

A PRELIMINARY OUTLINE OF ANTIKIRRINYA BIRD CLASSIFICATION:
A COMPARATIVE APPROACH

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1. Introduction

The main aim of this article is to document the ecological bird classification of the Antikirrinya, an Indigenous Australian population of South Australia. More specifically, I describe the classification provided by Ingkama Bobby Brown or *Wirrkima*, Antikirrinya elder and *ngurraritja* or ‘custodian’ of Ingkama, that is, the area of Ingomar Station, where Bobby was born ‘out bush’ around 1940. The station lies about seventy kilometres south of Coober Pedy, South Australia, and is where Bobby grew up and was taught Antikirrinya ways by his mother’s family, especially his uncle and grandfather.

The Antikirrinya are one of the smallest Yankunytjatjara-speaking groups of the south-eastern parts of the ‘Western Desert’ speech chain (for a discussion of the name Antikirrinya, see Brown and Næssan 2012). Yankunytjatjara² is an endangered cluster of First Nations communilects spoken by approximately 300-400 people, mainly in South Australia (Goddard 1985, Goddard and Kalotas 2002, Næssan 2008).

Ingkama or ‘Ingomar’ has been a South Australian *walypala* or ‘whitefella’ pastoral station (or a pastoral area under other stations) since the late 1870s (Munro 1997: 363). On the eastern boundary of the Great Victoria Desert, the sparsely vegetated *Ingkama* area is a mixture of *tali* (sandhills), *tjintjira* (swampland, marsh), *tjarta* (scrubland) and *karru* (creek-bed) formations. Bobby distinguishes it from areas further north by means of the expression *ngurra talitjarra* or ‘country with sandhill(s)’.

During a 1991-2001 biological survey of the Pitjantjatjara-Yankunytjatjara Lands, which cover 102,650 km² in the north-west corner of South Australia, a total of 140 different Pitjantjatjara and Yankunytjatjara names for 107 different species were recorded. Overall, ‘at least 153 native bird species’ have been recorded in the area (Copley et al. 2003: 251-2).

Goddard (1996a: 7) recorded ‘eighty-odd’ bird names from Yankunytjatjara at Mimili, South

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² The names ‘Yankunytjatjara’ and ‘Pitjantjatjara’ are spelled in accordance with standard South Australian orthography, in which single rhotics signify taps and all postalveolars are underlined. Standard South Australian orthography is also used when quoting works using this spelling. Otherwise the orthography employed here is as follows: bilabials p, m, w; alveolars t, n, rr (tap), l; postalveolars rt, rn, r, rl; palatals tj, ny, y, ly; and velars k, ng.

Australia. Finally, the research reported in this article revealed at least 75 species known to Bobby (with 61 specific names for individual species or for groups of birds not further differentiated taxonomically). Not all of them are permanent residents of the Ingkama area, as some come from the coast when food is available, predominantly after rainfall.

The most immediately relevant sources for this paper are Goddard's (1996a) outline of Yankunytjatjara bird names (mainly from Mimili, South Australia), and Copley et al. (2003). Moreover, Goddard's (1996b) lexicographic work includes many Yankunytjatjara and Pitjantjatjara bird names. Although the above studies are from north of the Ingkama area, they are highly relevant to the extent that they incorporate bird names and knowledge of Yankunytjatjara-speaking communities. However, prior to Brown and Næssan (2014), very little if any research, and no reasonably detailed study, has been conducted on how Antikirrinya or other Arnangu ('Western Desert people') actually *classify* birds within taxa beyond that of individual names. 'Bird names' henceforth refer to terminal taxa; the smallest units recognized, without any terminological subdivisions (see Bulmer 1967: 6, 22).

2. Methods

This work results from an Indigenous Language Support (ILS) research project (*Tjurlpu tjurta ngurraritja: Antikirrinya/Yankunytjatjara traditional linguistic and ecological knowledge of native birds*), which mainly took place from November 2012 to June 2013. The project, initially suggested to me by Antikirrinya elder Ingkama Bobby Brown, was made possible through a grant from the Australian Commonwealth Office for the Arts, Department of the Prime Minister and Cabinet, and administered by the University of Adelaide.³ Field trips were conducted in December 2012 and April 2013. In late July 2013 a week was spent working together in Adelaide, and Bobby provided clarifications and input during several in-depth telephone conversations from February to June 2014. Yankunytjatjara-Antikirrinya was the default language throughout, although Bobby sometimes wanted to explain things in English.

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The best results were obtained when we were out bush, when Bobby would comment on the behaviour of the birds he had seen. Apart from trips out bush, the other main type of investigation took place in various motel rooms, in the office at the University and at my home in Adelaide. These intensive workshops involved Bobby commenting on coloured pictures of various birds and on names I read out from previous work on Arnangu ('Western Desert') knowledge of birds (Goddard 1996a, 1996b, Copley et al. 2003). During workshops, Bobby made drawings of various birds while telling stories and supplying a running commentary on the behaviour, appearance and location of the birds in question, often interspersed with singing, the mimicking of birdcalls and occasional joking.

The use of images as an aid in the identification of bird species is far from unproblematic, as Agnihotri and Si (2012) point out. 'Static, two-dimensional images' (ibid.: 189) may in effect be atypical, under- or over-representing features that are less or more clearly visible when perceiving birds in their habitat. This constraint may have been at work here.

Bobby has frequently told me that he does not know as much as the 'old folks', Antikirrinya people who have now passed away. *Tjirlpi tjurta wiyarringu*, 'the old people are gone', he remarked, and on a couple of occasions he said that he only remembered the names to some extent: *ngayulu ini half-way kulini*, 'I understand/remember the name only half-way'. In one sense (memory strain notwithstanding), he positions himself in between the *ninti purlka* or 'very knowledgeable/experienced' people of the past and the *yangupala tjurta ngurrpa*, 'the young ignorant/inexperienced people' of today. In another sense, his comments clearly show deference to the elders, a characteristic and highly valued traditional way of explicitly devaluing one's own significance. Additionally, Bobby may not have wanted to talk at length about some birds, for example, if some birds and their names were seen as having a special relationship with the *ngurraritja tjurta*, the 'custodians' from other areas. Throughout this process, of course, all the decisions on what and how much to include have been entirely under Ingkama Bobby's control.

3. Classification and nomenclature

The most commonly accepted system of scientific classification is essentially that devised by the Swedish botanist and zoologist Carl von Linné (1707-1778; alternatively Carolus Linnaeus). Influenced by Aristotelian logic and terminology (Cain 1958), de Tournefort's botanical classification (Larson 1967) and John Ray's work (Schiebinger 1993), Linné's voluminous tenth edition of his *Systema Naturae* systematically applied a generic-specific (binomial) terminology to almost 4,400 animal species (ibid.). From Linné's initially

botanical system of class, order, genus, species, and variety (Larson 1967: 1751), the scientific classification of living creatures is now commonly arranged into the main levels of kingdom, phylum, class, order, family, genus and species, corresponding broadly to Linné's understanding of species as 'in general, the lowest systematic unit' (Mayr 1940: 251), although 'to Linnaeus the species was a unit that could be defined on a morphological basis' (ibid.).

