plants and other resources to be found. For the Kija and Jaru people of the east Kimberley region of Western Australia this traditional ecological knowledge is of the utmost importance, both in terms of culture and survival. Animals and plants figure among the favourite topics of conversation; many stories on a variety of themes include details about animals and plants encountered in travels and what people ate when in the bush. This traditional knowledge is part of what it means to know the country. As well as enabling the procurement of food and water, it is a traditional mark of identity; it shows that you belong to the country, that you are a product of the country. Kija and Jaru people have great pride in the foods that have given them sustenance since time immemorial. This knowledge, like the languages that have conveyed it for millennia, is highly endangered. The concern is that both be preserved and passed on to younger generations. In this paper we examine how traditional languages and traditional ecological knowledge have fared with the transition from hunter-gatherer to more sedentary lifestyles and what the implications may be for the maintenance of cultural knowledge and traditional languages.

The Jaru and Kija Animals and Plants Project

This paper reports the progress of a joint project between the Kimberley Language Resource Centre and the Kimberley Land Council. It aims to document indigenous knowledge of animals and plants, their uses, characteristics and behaviour as well as perceptions of changes to the environment.

The project responds to concerns from Jaru and Kija elders that traditional animal and plant knowledge and the language relating to it will be lost forever. One Jaru elder who has been heavily involved in the project since its inception was taken away from her parents as a child and is herself reclaiming such knowledge with the aim of passing it on to her children and grandchildren. The aim is to document and produce resources for each language that may assist in passing on that knowledge.

The project has dealt with two indigenous languages in parallel. There have been some advantages in this. Occasionally when unforeseen events in a particular

community have made work with the speakers of one language difficult, we have been able to work on the other language. Additionally since some speakers are bilingual, we have on occasion been able to collect data for both languages at the same time. Indeed, as part of the process of checking draft documents we intend to review the Kija data with Jaru speakers and vice versa, filling in potential gaps in the corpus. While the overall project has addressed both languages in parallel, one of the authors has only been involved with Jaru from about half way through the Jaru fieldwork.

History of Ethnobiological Recording

The recording and publication of indigenous plant and animal knowledge in Australia has been undertaken since the mid 1800's, for example, Crawford (1868), Maiden (1889) and Roth (1901). Recording and publication style vary from the exploratory (Leichhardt 1847), through popular (Low 1989) to scientific (Latz 1995). In recent times there has been an increased awareness of the potential loss of indigenous biological knowledge, and this has led to publications based on community desires to record and promote plant and animal knowledge (Purantatameri *et al.* 2001, Lindsay 2001).

Phyllis Kaberry conducted ethnographic work in 1934 and 1935 with Kija, Jaru and a number of other groups. Her research (Kaberry, 1939:11-36) describes Lungka (Kija) people as having five seasons and describes some of the bush foods available, their preparation and division in terms of who may eat what. Neville Scarlett (Scarlett, 1984) recorded Kija plant knowledge in the Bungle outcamp area in 1984, over a ten day period in the dry season. Debbie Bird Rose (Rose, 1984) undertook ethnographic studies in the same area at the same time, primarily noting changes in food resource availability. Frances Kofod has undertaken significant recordings of Kija plant and animal knowledge since the mid 1980's. Her data is unpublished, but has been made available to one of us (JB) for corroborative purposes. Ian Kirkby has recorded Kija plant and animal knowledge; this material is also unpublished and is not publicly available.

¹ between Language, Identity and the Land.

Tasaku Tsunoda has been recording Jaru linguistic data since the early 1970's, and his research continues. We have used the plant and animal names recorded by Tsunoda in a draft Jaru dictionary (Kimberley Language Resource Centre, 1992). In comparison to Kija, there has been relatively little plant and animal knowledge recording undertaken for the Jaru language.

The Languages and Their Speakers

Traditionally Kimberley Aboriginals were exclusively hunter-gatherers. From the late 19th century, with much of the area being taken up by pastoral leases, it became increasingly difficult for Aboriginal people to support themselves off the land. Gradually they began to congregate around cattle-station homesteads, taking up employment in the pastoral industry.

During the wet season Aboriginals working on stations were released from their duties and most returned to the bush to live off the land. It was during this 'holiday' period that people hunted, fished and conducted ceremonies. In the 1960s and 70s changes in legislation pertaining to wages and welfare saw an exodus from the stations and a movement to Kimberley towns such as Derby, Halls Creek, Fitzroy Crossing and Wyndham.²

Kija and Jaru are neighbouring languages belonging to separate language families. Jaru belongs to the Ngumbin subgroup of the Pama-Nyungan family whereas Kija belongs to the Jarragan language family, along with Miriwoong and Gajirrabeng. Kija has three noun classes; masculine, feminine and neuter/non-singular. Demonstratives, adjectives, pronominals and verbs agree in gender and number with the noun class of their referent. Noun class or gender³ is marked by a suffix that attaches to nouns and adjectives. Jaru has no noun classes. The languages are not mutually intelligible, although many older speakers understand and speak the neighbouring language and perhaps a few others. Not surprisingly there is a reasonably high incidence of borrowing, particularly of nouns and coverbs. Tsunoda (1981:5) puts the common vocabulary at 26%⁴. Some Jaru animal and plant names have retained the Kija gender suffix when borrowed from that language. Any forms borrowed in the reverse direction are not as immediately transparent.