The broader realms of classification among the Antikirrinya and other Yankunytjatjara-speaking people are as follows. Non-edible plants and other foods do not seem to have a generic cover term, whereas edible plants and game are divided into *mai* 'vegetable food' (also 'food' in general) and *kuka* 'game, meat'. *Karlka* 'seed(s)' is one of the important subdivisions of *mai*. 'Additional categories are *maku* edible larvae, *wama*, *tjuratja* nectars and other sweet substances, and *tjau* edible gums produced by some plants' (Goddard and Kalotas 2002: 6). As will be seen below, seeds and nectar are examples of Antikirrinya classification of birds according to their food preferences.

Kuka and *mai* are frequently used as generic markers of class membership – for example, *kuka marlu* 'kangaroo' and *mai karlka* 'seeds' (as 'food'). A more specific term for 'fleshy substance' or 'fleshy parts' is *ilytjan*. This property is shared by all phenomena classified as *kuka*. Although *tjurlpu tjurta* 'birds' are not within the *kuka* taxon as such, they are *ilytjantjarra*, i.e. 'having meaty, fleshy substance', whereas *ngukurn tjurta* 'eggs' are classified as *kuka*.

Essentially an attempt to arrive at an approximate translation of underlying patterns of logic employed in Antikirrinya bird classification, this report draws on comparative data from bird classifications worldwide and employs scientific binomial taxonomy throughout. This last mentioned aspect is commonly encountered in the literature on ethnobiological classification. Seemingly innocuous and motivated by practical concerns, it nevertheless has its dangers. Antikirrinya bird names may inadvertently be read as fundamentally explicable by means of English and scientific terminology in the sense that, say, *nyii-nyii* really means 'zebra finch', which really means *Taeniopygia guttata*. It is important to clarify here that the use of English and scientific terminology is certainly not about juxtaposing them with Antikirrinya terminology and classification in such a way that *walypala* ('whitefella') science provides the unquestioned yardstick or frame of reference. In other words, the meanings, the significance of *nyii-nyii* are neither covered by, nor defined by the 'zebra finch' or 'Taeniopygia guttata'. The meaning of *nyii-nyii* has to do with, among other things, its

relationship to human beings, its skills in building nests (from which Antikirrinya people in the old days learnt how to make huts) and the fact that it shows people the way to water.

4. Desiderata and terminology: classifying *tjurlpu*

What is the distinctive property (or set of properties) of *tjurlpu*? Apart from actual bird names, there seems to be very little specific terminology pertaining to *tjurlpu tjurta* or ‘birds’ in Antikirrinya-Yankunytjatjara. The intransitive verb *paarr-pakarni* (‘flying, taking off’) is generally used for birds, but may now be extended to any airborne phenomenon, aeroplanes as much as eagles). Another intransitive verb, *ngunmananyi* (‘humming, cooing’), typically refers to the sounds made by a *marnpi* (‘pigeon’). Lastly, *tjurnku* (‘down’) refers to the soft body feathers of *tjurlpu tjurta*. Other terms relating to birds seem to be based on a triad of form, function and, last but not least, relative location. What these polysemous or generic terms signify specifically is readily understandable within a communicative context, but the terms in question do not pertain exclusively to birds.

Thus *mulya* is used for ‘beak’, but is also any kind of ‘nose’, ‘snout’, or even ‘face’. The core feature appears to be the ‘front part’ or ‘tip’ of something, and the meaning can be easily extended to a whole range of phenomena (for example, the front part of a car is usually referred to as *mulya*). *Karłpi* is ‘wing’ as well as ‘feather’ and ‘broad leaf’. Broadly speaking, the main distinguishing feature of *karłpi* appears to be something along the lines of elongated, pointed and more or less oval shapes that are parts of larger units. *Pirri* refers to any kind of (bird and animal) ‘claw’, but also a human ‘fingernail’, whereas *wipu* is any kind of ‘tail’, be it that of an animal or a bird.⁴ *Mina* (or *pinytjun*) are terms used for ‘nest’, and *mina* generally refers to any rodent’s or bird’s nest, although birds that are classified as *minatjarra* (‘having a nest’) are clearly distinguished from those who lay their eggs *purnu yurltungka*, ‘inside hollow logs’. Both lizard’s and bird’s eggs are covered by the term *ngukurn*, which also means ‘brain’. These phenomena have in common the fact that they all are roundish in shape and enclosed organic substances.

The *karłaya* (emu, *Dromaius novaehollandiae*) is not a *tjurlpu*, though it does fall within the ‘game, meat’ *kuka* category. As Bobby says, the *karłaya* is ‘too big, and he can’t fly’. Emus lay eggs like *tjurlpu*, but so do lizards. ‘Beaks’ are perceptively distinctive, but in terms of nomenclature the emu has a ‘tip’ or ‘front’ *mulya* like everything and everybody else.

⁴ This generic term is similar to such terms as *kata* ‘head’, *kuru* ‘eyes’, *tjarłiny* ‘tongue’, *tjuni* ‘stomach’, *pilintji* ‘intestines’, *tjuni pilintji* ‘main part of intestines’, *tjarna* ‘back’ and *marna* ‘bottom’. These terms are applicable to people, animals and birds alike.

Gauthier and de Querioz (2001: 21) say that ‘in terms of “key” or “essential” avian characters, feathers have been central to traditional notions of “Aves,” because in the extant biota, at least, all 10,000 species of birds, and only birds, possess feathers...’. To the Antikirrinya, *karlpi* meaning ‘feathers’ is not represented as constituting a distinctive property, while *karlpi* in the sense of ‘wings’ is conceptualised allometrically – that is, the size of *karlpi* relative to the rest of the emu’s body. Thus, *karlaya karlpi wiya*, ‘the emu has no wings’, or, more specifically, it does not have wings of any importance compared to the size of its body.

Thus far, a *tjurlpu* has to be capable of flight and smaller than an adult emu. The next question one may ask is: how distinctive are capacity for flight and morphology (shape and size) as criteria for inclusion in the *tjurlpu* category?

5. Of bats and (other) birds: flight and morphology

Pinytjantjara is listed in Goddard (1996b: 136) as ‘bat’. More specifically, for the Arnangu that Copley et al. (2003: 205) worked with on the Pitjantjatjara Yankunytjatjara Lands, ‘*pinytjantjara* is used for all microbat species’. The species captured during the above-mentioned survey and identified by Arnangu as *pinytjantjara* (ibid.: 204) were the Chocolate Wattled Bat (*Chalinolobus morio*), Gould’s Wattled Bat (*Chalinolobus gouldii*), Gould’s Long-eared Bat (*Nyctophilus gouldi*), the Lesser Long-eared Bat (*Nyctophilus geoffroyi*), the Southern Freetail-bats (*Mormopterus* spp.) and the White-striped Freetail-bat (*Tadarida australis*).⁵ Ingkama Bobby also uses *pinytjantjara* for ‘bat’ in general.

Pinytjantjara has likely developed from the old term *pinytjun* ‘nest’ and the comitative or relator suffix *-tjarra* ‘with, having, using’. These bats are generally said to breed in hollow logs, but *pinytjantjara* as ‘with, having, using nest’ makes sense given that all of the above species have been found to use the nests of Fairy Martins (*Hirundo ariel*). *Partupirri* (Fairy Martins) build nests out of mud on cave ceilings or other suitably enclosed places, and Schulz (1997: 70) shows that these nests may be used as roosting sites (although it should be said here that the source data did not come from South Australia). The name *partupirri* is used for bats, presumably microbats, in some areas (Goddard 1996b: 129), but I am not aware of any Arnangu using *partupirri* to designate both microbats and the Fairy Martin.

⁵ The other extant species of insectivorous microbats (Copley et al. 2003: 201) in the north-west corner of South Australia are Finlayson’s Cave Bat (*Vespadelus finlaysoni*), the Inland Forest Bat (*Vespadelus baverstocki*), the Inland Broad-nosed Bat (*Scotorepens balstoni*), and the Little Broad-nosed Bat (*Scotorepens greyii*). *Ulpurpurru*, the Ghost Bat (*Macroderma gigas*, now probably extinct), has been excluded from the discussion here for the sake of clarity and brevity.

Several cultures do group ‘birds’ (Aves) together with ‘bats’. Among the Wopkaimin, hunters and horticulturalists at the Fly and Sepik headwaters of central New Guinea, *awon* includes ‘birds, bats and sugar glider’ (Hyndman 1984: 294). The horticulturalist Karam of the Schrader Mountains of New Guinea employ the taxon *yakt*, which encompasses about 180 kinds of recognized and named airborne birds, as well as bats (Bulmer 1967: 5). For the Nage, hunters and livestock breeders on the island of Flores, eastern Indonesia, bats and birds belong together in the category of *ana wa ta'a co*, ‘flying animals’, because in the final analysis ‘bats – like birds (Aves) – possess wings and move in the same way as do birds’ (Forth 2004: 433). The hunter-gatherer Efe of the Ituri forest in northeastern Zaire and their neighbours, the horticulturalist Balese, group birds and bats together under the term *osa* (Efe) and *bali* (Balese), and at least the Efe pointed out that bats were *osa* because they had wings (Arioti 1985: 25-6).

The Northern Paiute of the Great Basin use the taxon *huzíba* for ‘birds’ and ‘bats’. Bats, robins and hawks occur with other *paʔágweiti* (‘high fliers’) in the ‘not used’ category (Fowler and Leland 1967: 386). As seen below, *huzíba* is one of the subsets of *yozi dí* ‘things that fly’ or ‘flying things’.

In some instances, a perceived morphological similarity between bats and non-flying creatures is reflected in naming practices. The name *dshonné* ‘flying mouse’ is recorded among the Chipewyan people of the Lake Athabasca region in Canada (Höhn 1973: 165), whereas *flittermouse* occurs in at least sixteen dialects of English (Skeat 2011 [1911]: 4). In German, *Fledermaus* (‘flying mouse’) is the term for a microbat, and the *Flughund* (‘flying dog’) is a megabat. Similarly, in Norwegian *flaggermus* (‘flying mouse’) denotes a microbat and *flyvende hund* (‘flying dog’) a megabat, whereas in English the latter is commonly referred to as a ‘flying fox’. It seems reasonably clear from this that bats were at some stage considered (or at least represented) as mouse-like, dog-like and fox-like (presumably because of their facial features) in some classificatory schemes.

From the examples above, there appear to be two different patterns of classification in the data, namely the grouping together of bats and birds on the grounds of behaviour, morphology, or both (bats fly and have wings), versus relating bats to the most similar-looking non-flying creature while at the same time designating the capacity for flight in the name (which in effect simultaneously distinguishes a part of the morphology from behaviour and juxtaposes the two).

Classificatory ambiguity seems evident in the last mentioned trajectory. An interesting similar example is seen in Tuladhar-Douglas's comment (2008: 77) that 'the classificatory difficulties posed by bats recur in any number of tropical Asian societies. The problem is made overt in a folk tale cited by Karma Phuntsho from Bhutan (2000, p. 96) in which a bat claims to be either a bird (by showing its wings) or a beast (by showing its fur), depending on the situation'.

Classificatory ambiguity is also evident in the following example. The extent to which the Great Basin Southern Paiute include bats within the taxon *wičici* (commonly used for 'little birds') seems a matter of individual preference. Thus, 'some informants say that they must be birds, because they fly, while others say that they must be related to mice because of their physical appearance' (Fowler 1971: 151). Thus, morphology (body shape and size) and the behaviour of a being may lead to different conclusions within the same community.

Having considered some of the ways in which bats are classified in relation to taxa that more or less inclusive of (and more or less equivalent to) 'birds', it is time to approach the question of whether *pinytjantjarra* (microbats) are considered to be, or to be related to, *tjurlpu*.

Bats are not eaten by Antikirrinya: in fact, Bobby says *pinytjantjarra* are poisonous to eat. Apart from that, I have never heard Antikirrinya give bats anything approaching special symbolic significance. According to Bobby, *pinytjantjarra karlpitjarra munu paarr-pakanytja*, that is, 'bats have wings and they fly'. In this instance, both the morphological property and the associated behaviour are made explicit, whereas the capacity to be airborne is usually implied through the reference to 'wings'. As noted previously, the term *karlpi* covers a fairly broad domain. *Karlpi* meaning 'feathers' is obviously not what is being referred to here; in fact, no Antikirrinya ever drew my attention to the ostensibly distinctive fact that *pinytjantjarra tjurta* have fur. Nor did Bobby mention other morphological properties of bats or their similarity with other (non-airborne) creatures, perhaps indicating that they are considered irrelevant. A distinction based on laying eggs has never been mentioned either, and the only clear reference to behaviour relates to flight. *Pinytjantjarra mungangka paarr-pakanytja* ('bats fly around at night'), and in that sense their airborne behaviour takes place in a temporal sphere similar to that of *piiwi* (Tawny Frogmouth, *Podargus strigoides*), *tjurrki* (Australian Owlet-nightjar, *Aegotheles cristatus*), *wiratju* (Barn Owl, *Tyto alba*), and *wiilu* (Bush Stone-curlew, *Burhinus grallarius*). However, in contrast to the above, *pinytjantjarra kuru pati* ('the bat is blind').

Opinions concerning the classification of bats differ among Arnangu. Greg Wilson (personal communication, April-May 2014) asked two Pitjantjatjara-speaking women in their late forties about this, and one of them, who was working with Greg at the time, said *pinytjantjarra* are *tjurlpu*⁶ but that they are ‘bad’ birds, essentially due to their movements being the temporal reverse of ‘the norm’ regarding sleep and activity. The other, communicating via iPhone, drew attention to the morphological dissimilarities between birds and bats, stating that *paluru pina purlka munu kartirti iri*, ‘it [the bat] has big ears and sharp teeth’, that *tjana* (Arnangu *tjurtangku*) *alatji kulini: mamu palatja*, ‘they (Arnangu [pl + ERG] think like this: it’s evil, that one’. She also remarked *pinytjantjarra mauntalpa nyinapai, walytja tjurta kutju*, ‘bats stay by themselves, only with their own’. In sum, she held that bats are not birds, although they fly.