Jaru is regarded as consisting of two main groups of dialects (Tsunoda 1981:2-4). The two groups of dialects have the names 'Wawarl' for the western varieties originally spoken around Lamboo Station, Ruby Plains and Old Halls Creek and 'Nyinyin', for the eastern varieties; spoken at Old Flora Valley, Turner River, Sturt Creek, Gordon Downs and Nicholson Stations. The variation that exists between the dialects is

predominantly lexical and phonological. Nyinyin is phonologically more conservative than Wawarl. The term Wawarl is no longer recognised as a name by the remaining speakers of those dialects although it once was (perhaps not widely) and still is by Nyinyin speakers. Three neighbouring Ngumbin languages: Malngin, Wanyjirra and Gardangaruru are mutually intelligible with Jaru (at least with Nyinyin) and could arguably be considered dialects of Jaru. Tsunoda (p.c.) considers that it is likely that there were at least two dialects of Wanyjirra. *Jaru* is the word for language in a number of the Ngumbin languages including Jaru, Wanyjirra, Malngin, and Gurindji. Coming to grips with dialectal variation has been a difficult issue for the production of linguistic resources for Jaru as ultimately we consider a range of mutually intelligible lects whose speakers consider their own variety to be the 'proper Jaru'.

Kija is generally considered to have two dialects: the southern, Halls Creek Kija and the northern, Turkey Creek Kija. The terms Lungka and Kuluwarrang have also been used to refer these two varieties however not all speakers use the terms in the same way⁵. It seems likely that early last century there were several dialects or varieties of Kija and as people moved from stations to towns in the late 1960's and 70's the related lects may have influenced each other. It is clear however that an individual's speech includes forms and features peculiar to the regions that they grew up in.

There are no recent estimates of speaker numbers. Taylor & Taylor (1971) estimate 300 for Kija and Tsunoda (1981:17) estimates 200 people speak Jaru as a first language and a further 100 as a second language. Both languages are highly endangered. The youngest fluent Kija speakers would be in their forties or fifties. The situation for Jaru would be similar were it not for the community of Kundat Djaru (Ringer's Soak), where children are still acquiring the Gordon Downs dialect of Nyinyin.

Fieldwork

Fieldwork involves travelling in four-wheel drive vehicles onto various cattle stations in Kija and Jaru country; either taking day trips or camping out for three or four days at a time. We generally take speakers who have a connection to the particular area along with others from the same language group. As we travel, we observe birds, reptiles and mammals and collect plant specimens that we talk about later. On one trip, we were fortunate enough to liaise with a team of zoologists who were trapping various fauna near the Argyle Diamond Mine. But to positively identify all species by this

² Jebb (2002:205-296).

³ Worrorran Languages of the North and Central Kimberley have four or more noun-classes including masculine, feminine, non-singular and at least one other neuter class (McGregor 1988:82). Since Kija has only the three, I will use the terms 'noun class' and 'gender' interchangeably, especially in relation to suffixing.

⁴ Based on Hale's 104 item basic wordlist (Tsunoda, 1981:3).

⁵ Halls Creek people use the term Lungka to refer to themselves and their dialect. They also say it means 'naked'. Kofod (p.c.) has attested Lungka as a coverb meaning 'to go naked'. Phyllis Kaberry uses the term Lungka to cover all the Kija 'tribe' and the name of the language although concedes that "the general term for the tribe at Moola Bulla is Lunga (sic), whilst the alternative- Kidja (sic) - is heard at Violet Valley and Bedford, ninety miles to the north (Kaberry, 1937b:92)."

means would require many months of fieldwork and a budget much larger than is available. In order to get by this problem we go through folders of fauna sets with photographs of each species, discussing the animals' behaviour and environments. Still, the process is not unambiguous; it is often hard to gauge an animal's size and colour from a picture. The mammals are particularly difficult, especially those not seen in the area for some time. It is from the ensuing discussions that gradually, over several sessions, we are able to correlate the various taxa with their vernacular nomenclature.

To date, there have been approximately 18 weeks of fieldwork completed, 41 days on Kija and 31 on Jaru. For the Kija work we were based in the community of Warrmarn⁶ and made fieldtrips out onto surrounding stations and visited surrounding communities. For the Jaru work, we based ourselves in Halls Creek and made trips out to stations from there. We have tried to cover as much Kija and Jaru country as possible in an attempt to account for ecological and dialectal variation.

People have been involved in the project for varying periods, some for the whole project and some for just the odd day trip. So far over 35 men and women have made contributions towards the Kija data and over 25 for Jaru. On the trips we take between three to eight elder language speakers with the optimum number being around three or four. Invariably there are a few grandchildren and sometimes a few adults who may not be full speakers of the languages. However, often these people can provide significant information about the various animals and plants, their uses and habitats, even though they may use English names for them. By and large people are extremely willing to go bush. One of the main differences between the two projects stems from basing ourselves in a community as opposed to a town. Warrmarn is a stronghold for the Kija language, in the middle of the Kija area. Even though people at Warrmarn seem to be always at meetings or out bush there is nearly always someone to work with. The same situation does not apply for the Jaru living in and around the town of Halls Creek. Still there are a number of dialects spoken there and it is possible to work with several dialects at once. Moreover, there is a small group of dedicated, enthusiastic Jaru speakers in Halls Creek who have been the mainstays of the project. 'Going bush' for Halls Creek people can be difficult and for elders without a vehicle the best way to do it is to become involved with a community organisation. These bush trips are special events and people look forward to them. People in Warrmarn seem to be able to go bush much more often, regularly hunting for sugarbag (bush-honey), boab nuts, goannas, kangaroos and bush-turkeys. However, they are equally enthusiastic about participating in this work. By and large everyone seems to regard it as intellectually stimulating, important to record the knowledge for future generations and just good fun to be in the bush.

⁶ Formerly Turkey Creek, Warrmarn is often incorrectly spelt Warmun.

To date 183 different plants and 219 animals have been tentatively identified for Jaru and 201 plants and 222 animals for Kija.⁷ The higher figures for Kija are in part due to the greater time spent on the language and in part to the general trend for higher biological diversity in lower latitudes as rainfall increases.

An important aspect of the project has been to document variation in pronunciation of animal and plant names. All mentions of animals or plants have been catalogued with, at the very least, the speaker's name and tape numbers, even if a given form is the same as something previously attested and no new information has been offered. For each language this information (as well as ethnobiological data) is being entered into a database so as to build a better picture of ideolectal and dialectal variation. In addition, a number of Dreamtime stories relating to plants and animals have been collected.

One of our provisional findings is that there is a strong correlation between the level of 'traditional ecological knowledge' (TEK)⁸ and the amount of traditional language that people speak. By and large, the more language a person has, the more TEK they will have. The relationship is not strictly proportional since, as we will see, the converse is not necessarily the case. Age is definitely a factor in this although another key variable appears to be a person's upbringing. In this context, it is worth comparing the living conditions last century at Moola Bulla with those at Violet Valley. These two government ration stations were established in 1910 and 1911 respectively, to protect the burgeoning pastoral industry from the increasing problem of cattle spearing. Moola Bulla Station was set up to train Aboriginal men to work in the pastoral industry and women to work as domestics. It was also a place of punishment that people were sent to for crimes such as cattle spearing. In 1939 a Presbyterian mission and school was established. Although it is Kija country, Jaru, Gooniyandi, Walmajarri, Kukatja, and Wanyjirra people also spent time there. Speaking traditional languages was discouraged (Achoo *et al.* 1996:121). Moola Bulla is likely to have been a centre from which the Kriol language spread west to Fitzroy Crossing⁹ and throughout the central and east Kimberley. In contrast, the Violet Valley ration station interfered less in the lives of its Aboriginal residents. It was a major destination for Kija people in the 'holiday' season (including those from Moola Bulla) so they could conduct ceremonies (Jebb, 2002:156). By and large only Kija people lived there. Many residents of the communities of Warrmarn, Bow River and Crocodile Hole spent time at Violet Valley. Middle-aged Kija

⁷ Since this is a work in progress, all identifications of animals and plants including those that are mentioned in this paper must be considered tentative.

⁸ Williams & Baines (1993).

⁹ In 1955, the government sold Moola Bulla to private interests who expelled the entire Aboriginal population. The majority were loaded onto trucks and taken to the United Aborigines mission in Fitzroy Crossing. It is to this event that Hudson (1983: 13-15) attributes the arrival of Kriol in the Fitzroy Valley, eventually replacing the earlier Pidgin.

people connected with Violet Valley appear to have better command of their language and more profound animal and plant knowledge than their Moola Bulla counterparts. Indeed the plight of Halls Creek Kija relative to Turkey Creek Kija seems to have roots in the greater interference and dislocation for Moola Bulla residents¹⁰.

In spite of the disadvantage of living in Halls Creek relative to the communities in terms of the retention and maintenance of TEK and traditional languages, sufficient Halls Creek Kija speakers and ample Jaru speakers have been able to make invaluable contributions towards the project. For Halls Creek people, a short drive out of town is usually enough for them to recommence speaking Jaru or Kija and for the TEK to return. They themselves comment that the correct place to be speaking language and talking about such matters is in the bush, away from town.

Expressing Identity

In both languages, the primary means of expressing one's identity is in terms of owning and controlling the language normally associated with a tract of country:

Ngayin-ti Kija-pa-n=ngake
1s-Top Kija Language-having-Stat=1sBENE
I have the Kija Language
~ I am Kija.