In early May 2014, Greg met three female Pitjantjatjara speakers at the Central Market in Adelaide. When asked about bats, they did link them with birds, since they both fly.

From the above, it is reasonably clear that behaviour points in two directions: *pinytjantjarra tjurta* stick to themselves, which, together with morphology, is seen as making them separate from birds. On the other hand they do fly, and this, in so far as it is considered a significant desideratum in and of itself, leads to them being *tjurlpu*.

When asked if *pinytjantjarra* are *tjurlpu*, Bobby was consistently non-committal. Sometimes he replied, *tjinguru*, ‘might be’ or *ngayulu ngurrpa*, ‘I don’t know’. That bats have wings, that they fly and that they consequently share two prototypical properties with those in the *tjurlpu* category is unproblematic. However, in contrast to the situation outlined by Forth concerning Nage classification of bats as ethnotaxonomically and symbolically peripheral members of a taxon consisting of airborne creatures (Forth 2009: 143), *pinytjantjarra* were neither clearly classified as, nor overtly distinguished from, *tjurlpu* by Bobby, who did not say that *pinytjantjarra* are (not) *tjurlpu*.

6. Flight and morphology: the case of ‘insects’

Across different cultures, it seems fairly obvious that the scope of taxa including birds (*Aves*) may have a broader or narrower scope than the scientific taxon *Aves*. Says Hunn (1982: 838), ‘often the life form we gloss as “bird” is, in fact, only “quasi-bird,” a monothetic taxon defined in terms of the capacity for flight or a preference for an aerial habitat’. The Cheyenne of the American Plains ‘consider dragonflies and butterflies to be birds, both hatched from

⁶ Note that the spelling of the iPhone message mentioned below has been modified in accordance with the main spelling of this work.

nymphs, and they consider many other birds to be likewise developed from particular nymphic or larval forms, forms which Anglos call snakes' (Moore 1986: 178). The Sahaptin of the Columbia River Basin have a category 'egg-makers', which include 'birds, reptiles, fish, and insects', one of the subcategories of this group being the polylexemic *wayna-waynaʔá*, 'flyers such as birds and insects' (Randall and Hunn 1984: 343).

The Sinama-speaking Samal of Basilan Strait in the southern Philippines have the category *manuk-manuk*, which in its broadest sense 'includes all creatures larger than flies that are adapted to flying' (ibid.: 339). Mosquitoes are excluded, but moths and dragonflies fall within this category. A different example is provided by the Great Basin Northern Paiute, for whom *yozi' di* ('things that fly') consists of two subcategories, namely *huziba* ('birds and 'bats') and *muibigwaʔniʔyu* ('fly-like things'), which includes butterflies, locusts, moths and flies, all of which are also within the 'not used' category (Fowler and Leland 1967: 386, 392). That the taxon *huziba* ('birds' and 'bats') is distinguished from other flying creatures based on size seems clear from the alternative term for 'fly-like things': *titi' giciʔyu yozi' di*, or 'tiny flyers'.

The above examples, in which some flying insects are either seen as a type of birds or as part of a 'birdlike' group of flyers, seem different from the situation among the Antikirrinya. There is no Antikirrinya generic term corresponding to 'insect'. Instead, a number of flying insects are represented in terminal taxa, for example, *kiwinyiwinyi* 'mosquito', *punpun* 'fly', *piiny-piiny* 'moth', *pinta-pinta*, brightly coloured butterflies associated with men and boys, *ngurtu-ngurtu*, the paler or yellowish butterflies associated with girls, and *karluwartawara* 'dragonfly'. However, despite their wings and capacity for flight, they are not grouped together with or otherwise seen as somehow related to *tjurlpu*.

A *tjurlpu* must be airborne, but not all airborne creatures are *tjurlpu*. Flight, then, is a necessary but insufficient criterion modified in varying degrees with reference to morphology (shape, size, appearance) and behaviour other than flight.

7. Sounds and onomatopoeia in terminal taxa and beyond

Arnangu typically see bird names and the sounds birds make as related. Emphasising the importance of sounds in meaning and the old and everlasting properties of the names, Bobby remarked, 'ini *tjurlpu tjurta irritatinguru*. *Tjirlpi tjurtangku kulira ini tjunu*. The name goes on forever. All the bird names are from the past. After hearing (the birds), the old people named (the birds)'.

Bobby readily distinguished between on the one hand swallow calls about raptors and warnings about approaching predators on the ground, and on the other calls warning that other non-raptors are coming into their territory. Acute sensitivity to bird calls is quite typical of senior Antikirrinya. For them, matter-of-factly distinguishing between a crow coming back to the area where it was hatched and a crow coming from a different area (based on their sounds) is a fairly obvious thing to do.

In a discussion of Pitjantjatjara and ‘Andagarinja’ classifications of sounds, particularly focusing on musical terminology, Ellis et al. (1978: 78) held that both musical and environmental sound is ‘one of the most critical elements in classification by Aboriginal people, probably throughout Australia’. Goddard’s (1996a: 6-7) brief but insightful treatment of onomatopoeia in Yankunytjatjara bird names shows that ‘if the bird has a commonly heard call (or calls), the name is almost invariably an onomatopoeic rendering of the call (or one of the calls). The bird is said to “call its name itself” *walytjangku ini wangkanyi*’ (ibid.: 6). The imitation to which attention is drawn is the mimicking of a call by ‘uttering the name with the appropriate changes to pitch and volume and with repetition if appropriate’, whereas the names themselves, ‘when cited as names, are pronounced without any special effects’ (ibid.: 6-7).

Another mode of imitation is exemplified by Bobby’s rendering of two types of crow sounds. He uses *kaaa... kaaa...* with a deep, low voice to indicate *kaarnka tjurta urlparirranguru*, ‘crows from the east’, also called ‘from Arabana country’ (typically from around Anna Creek), whilst crows from Ingkama and Mabel Creek have calls (*kaaa... kaaa...*) with a comparatively higher pitch and an overall softer quality. The actual imitation of the sounds is different from the name, as applies to several other birds, for example, Bobby’s imitation of the call of *piyarr-piyarr* (Galah, *Cacatua roseicapilla*). It would appear that name-based imitations (imitations with lexemic foci), the names ‘cited as names’ (see above) and imitations in the sense of non-verbal vocalizations should be distinguished from one another.

The name *ararlaparlaparl* (Crested Pigeon, *Ocyphaps lophotes*) is said to come from the sound this pigeon makes when it flies, but most of the names do seem to be based on birdcalls. One of the exceptions is *itirrki tjaru-tjaru* (Masked Lapwing, *Vanellus miles*), which refers to the fact that the bird in question has a habit of moving its head downwards and looking down – ‘down’ is *tjaru*. *Itirrki* was left unexplained, and I was unable to obtain an etymology for it. In general terms, it would be fair to say that the etymologies of some bird names are difficult for Arnangu to explain, or, for that matter, anyone concerned: although

their referents are clearly understood, they are nevertheless to all intents and purposes unanalysable (much like ‘hawk’, or ‘falcon’ for English speakers). These names arguably relate to non-onomatopoeic names in most cases. Both *ngarnamarra* (Malleefowl, *Leipoa ocellata*) and *warlawurru* (Wedge-tailed Eagle, *Aquila audax*) would seem to fall within the unanalysable category, in addition, Bobby remarked that he never heard the *warlawurru* utter any call.