Kija example

Ngaju nga-rna Jaru-yaru
1sg aux-1sgNom Jaru Language-having
I have the Jaru language.
~ I am Jaru."

Jaru example

Possession of the language is the marker of identity but for indicating the language actually being spoken a speech verb is used.

Nginyjiny Jaru-pa-ny jarrak kerne Kijam
3sm Jaru-having-m speak 3sS.say.Pres Kija
He is Jaru but he speaks Kija.

Kija example

It has been widely documented¹¹ that traditionally, Kimberley Aboriginal people were competent in a number of languages: the language of each parent and perhaps several neighbouring languages. Most could speak two or three and some as many as five or six. In spite of this multilingual ability, people generally associate themselves with one language group.

In Halls Creek there are a number of people of mixed Jaru and Kija descent. The basis of their association

with one language or the other has not been explicitly researched. Early ethnographers like Phyllis Kaberry (1939:184) described the 'Lunga (sic, Lungka) tribe' as constituting a 'territorial, linguistic and cultural unit'. Land ownership is through membership to one of a number of 'patrilineal hordes', each of which is tied to a named, well-defined area or *nawarram taam*¹², literally big or important country. If a person's horde country lies in the Kija area then presumably this would be grounds for association with the Kija language.

By contrast, Kaberry (1935:16) thought that the existence of patrilineal hordes among the Jaru was doubtful. For one thing she could find no named areas that could be equated to a horde country, although she was able to roughly identify Jaru land. In addition, her Jaru informants at Flora Valley spoke about their own 'country' in terms of where they were actually born rather than 'horde' membership through descent. Presumably, if a person's birthplace were identified as Jaru, then the individual's identity would follow. This appears to be still the case today although the importance of birthplace in Jaru land tenure has diminished in recent years with the preponderance of hospital births. The authors feel that the parents' birthplaces may also be contributing factors.

But how does language in Aboriginal Australia come to be inscribed in the landscape? What is the indigenous justification? Some researchers have found that the connection is established in the Dreaming or, in the Eastern Kimberley, *Ngarrangkarni*. The passage of mythological beings inscribing language on the landscape has been well documented. Sutton (1997: 222) describes two sorts of myths that account for the origin of language variation. The first is where dreamings allot language and culture to different groups of people, the second where creator spirits travel through the landscape changing language in certain places on their journey. Stan Brumby (Achoo *et al.* 1996:3-5) tells a version of a the eaglehawk and kangaroo story for Halls Creek that seems to be of the first type, except that in his account language is not allotted. However it does in part account for why Kija is spoken to the north of the town and Jaru to the south. The authors are also aware of an example of the second type where a Dreamtime entity passes through Kija country and changes language upon entering the territory of a neighbouring language group, however this story is not in the public domain.

Undoubtedly, the reasons that people associate themselves with a given language group are varied and complex. However, it seems clear that cultural variables such as the mythological landscape, land tenure and kin are important factors.

Country as a Marker of Identity

Another way that both languages frequently express identity is with a suffix *-ngarna* meaning 'denizen'. It is extremely productive. It can be used to describe oneself in terms of one's traditional country:

¹² Kaberry (1939:30-31).

¹⁰ From 1955 to 2001, Aboriginal residents of Halls Creek were denied access to Moola Bulla, in spite of the fact that town's present location was annexed from the property in 1948. The station literally surrounds the town.

¹¹ See for instance Hudson & McConvell, (1984:24-25); Achoo *et al.* (1996:xii).

Nyandu nga-ø gaja-ngarna.
 3s Aux-3sNom red ground-denizen
 He comes from the red ground.

Nyinyiny example

It is used to describe speech varieties:

Birli-ngarna
 Stone-denizen

The above expression was used by a Wanyjirra speaker to describe Gardangarurru, the language once spoken to the south of Wanyjirra territory.

It is used very productively to describe animals:

<i>Ngurrwa-ngarna-l</i>	<i>Kawarn-ngarna-ny</i>
White Currant-denizen-f	Blacksoil-denizen-m
Firefly	Songlark
<i>Flueggea virosa</i>	<i>Cinclorhamphus mathewsi</i>

Kija Examples

Gundurru-ngarna
 Sky-denizen

Wedge-tailed Eagle *Aquila audax*

Nyinyiny Example

Laarn-ngarna-ny

Up high, above-denizen-m

Green Tree Frog *Cyclorana australis*

Kija example also borrowed into Jaru

So productive is this suffix that it is necessary to check whether the attested form really has the status of a name or whether our informants are merely describing the animal in terms of its preferred environment. For example the Kija expression *kurlungarna* (water-denizen) has been used to describe freshwater mussels, cormorants and diver-ducks, Merten's and Mitchell's Water Monitors as well as a female water spirit¹³.

Bush Tucker and Bush Medicine as Markers of Identity

Jaru and Kija people are extremely proud of the bush foods and bush medicinal plants that grow in their country. They speak of them with a kind of patriotic fervour. "That's the tucker that bin growem up mibala." When telling stories it is very common to list the kinds of food that people used to eat, even when the story relates to altogether different subject matter.

Mangarri nyila buwujuman ngalu ngarninyurra
mangarri nyila,
 They used to eat bush tucker,

guyu wurrurru: jarrambayi, jaji, girnanyji, warna,
nyarlgu, gayamarr.
 all sorts of meat: goannas, kangaroos, echidnas,
 snakes, bilbies, sandfrogs.

Nyilala ngalu ngarninyurra ngamunyunga.
 A long time ago that's what they used to eat.

Jaru example

In 1996, in an effort to inspire his family and encourage them to stop drinking, the late Jack Jugarie, a Jaru man in his seventies, walked from Wolfe Creek Crater to Wyndham, a distance of around 500km. He did this unassisted, living only off bush tucker. Halls Creek people are in fact so proud of this achievement that they had a statue of him erected in the main street.

Kija and Jaru people speak proudly of the ways that the old people used to *karlmingarri wumperramante*, catch fish by pushing spinifex or dry grass from one side of a shallow waterhole to the other or *jaluwipkarri wumperramante*, 'poison' them with certain grasses, seed pods, or the leaves of the freshwater mangrove¹⁴. The process would deplete the water of oxygen. The fish would thus rise to the surface where they were plucked out of the water by hand.

Aboriginal people take pride in the knowledge that their medicines and foods have kept them alive and given them sustenance. They also find it mildly amusing that white people, *Gardiya*, if left to fend for themselves in the bush, would be lucky to survive for more than a few days. That is not to say they would wish such a thing upon them. Kija people will often make sure that you have been 'welcomed' to country. *Manthakirrem* is perhaps better translated as introducing someone to either country or food. This might be done with a smoking ceremony or by putting water on your head and arms (*mamakirrem*) with wet Eucalyptus leaves. They may well sing a song at the same time¹⁵. The purpose of this is to introduce you to the spirits that reside in the area and thus protect you from misfortune. Only the *taawam*, traditional owners for that particular country, can do it. Kija people are afraid to go into a stranger's country unless they have been 'welcomed' beforehand. There are likewise certain sorts of bush foods for which they need to *mantha* you before you eat them for the first time. The process however is altogether different.

Interaction with the Landscape

The landscape is full of spirits. This becomes quickly apparent to the researcher through the observation of peoples' behaviour. The Jaru and Kija participants in this project not only talk about various invisible beings in certain ways, they behave in certain ways towards them. Some are regarded as benevolent, some are malevolent, and for the latter it is best to follow the correct protocols. One example of the 'cheeky' ones is the big and hairy *yungkuny* of the Kija, sometimes described as a caveman or a gorilla. Then there are the Jaru *murunggurr*, nasty, little humanoids that can

¹³ At the time of printing *kurlungarnany* had been approved as an acceptable name for a fresh water mussel, the rest remained unchecked. Other names have been attested for all of these entities.

¹⁴ Kija forms. Jaru: *Ngalu warnan ganyangurra*. They used catch fish by pushing spinifex.

¹⁵ A well known corroboree that is often sung to 'welcome' newcomers to the Argyle Diamond Mine goes '*Ngarrangkarninji manthangarri yirriyajingungu*', we welcome/introduce you to our dreaming place.

transform into birds¹⁶. It is said that they have a distaste for white shirts and grey horses, so in their vicinity, it is best to wear coloured tops and to ride black, bay or piebald horses, or stay in the motorcar.

The Dreamtime creator spirits are likewise potentially malevolent or benevolent depending on the protocols followed. Jaru people say that if you go to a waterhole where a *warnayarra* (rainbow serpent) resides you should introduce yourself by speaking to it in Jaru, pick up a stone and rub it with sweat from your armpits and throw it into the water. It is better still to be introduced by a *walalja* (traditional owner). However, should a stranger go there on their own and follow the above procedure, hopefully nothing will happen to them. On the other hand a Kija woman was heard to demand of the nearby Dreamtime *parntel*¹⁷ to give her copious sugarbag (bush honey) and to assist one of the four wheel drives in not getting bogged in the deep sand of a dry river bed. It seems that in addition to 'traditional owners' having obligations to look after the country the dreamings are obliged to look after them and their friends. The *Ngarrangkarni* (Dreamtime) is not merely the 'Time Long Past' as Kaberry (1939) describes it, the dreamings are current and play a part in people's lives today.

Animals and Plants as Kin

Kija and Jaru both follow the system of eight subsections¹⁸. The subsection system (or skin system) provides the framework on which to base all kinds of social interaction including varied social obligations, potential marriages, joking/swearing relationships and avoidance. Placement within the system allows people who aren't immediate kin to interact on the basis of classificatory kin relationships.

Since animals have skins they may automatically be referred to with a kin term. A young Kija woman of Nangala skin was reported to have said to her mother, "There's my husband singing out". She was referring not to her real husband but to *kerrerangkulji*, a magpie, a bird of Jungurra skin and the correct marriage partner for Nangala.