Granted that most names are based on onomatopoeia (i.e. resulting from processes of lexicalizing bird sounds) and that these names are important in identifying the bird(s) in question, there is nevertheless no indication that bird sounds or representations thereof play any role in levels above the terminal taxa.

8. *Nganampa walytja*: our relations

The term *walytja* has several related meanings, but typically means ‘relatives’ and ‘relatedness’. In a broad sense, *walytja* or ‘kin’ relationships occur on three levels as far birds are concerned. *Tjurlpu tjurta* have their own *walytja tjurta* or ‘kin’. Birds may be grouped together in non-terminal taxa which are extended or classificatory family-like relationships, and in addition, some birds are seen as being related to (all) Arnangu.

The birds designated as *nganampa walytja* (literally ‘our family’ or ‘our relations’) are the *kurrparu* (Australian Magpie, *Gymnorhina tibicen*), *kaarnka* (Torresian Crow, *Corvus orru*; Little Crow, *Corvus bennetti*; Australian Raven, *Corvus coronoides*), and *tiil-tiil* (Magpie-lark, or Murray Magpie, *Grallina cyanoleuca*). These birds ‘stay close to the camp’, *ngurra itingka ngarapai*, or, as Bobby noted, they ‘hang around with Arnangu all the time’.

Itirriki tjaru-tjaru (Masked Lapwing, *Vanellus miles*) are not considered ‘our family’, although according to Bobby, *ngurrangka itingka ngaranyi*, *papa inuraku ngurlu*, *pakutjaku mulkuku ngurlu*, ‘they stay close to the camp, because they’re afraid of dingoes, foxes and wildcats’.

The birds within this grouping are otherwise dissimilar; the *tiil-tiil* (Murray Magpie) is the only one among them that makes a nest out of mud. In contrast to the predominantly insectivorous other birds in this group, the *kaarnka* (Crow) is said to ‘eat anything, any scraps of food he can find’, and is often referred to in Aboriginal English as *kapintja* (< English ‘scavenger’). In fact, the *kaarnka* might pick up just about anything it sees, even if it is not food. Thus, *wati/kungka kaarnka* (‘crow man’ and ‘crow woman’ respectively) are used for ‘light-fingered’ people. Metaphorical extensions of bird names provide a means to highlight certain people’s perceived antisocial behaviours.

9. *Tjurlpu tjurtangku tjakultunkupai*: birds that impart messages

As the day comes to an end, it grows darker *mungarringanyi*. The sun is setting, *tjirntu tjarrpanyi*. The sun is about to enter the realm of *munga* or ‘darkness’ and will traverse underneath the world from west to east before returning at *katjarungkarni* or ‘daybreak’. Now it is *wantitja* – just before sun goes down – or *mungawarluru* – twilight, just before night. This is when one has to watch out and listen for signs of dangers, especially those associated with *mamu*, ‘evil spirits’. They come from the west as it is getting darker and lie in wait close to the camp. A little later, they might move around in the dark. ‘When the sun is down’, Bobby said, ‘they’ll get your soul if they can. *Mamu* might be grabbing your soul’.

Not only do the calls of the *titirarra* (also *itarr-itarra*, Spiny-cheeked Honeyeater, *Acanthagenys rufogularis*) and *pirtitja-pirtitja* (also *pititjaku-pititjaku*, Grey Butcherbird, *Cracticus torquatus*) warn about the evil spirits, they attack them and pick on the spirits’ tails with their beaks.

There are several types of *mamu* or ‘evil spirits’. Apart from huge, hairy female (*kungkapan*) or male creatures (*tjangara*) that are known to steal children and eat them, there are invisible spirits who may enter one’s body and cause various mental and physical problems. As seen above, the *mamu tjurta* or ‘evil spirits’ described by Bobby will steal a person’s ‘soul’ *kurrun* whenever they get the chance to do so. If one hears and understands the bird calls properly and stayed inside the hut, one can avoid this, but if the *mamu* is successful, a skilled *ngangkari* or ‘traditional healer’ is needed to go in search of the lost soul, take it from the evil spirit, and put it back into the body of the person in question.

Titirarra and *pirtitja-pirtitja* may be grouped together with *wiilu* (or *wirlu*, Bush Stone-curlew, *Burhinus grallarius*)) in that they all warn about some immediate danger in the dark. Whereas the former two are diurnal, the latter is perhaps more clearly associated with *munga*, the night and the darkness, though not exclusively so, since it is said to also move around during *mungatji-mungatji*, ‘half-way between midday and sundown’.

The call of the *wiilu* (Bush Stone-curlew, *Burhinus grallarius*) is considered specifically to be a warning about *kurtatji*. At times this term broadly refers to one or more enemies, but mostly it concerns the traditional Law assassin, the *tjina karrpil*, literally ‘bound feet’, due to the emu feather shoes worn by these men as they move around, often through the air by means of extremely powerful magic. The importance of knowing whether assassins are close to camp can hardly be overstated.

Piiwi (Tawny Frogmouth, *Podargus strigoides*) is a nocturnal raptor, but different from *tjurrki* (Australian Owlet-nightjar, *Aegotheles cristatus*) and other owls, since it makes nests in tree branches: ‘the *piiwi* is a troublemaker, might trick you’. Its yellow eyes have associations with the dusk, when evil spirits and assassins typically move around. People with ‘yellow eyes’ or *kuru urntarnu-urntarnu* are possibly *kurtatji* (in the case of men) or otherwise potentially dangerous and cannot be trusted, because their eyes signify a link with some of the dangers of the dusk and night.

A second group of birds that communicate vital information to people consists of the *kaarnka* (Crow) and *tjintirr-tjintirr* (Willie Wagtail, *Rhipidura leucophrys*). Bobby did not suggest such subgroupings by referring to clear terminological distinctions, but I nevertheless think the Crow and the Willie Wagtail may be singled out from the others mentioned above in that they do not specifically warn about dangers; rather, they tell news about other people, frequently kin. According to Bobby: *Kulinma! Kaarnkangku nganarnanya wangkanyi. Arnangu kutjupa pika purlka ngarrinyi iluntjikitja*, ‘Listen! The Crow is talking to us. Some person might be very sick and be about to die’. The *kaarnka* (Crow) tells about the illness and death of *walytja* or ‘kin’ living elsewhere. The *tjintirr-tjintirr* (Willie Wagtail) may bring bad news as well, but mostly it imparts messages to the effect that visitors are on their way to the camp.

10. *Purnu yurltungka ngukurn tjunanyi*: (those that) lay eggs inside hollow logs

Birds that lay eggs inside hollow logs are distinguished from birds that make nests *purnungka* or ‘in trees’ and *putjangka* or ‘in the grass’. In fact, birds that lay eggs inside hollow logs are often called *minatjarra wiya* or ‘no nests’, but this also applies to those species that lay their eggs in holes in the ground like the *itirrkijaru-tjaru* (Masked Lapwing, *Vanellus miles*) or among rocks on the ground like the *pirtingkura* (Inland Dotterel, *Charadrius australis*).

The *purnu yurltungka* descriptive tag of nesting preferences mainly consists of *irriyulta* (Wood Duck, *Chenonetta jubata*), *piyarr-piyarr* (Galah, *Cacatua roseicapilla*), *tjiltjiltji* or *tjiil-tjiil* (Budgerigar, *Melopsittacus undulates*), *patil-patil* (Port Lincoln Parrot, *Barnardius zonarius*), *tjulily-tjulily* (Mulga Parrot, *Psephotus varius*), *kuurr-kuurr* (Boobook Owl, *Ninox novaeseelandiae*), *tjurrki* or *tjuurr-tjuurr* (Australian Owlet-nightjar, *Aegotheles cristatus*) and *wiratju* or *tjalku-tjalku* (Barn Owl, *Tyto alba*).

Irriyulta is also a *tjurlpu kapitja* or ‘water bird’. Within *purnu yurltungka* are also four birds that are grouped under *karlka ngalkupai*, ‘habitually eating seeds’ or ‘seed-eaters’: the *piyarr-piyarr*, *tjiltjiltji*, *patil-patil* and *tjulily-tjulily*. The remainder, collectively referred to by

Bobby as *tjurcki tjurta* or ‘tjurcki (owl) mob’,⁷ are all owls, are broadly similar in appearance and are all nocturnal predators (*mungskangka paarr-pakanytja*, ‘flying around at night’).

The *piyarr-piyarr* (Galah) and others in this group are mainly found near marshes, waterholes or along creeks, mostly preferring to lay their eggs in *ankarra* (coolibah trees), but sometimes also in *kurrku* (mulga) trees, at Mabel Creek, Longs Creek and Lake Phillipson.

It seems clear that the heterogeneous grouping together of those birds that lay their eggs inside hollow logs does not actually designate or imply *walytja* or ‘kinship’, i.e. that the birds in question and the groups they belong to are related. This was made clear by Bobby’s remark that the *tjiltjiltji* and ‘*tjurcki* mob’ are not in the ‘same mob’, although both ‘stay inside hollow logs’, *purru yurltungka nyinanyi*.

People called *tjurcki* (the Australian Owlet-nightjar, *Aegotheles cristatus*) are not thieves but have hidden motivations. They are untrustworthy, sneaky and typically miserly where money is concerned. Basically un-sharing and uncaring, they may also be *pangan*, ‘greedy’. Darkness and its associations with potential danger may be relevant here, probably combined with the fact that the *tjurcki* mostly stays hidden during the daytime. It is then not *uti*, ‘visible, in plain sight’, not even when it occasionally peeks out from its hollow log.

11. *Ngukurn mantangka tjunanyi*: laying eggs on the ground

Birds that lay eggs on the ground are typically associated with *manta uril* or ‘open country’ (with the exception of the *ngarnamarra*, which mostly prefers *tjarta*, ‘shrub land’). These birds are the *pirtingkura* (Inland Dotterel, *Charadrius australis*), *itircki tjaru-tjaru* (Masked lapwing, *Vanellus miles*), *ngarnamarra* (Malleefowl, *Leipoa ocellata*) and *kipara* (also *parrul*, or *nganurti*, Australian Bustard, *Ardeotis australis*). The *pirtingkura* and *itircki tjaru-tjaru* are related, in the ‘same mob’, because they both simply dig a hole for the eggs. The others in this group cover the eggs with leaves (*ngarnamarra*) or place sticks and gravel around them (*kipara*).

Ngukurn mantangka tjunanyi appears to be simply a descriptive tag for nesting preferences and not a close kin grouping.

12. *Tjurlpu minatjarra*: birds with nests

Among the numerous kinds of birds which make nests in trees (often referred to as *minatjarra*, ‘with’, ‘having’ or ‘using nests’), a finer distinction is made between those

⁷ ‘Mob’ is used in Aboriginal English as a plural marker.

making *mina tarrtja* or ‘shallow nests’ and others. The *irtartura* or *marninka* (Black Kite, *Milvus migrans*), *piiwi* (Tawny Frogmouth, *Podargus strigoides*) and *ararlaparlaparl* (Crested Pigeon, *Ocyphaps lophotes*) make shallow nests. These nests are frequently compared with those of the *kaarnka* (Crow) – in a sense, the widely distributed *kaarnka* provides a yardstick, a measuring template for other birds with superficially similar nests, because *kaarnkangu mina palya palyarni*, ‘the Crow makes good nests’, that is, not shallow nests. The nest of the *irtartura* is placed in the same location as Crow’s nests: *irtarturaku mina kaarnka puriny, purnu katungka*, ‘the Black Kite nest is similar to the Crow, it’s high up in the tree’, but Black Kite nests are slightly larger than the Crow’s. The *piiwi* (Tawny Frogmouth) and *kurrparu* (Magpie) build quite similar nests in the very same locations, but *kurrparu* nests are a little deeper.

The *nyii-nyii* (Zebra Finch, *Taeniopygia guttata*) is among those species known to make good nests, and their association with the huts of people is quite specific. *Tjirlpi tjurta karnkungka nyinanyi, nyii-nyii puriny*, ‘The old people would sit inside the hut just like the Zebra Finch’. Also, *tjirlpi tjurtangu karnku palyarni, tjurlpu tjurtangu ngaparrtji mina palyarni. Tjamula arangka, tjamula kamila arangka, alatji. Tjurlpu tjurta ninti tjamula arangka*, ‘The old people are making huts, the birds for their part make nests. Such are the ways of the grandfathers and grandmothers. The birds know the ways of the grandfathers’.

For both birds and people, what takes place is ultimately a realization of ‘the ways of the grandfathers and grandmothers’, *tjamula kamila arangka*. These ‘ways’ are traditions and techniques to be taught and learned. What to use for a nest, and how and where to build it, are important parts of what birds are taught by their elders. According to Bobby, the very first building of a *karnku* (a brush hut made with *mulga* wood branches and spinifex grass) happened a very long time ago when Arnangu saw the nests of the *nyii-nyii*:

Arnangu tjurta mina nyakula tjurlpu nyii-nyiiinguru nintirringu. *Nyii-nyiiingku mina putjangka karlpingka palyarni. Tjanpi wartatjarra mankula munu tjarukutu tjunanyi*, ‘As Arnangu saw the nest, they learned from the Zebra Finch. The Zebra Finch build [domed] nests with grass and feathers. (People) put the spinifex grass downwards with the roots on (so water can trickle down)’.

Nest location, size, shape, building materials and the relationship of nests to people are important features which in varying degrees constitute similarities as well as differences within the category of *tjurlpu tjurta* and between birds and people.

Two of the remaining groupings (*marnpi tjurtaku walytja* and *tjurlpu kapitja*) mainly have to do with typical habitat preference, while a subcategory of the *tjurlpu kapitja* (‘water

birds’), called *ngurntiwarlarta* (‘long neck’), is primarily defined with reference to morphology. This is also the case with the last group considered here, the *tjuku-tjuku tjurta*, or ‘small birds’.