It seems that animals have skins because in the *Ngarrangkarni*, ancestral creator spirits travelled the land in human form. As humans they not only had skins but husbands and wives, parents and children, love, hate, liaisons and adventures. During the course of these adventures they transformed into mammals, birds, fish, reptiles etc. Kaberry (1938:281) says on the matter:

....from the point of view of the Aborigines the kinship system is a projection of the mythical past into the present: it derives from the totemic ancestors and from the rainbow serpent in particular. The totemic ancestors stood in a kinship relation to one another; it was the Rainbow Serpent, the source of magical power, of rain and of the spirit children, in fact as the

source of human life itself who provided the means for regulating not only marriage but general behaviour as well.

Trees, on the other hand, have skins, because according to a Kija Dreamtime story, a *yungkuny*¹⁹ went around planting them so he could have shade. As he planted them, he told them all their names and assigned their subsections.

Many people seem to know the subsections of some of the animals, especially important ones like kangaroos and emus. There are very few people left who have knowledge of the subsections for plants. Often people say that the old people didn't tell them. However one Kija elder provided us with subsections for some ninety plants. We have attested more skins for animals and plants for Kija than Jaru. This rings true with Kaberry's observation that for Kija many more species had skins than just the subsection totems.²⁰ Thus far there has been little correlation between the forms attested for the two languages. For a given language some of the information provided on the subsections is apparently inconsistent. This is an area that needs further checking. However some of the inconsistency can be accounted for by comparing the forms attested across the two language groups. Not surprisingly speakers of neighbouring dialects of the two languages have given the same skins for the same animal ie. Jungurra was the subsection attested for emus from southern Kija speakers and western Jaru speakers.

In Kija there appear to be similarities between the structure of personal names and those of some animals, particularly birds (this is ignoring the fact that some people are actually named after birds). A high proportion of bird's and other animal's names are onomatopoeic. Other names are derived from a coverb ie. *Marrkmarrkjil*, Grey Goshawk, *Accipiter novaehollandiae*. *Marrkmarrk* is a coverb meaning 'to hover'. *Watpil*, the Australian Bustard, *Ardeotis australis* is so called because it's always *watkarri wiyinya*, looking back over its shoulder. *Wat* is the coverb, 'to look back'. Many personal names are also derived from coverbs²¹. Commonly the coverb relates to the actions of a figure in a Dreamtime story, often the subsection totem of the person named²².

There is a suffix *-jil* that has thus far been attested only in Kija women's names and feminine animal names (as well as one plant) with consonant final stems. In women's names it occurs following a coverb, as it does with the names of animals where it may also follow an onomatopoeic (often-reduplicated) form. It is difficult to ascertain the meaning of this suffix as it seems to be a

¹⁹ A big hairy caveman.

²⁰ Kaberry (1938:282).

²¹ This is also the case with Jaru.

²² Indeed this is the case for two women of the Nyaajarri subsection, named *Watpil* after their totem the Australian Bustard, also Nyaajarri. Kaberry (1939:51) writes that infants are often named after their *nharruku* (namesake), usually someone of the same subsection; their conception totem; the waterhole where the father finds the spirit child in a dream or some incident associated with infancy.

¹⁶ Black Chinned Honeyeaters, *Melithreptus gulari*.

¹⁷ Centralian Blue-tongue Lizard, *Tiliqua multifasciata*.

¹⁸ See for instance Berndt & Berndt (1988:49-52); Blythe (2001:10-11); Kaberry (1937b); Tsunoda (1981:8-14).

relic form with a very restricted environment. Variations on the same animal's names and sometimes the same women's names have also been attested with (instead of *-jil*) the feminine gender suffix *-el* expected for C final stems.

Women's names	Animal's names	
Jurtjurtjil	waakwaakjil	Torresian Crow
Wirritjil	kurlurturtukjil	Peaceful Dove
Parratjil	jiyikjiyikjil	Roufous Whistler
Mawurrkjil	kurrkurrjil	Tawny Frogmouth
Jawurtjil	marrkmarrkijil	Grey Goshawk
	jurnjurnunukjil	Pardalotes
	rerrekjil	Diamond Fish?
	puyurtpuyurtjil	Knob-tailed Gecko
	ngurkngurkjil	Pig
	yirringarakjil	White-bellied Cuckoo-shrike

Table 1: Women's Names and Animal's names attested with *-jil*.

The expected masculine variant *-jiny* has not been attested in men's names and has only been found in the name of one plant (where it may be purely coincidental).

Thus a claim that animals (and perhaps plants) form part of the Kija extended family may be strengthened by existence of this relic suffix.

What is the Role of Animals and Plants in Maintaining the Links?