13. *Marnpi tjurtaku walytja*: ‘*Marnpi mob*’, or the Pigeon family

‘*Marnpi* (pigeon) mob’ is an example of a group identified lexically with reference to its typical or main members – the *marnpi* are the Common Bronzewing (*Phaps chalcoptera*) and the Diamond Dove (*Geopelia cuneata*). The other members of this group are the *ararlaparparl* (Crested Pigeon, *Ocyphaps lophotes*), *purntaru* (Little Button-quail, *Turnix velox*) and *parmparnparlarla* (Crested Bellbird, *Oreoica gutturalis*). Birds within this group stay in the grasslands, the spinifex grass and the saltbush areas (i.e. *putjangka*, *tjanpingka*, *irriyangka*)

14. *Tjurlpu kapitja*, ‘water birds’, and *ngurntiwarlarta*, the ‘long neck family’

The taxon *tjurlpu kapitja* – *kapi* ‘water’, *-tja* ASSOCIATIVE – obviously refers to habitat, and contains the subcategory *ngurntiwarlarta*, ‘long neck family’. That the last mentioned is a subcategory is evident from the fact that the ‘long neck family’ are all ‘water birds’, but not all ‘water birds’ are in the ‘long neck family’. Within *tjurlpu kapitja*, only *irriulta* (Wood Duck, *Chenonetta jubata*) and *tjurnatjarlirli* (Black-tailed Native-hen, *Gallinula ventralis*) are not classified as *ngurntiwarlarta*. In the old days, Bobby’s *tjamu* or ‘grandfather’ told Bobby about another type of duck, said to be smaller than the *irriulta* but otherwise quite similar (and a *tjurlpu kapitja* like the Wood Duck), but he was unable to remember the name.

Around Ingkama there were more or less permanent water sources at Eight Mile Creek, Twelve Mile Creek and Mabel Creek, and one of several waterholes was located on the *manta uril*, the ‘plain’ or ‘flats’ north-east of the Stuart Range. Groups of the Ingkama region ‘used to live there long time, see. Lived there all their lives, swamp everywhere around them’. These ‘swamps’ or ‘claypans’— *tjintjira* – were important sites for collecting bird’s eggs, particularly those of the *irriulta* (Wood Duck, *Chenonetta jubata*). However, when possible, the *tjurlpu kapitja* stay near open water.

Bobby remarked: *irriti nganarna ngukurn manu purnu yurltunguru. Manta ipangka pauningi, taarnpaingka*, ‘In the old days we used to get eggs from the hollow logs and boil them in the hot sand next to the fire so that they wouldn’t burst’. Whenever they took eggs, customary behaviour was to leave half of them or so; at least within Bobby’s group it was considered bad to take all the eggs.

Ngurntiwarlarta is one out of two taxa in which morphology (body shape and size) is clearly lexicalized. More precisely, the *ngurntiwarlarta* taxon (*ngurnti* ‘neck’, *warlarta* ‘long’, translated by Bobby as ‘long neck family’) is based on allometric reasoning concerning the size or shape of a body part in proportion to the rest of the body. Only two members of the ‘long neck family’ have additional names. *Taparangu*, a name covering the White-faced Heron (*Egretta novaehollandiae*), and the White-necked Heron (*Ardea pacifica*) are associated with swampy areas around Ingkama and with Lake Phillipson further north-west, the other name being *kurr tjal* ‘Swan’ (*Cygnus atratus*). Apart from these two names, the domain of the *ngurntiwarlarta* includes the Australasian Grebe (*Tachybaptus novaehollandiae*), Australasian Darter (*Anhinga novaehollandiae*), Australian Pelican (*Pelecanus conspicillatus*), Great Egret (*Ardea alba*), Hoary-headed Grebe (*Poliiocephalus poliocephalus*) and Pied Cormorant (*Phalacrocorax varius*). Several of the members within the *ngurntiwarlarta tjurta* category would be absent for a considerable time: typically, species like Australian Pelican, Pied Cormorant and Swan occur well south and south-east of the Antikirrinya lands. However, as Kingsford noted (1995: 422), several water birds may occur in arid Australian regions.

The *tjurnatjarlirli*, ‘Swamp Hen’ or ‘Black-tailed Native-hen’, are permanent residents in swampy areas or *tjintjira* and ‘go together’ with *ngurntiwarlarta*. This may have something to do with the neck of the *tjurnatjarlirli* not being quite as long as the other members of *ngurntiwarlarta* relatively speaking, but longer than that of the ‘Wood Duck’ or *irriyulta*.

Allometric patterns are not in themselves decisive for inclusion in the *ngurntiwarlarta* taxon, since ‘long neck family’ is a subdivision of *tjurlpu kapitja*. The *kipara* or ‘Australian Bustard’ (*Ardeotis australis*) does have a fairly long neck, but it is not *tjurlpu kapitja* and consequently not in the ‘long neck’ family. *Kipara manta urilta ngaranya*: ‘*kipara* lives on the flats, in open country’.

The *wiilu* or *wirlu* (Bush Stone-curlew, *Burhinus grallarius*) and *piil-piil* (Yellow-throated Miner, *Manorina flavigula*) represent different cases to the above, both being associated with swampy areas, but they are nevertheless not classified as *tjurlpu kapitja*. The *piil-piil* is grouped together with others that have nectar among their food preferences, i.e. *wama ngalkupai*, ‘eating nectar’ or ‘eating sweet substance’. The *wiilu* is different from the *tjurlpu kapitja* birds in that it ‘flies around at night’, *mungangka paarr-pakanytja*. In addition, it is a type of messenger bird, as seen above.

This broadly corresponds to Bulmer’s (1967) discussion of how the cassowary is classified by the Karam of Papua New Guinea: its ‘special taxonomic status’ is a ‘function of

something broader, a special status in culture, or cosmology, at large' (ibid.: 19), especially that of its relationship to human beings. Readily observable features of morphology and habitat are not all there is to it; at the 'upper level' of Karam taxonomy, 'culture takes over and determines the selection of taxonomically significant characters' (ibid.: 6).

15. *Tjurlpu tjuku-tjuku tjurta*: small birds

Many Antikirrinya-Yankunytjatjara speakers, Bobby included, use *tjuku-tjuku* for all things small, be it size, amount, or young and small creatures. Thus, while all chicks and a number of other phenomena could be termed *tjuku-tjuku*, the group of *tjurlpu tjuku-tjuku tjurta* relates to the size of adults. In contrast to the Great Basin Shoshoni distinction (Hage and Miller 1976: 483) between *kwinaa* '(large) birds' and *huittsuu* ('small birds'), the Antikirrinya 'small birds' constitute a marked category in that there is no contrasting lexicalized taxon of 'large birds', although certain birds may of course be described as 'big'.