Communities vs. Towns

There is some value in a comparison between life in the communities and life in the towns. As previously mentioned, Kija people living in Warrmarn and other Kija communities are living on Kija country. They regularly go hunting and camping out in the bush. Similarly, Jaru people of Kundat Djaru and Billiluna regularly go looking for bush foods. On the other hand, until recently Halls Creek people have been locked off Moola Bulla station for over forty years. Moola Bulla is the traditional country of many of the speakers of Halls Creek Kija. For everybody, these days travelling to country to hunt and fish hinges on the use of four-wheel drive vehicles. Warrmarn and the surrounding Kija communities have a higher ratio of 4WD to 2WD vehicles than Halls Creek, in part due to the success of Warmun Art Centre and Jirrawun Aboriginal Arts in injecting money into the communities.

Knowledge Acquisition and Retention

There are marked differences between the amount of knowledge retained by elders in communities versus towns (linguistic, ethnobiological and other). This knowledge retention impacts on the ability of elders to pass it on to the next generation. Many elders in the towns don't speak their languages on a daily basis and

seldom search for bush foods. Discussions about animals, plants and the land, which is regarded as important business, are abstracted by the 'urban' setting in which they take place.

Often the response to a question to which people may not know the answer is, "The old people didn't tell us." Kaberry (1939: 21) reveals something of the process of instructing children whilst foraging for food.

Children accompany their mother, so that from an early age they begin to absorb the details of the environment. She points out the tracks of game and reptiles, and the children constantly question her about different bushes and plants. On the whole there is little explicit instruction, and younger children are not considered capable of supporting themselves until after puberty. They generally managed to find something, however, which they ate on the spot, if it did not need cooking.

In the 1930s, as now, children learnt through doing things and asking questions. The main time for learning about the environment would have been in the three months 'holiday' during the wet seasons. If the old people didn't tell today's elders information such as the skins of trees, perhaps it was because there were only three months of the year when the appropriate questions might have been asked of them. The most knowledgeable people we have been working with are those who for the first years of their lives lived as 'myalls' in the bush with their parents or grandparents, avoiding white people out of fear.

Learning about the bush, learning the language and hearing stories about the country is very much a face to place experience. Now as in the 1930s, traditional knowledge and language can best be acquired by spending time in the bush with elders, and by asking questions in that environment.

There is a characteristic feature of Halls Creek Kija that has unfortunate implications for language maintenance. The tendency is to drop the gender suffix from nouns, particularly when the noun is borrowed into Kriol or English. Asking a speaker the name of an animal or plant (in English) invariably results in such forms.

Dijan kunya im neim thalngarr.

This tree is called thalngarr (snappygum).

Kriol example

Fluent speakers, of whom there are now only a handful, when asked to put the word into a sentence will do so with the appropriate demonstratives and full gender agreement.

Nginyjiny kunya-ny thalngarr-ji yinginy-pe-ni
This.m tree-m snappygum-m name-ns-3smIO

This tree is called snappygum.

Halls Creek Kija example

Partial speakers may know all of the uses and characteristics of a plant or animal but may not be able to construct a full Kija sentence and indeed may not even know whether it is masculine or feminine. Indeed working with Halls Creek Kija speakers alone would

probably have resulted not learning the noun classes for animals and plants. Since the last full speakers of this dialect will not be with us for much longer this project is very timely.

What goals do people have for this project? Given that Aboriginal people recognise that world has changed and they can't spend as much time in the bush as they'd like, they have requested books to aid language lessons; resources for schools and families to help in passing on the information. The fruits of this project may be many and varied. As the project advances Kija and Jaru people are being consulted about the presentation of the material in terms of content, style, target audience and media as well as what other potential outcomes there may be.

The existence of non-speakers with sound tracking skills and knowledge of the uses and preparation of plants invites one to posit that, at least in the east Kimberley, TEK has been more durable than traditional languages in terms of resistance to the pressures against their perpetuation. Why? Perhaps the transmission from parent to child is more critical for endangered languages than for TEK. Endangered language may require unbroken intergenerational transmission, at least to a certain age. Perhaps TEK is something that can be acquired sporadically with reasonable success. The Moola Bulla experience may be testament to this. Three months of the year seems to have been sufficient for Kija children to acquire reasonable bushcraft but not to properly acquire the endangered language, when for the remaining nine months, they would hear predominantly Kriol. By contrast, Nyininy speakers from Gordon Downs were some of the last Aboriginal people to leave a Kimberley cattle station in 1981 when the entire community was expelled. Soon after, the community of Kundat Djaru was established at Ringers Soak 9km from the Gordon Downs homestead. Kundat Djaru today is one of only two communities in the Kimberley where children speak a traditional Aboriginal language as their mother tongue. The authors suggest that this may be in part due to its geographic isolation and in part to the relatively uninterrupted contact with traditional country and the resultant perpetuation of cultural traditions.

Maintaining the Links

Do animals and plants play a role in maintaining the links between language, identity and the land? Clearly if they do, it is an unwitting one. However, if enthusiasm plays a part in the transmission of knowledge then their potential is enormous. Bush tucker is important to Aboriginal people. It is also familiar, concrete and tangible, not to mention tasty. As we have seen from the adult non-speakers and partial speakers, without the production of the requested resources, the role has been greater in maintaining links between identity and the land, and lesser for language.

Throughout the country, for many years, TEK has been a cornerstone of Language maintenance programmes and quite rightly so. While TEK was once critical for survival, today it is more important for Aboriginal

identity. The role of animals and plants in the maintenance of language is potentially critical, if language maintenance may be successfully piggybacked upon the maintenance of the more durable TEK.

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Bibliographical References

- Achoo, H. *et al.* (1996). *Moola Bulla, In the Shadow of the Mountain*. Broome, Magabala.
- Berndt, R.M. & Berndt, C.H. (1988). *The World of the First Australians*. Canberra, Aboriginal Studies Press.
- Blythe, J. (2001). *Yuwurriyngem Kijam: a Phrasebook of the Kija Language*. Halls Creek, KLRC.
- Crawford, J. (1868). On the vegetable and animal food of the natives of Australia in reference to social position, with a comparison between the Australian and some other races of man. *Transactions of the Ethnological Society of London. New Series*, 6:112-22.
- Hudson, J. (1983). *Grammatical and Semantic Aspects of Fitzroy Valley Kriol*. Darwin, SIL-AAB.
- Hudson, J. & McConvell, P. (1984). *Keeping Language Strong - Report of the Pilot Study for the Kimberley Language Resource Centre (long version)*. WA, KLRC.
- Jebb, M.A. (2002). *Blood, Sweat and Welfare*. Crawley, UWA Press.
- Kaberry, P.M. (1935). *Flora Valley*. Unpublished Fieldnotes (3 Vols). AIATSIS. Ms. 739/1, 14.
- _____. (1937a). Subsections in the East and South Kimberley Tribes of North-West Australia. *Oceania*, 7/4:436-58
- _____. (1937b). Notes on the Languages of East Kimberley, North-West Australia. *Oceania*, 8/1:90-103.
- _____. (1938). Totemism in East and South Kimberley, North-West Australia. *Oceania*, 8/3:303-333.
- _____. (1939). *Aboriginal Woman, Sacred and Profane*, London, George Routledge & Sons.
- Kimberley Language Resource Centre, (1992). *Jaru Dictionary: Draft Edition, June 1992*. Halls Creek, KLRC.
- Latz, P. K. (1995). *Bushfire and Bushtucker: Aboriginal Plant use in Central Australia*. Alice Springs, Institute of Aboriginal Development.
- Leichhardt, L. (1847). *Journal of an overland expedition in Australia, from Moreton Bay to Port Essington, a distance of upward of 3000 miles, during the years 1844-1845*. London, T. & W. Boone (reprinted 2000, Adelaide, Corkwood Press).
- Lindsay, Biddy Yingguny *et al.* (2001). *MalakMalak*

- and Matngala plants and animals: Aboriginal flora and fauna knowledge from the Daly River area, northern Australia. NTBB No 26. Darwin, Parks and Wildlife Commission of the NT.
- Low, T. (1989). *Bush Tucker: Australia's Wild Food Harvest*. Sydney, Angus and Robertson.
- Maiden, J.H. (1889). *The Useful Native Plants of Australia*. London, Trubner.
- McGregor, W. (1988). *Handbook of Kimberley Languages Volume 1, General Information*. Canberra, Pacific Linguistics C105.
- Puruntatameri, J. *et al.* (2001). *Tiwi plants and animals: Aboriginal flora and fauna knowledge from Bathurst and Melville Islands, northern Australia*. NTBB No. 24. Darwin, Parks and Wildlife Commission and Tiwi Land Council.
- Roth, W.E. (1901). *North Queensland Ethnography. Food: its search, capture and preparation*. Bulletin 3. Brisbane, Government Printer.
- Rose, D.B. (1984). *Preliminary Report: Ethnobotany in the Bungles*. East Kimberley Working Paper No. 5. Canberra, Centre for Resource and Environmental Studies.
- Scarlett, N.H. 1984. *A preliminary account of the ethnobotany of the Kija people of Bungle Bungle outcamp*. East Kimberley Working Paper No. 6. Canberra, Centre for Resource and Environmental Studies.
- Sutton, P. (1997). Materialism, Sacred Myth and Pluralism. In F. Merlan, J. Morton & A. Rumsay (Eds.), *Scholar and Sceptic, Australian Aboriginal Studies in Honour of LR Hiatt* (211-242). Canberra, Aboriginal Studies Press.
- Taylor, P. & Taylor, J. (1971). A Tentative Statement of Kitja Phonology. In B. Blake *et al.* *Papers on the Languages of Australian Aboriginals*, (100-119). Canberra, AIAS.
- Tsunoda, T. (1981). *The Jaru Language of Kimberley, Western Australia*. Canberra, Pacific Linguistics, B-78.
- Williams, N.M. & Baines, G. (eds.) (1993). *Traditional Ecological Knowledge: Wisdom for Sustainable Development*. Canberra, Centre for Resource and Environmental Studies, ANU.