This group mainly consists of the birds represented within the *mininy-mininy* and *mirrilyirrilyi* groups, i.e. predominantly the Pardalotidae and Maluridae families. Of the *mininy-mininy*, the smallest are the Chestnut-rumped Thornbill (*Acanthiza uropygialis*) and the Weebill (*Smicronis brevirostris*), which have an average adult weight of six grams and a wingspan of 15 cm (Higgins and Peter 2002: 292, 458), followed by the Inland thornbill (*Acanthiza apicalis*, seven grams and a wingspan of 15 cm on average) and the Yellow-rumped Thornbill (*Acanthiza Chrysorrhoa*, nine grams and with a wingspan of 17.5 cm) (ibid.: 437, 506). The heaviest of the *mininy-mininy*, which is twice as heavy as the smallest in this group, is the Southern Whiteface (*Aphelocephala leucopsis*), weighing 12.5 grams, but with a wingspan of 17 cm (ibid.: 550). Most of the *mirrilyirrilyi* are not that much bigger or heavier than the *mininy-mininy*: the Variegated Fairy-wren (*Malurus lamberti*) and the White-winged Fairy-wren (*Malurus leucopterus*) both weigh seven to eight grams and have wingspans of 14.5 and 13 cm respectively (Higgins et al. 2001: 311, 348), whereas the Splendid Fairy-wren (*Malurus splendens*) has an average weight of seven to eleven grams and a 14.5 cm wingspan (ibid.: 294). The heaviest of the *mirrilyirrilyi* are the Striated Grasswren (*Amytornis striatus*, 18 grams, and with 18 cm wingspan) and the Dusky Grasswren (*Amytornis purnelli*), which has a weight of 21.5 grams and a wingspan of 17 cm (ibid.: 414, 447), or three times the weight of the smallest species in this group.

Over half the *tjurlpu tjuku-tjuku tjurta* (6/10) are below 10 grams and have an average wingspan below 15 cm. Taking into account the larger and heavier species within this group;

one could safely say that all *tjurlpu tjuku-tjuku tjurta* are below 25 grams in weight and have a wingspan below 20 cm.

Interestingly, there are other birds that would fall below these values, for example, the *nyii-nyii* or Zebra Finch (*Taeniopygia guttata*), which Bobby called *tjurlpu tjuku-tjukukutu* ('a very small bird'). My understanding is nevertheless that the *tjurlpu tjuku-tjuku tjurta* group only consists of the *mirrilyirrilyi* and *mininy-mininy* taxa and that *nyii-nyii* is not actually included. What seems to be the case here is that all the birds in this category are small, but not all small birds are in this category. Explicitly, morphology is the desideratum. However, typically, unstated knowledge modifies the property of 'smallness'. The *nyii-nyii* may to some extent be in a category of its own (albeit unnamed), since *nyii-nyii tjurtanku kapi nintini* ('the Zebra Finches show [the way to] the water'). Also, it is associated with a very important *inma* or 'song, ceremony with song' (Ellis 1982), and, as noted above, is thought to have inspired or taught Arnangu in the old days how to make a *karnku* or brush hut. More generally, feeding preferences do seem to play a part. The *mininy-mininy* and *mirrilyirrilyi* eat both seeds and insects, whereas the *nyii-nyii* is predominantly grainivorous. Another tiny bird not within the 'little birds' category, the *tirtu-tirtu* (Striated Pardalote, *Pardalotus striatus*), with an average weight of 12 grams and a wingspan of 18 cm (Higgins and Peter 2002: 69), also has somewhat different feeding preferences from the *mininy-mininy* and *mirrilyirrilyi* groups, feeding on insects and nectar, *wama*, but not on seeds.

16. Concluding discussion

In so far as it is considered necessary, the task of separating overt taxa from other descriptive devices that are not taxa as such is far from simple, nor is the extent to which one can distinguish covert categories (unnamed taxa) from taxonomically overt categories (for a discussions of covert categories in biological classification, see Berlin et al. 1968, Atran 1983). Some of the groups of birds above are terminologically realized as phrases with characteristic ellipsis, though they represent typical ways of talking about these groups. Groups of birds not named by single nouns broadly correspond to the taxonomy patterns of some American First Nation languages. Drawing on Hupa and Sahaptin data, Valenzuela (2000: 11) mentions that 'categories that are usually named by monolexemic nouns in other languages tend to be coded by plurimorphemic (nominalized) verb forms or even by complete sentences'.

Contrary to the claim that 'the taxa which occur as members of the same folk ethnobiological category are always mutually exclusive' (Berlin 1973: 260; see also Berlin et

al. 1973: 215; Atran 1998: 548-9), a bird within one grouping may have memberships in other categories, as seen above. Those that lay eggs inside hollow logs may or may not be seed-eaters, nocturnal predators or a *tjurlpu kapitja*, a ‘water bird’. The above corresponds quite closely to Forth’s statement (2004: 427) that it ‘is by now fairly well established that speakers of a single language can employ a variety of conceptual criteria in defining and categorizing natural kinds, and, moreover, that, within a single culture, the same animal categories can participate in several classificatory schemes...’.

The most important groupings of *tjurlpu tjurta* appear to be birds seen as kin to Arnangu, followed by storytelling or messenger birds. As we saw above, the *kaarnka* (*Corvus* spp) is both *walytja* or ‘kin’ and a messenger. Both these groupings deal with the birds’ relationship to human beings and are based on their typical proximity to camps as well as behaviour. Spatial and behavioural patterns also combine when it comes to birds that lay their eggs in hollow logs or on the ground, the latter being distinguished from those that have nests in the grass like the *purntaru* (the Little Button-quail, *Turnix velox*). The above, and those that dig burrows for their eggs in riverbanks – the *ruurl* (*luurn*) or Sacred Kingfisher (*Todiramphus sancta*), Red-Backed Kingfisher (*Todiramphus pyrrophygia*) and *ruurl* or *tirrun-tirrun* (Rainbow Bee-Eater, *Merops ornatus*) – constitute a minority of birds in terms of nesting preferences and locations. The majority, simply put, make their nests in trees. Location, or habitat, is again important concerning the ‘*marnpi* (pigeon) mob’ and the *tjurlpu kapitja* ‘water birds’, whereas the ‘water bird’ subcategory of *ngurntiwarlarta* or ‘long neck’ is defined in terms of allometric morphology. The last grouping outlined above consists of the morphologically defined *tjurlpu tjuku-tjuku tjurta*, ‘little birds’ or ‘small birds’, although feeding preferences also distinguish these from other species. Other groupings or distinctions, some mentioned above, are *mungangka paarr-pakanytja*, ‘flying at night’, versus *karlarlangka paarr-pakanytja*, ‘flying during the day’; *karlka ngalkupai*, ‘seed-eating’ and *wama ngalkupai*, ‘nectar-eating’. Note, however, that categories of eating habits concern typical or habitual preferences and do not imply that the relevant birds necessarily eat this food always.

Most of the groupings considered here refer predominantly to space. This is connected to the concept of *ngurraritja*, ‘someone that belongs to a place, traditional owner, custodian’ (Goddard 1996b: 102). Translations I have heard from Bobby and other Arnangu emphasise this belonging, specifically that *ngurraritja tjurta* belong to and come from a place, ‘from the country’. As we saw above, some birds are said to have their own *tjukurr* (‘Law’) and to have

been taught *tjamula kamila arangka*, ‘the ways of the grandfathers and grandmothers’, from their elders. This is a continual process, and the teachings extend to people.

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