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# Flora–Fauna Loanwords in Arnhem Land and Beyond—An Ethnobiological Approach\*

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*Borrowing is said to be a pervasive phenomenon among Australian languages, particularly in the domains of flora–fauna and material culture. In-depth studies of borrowing in individual languages or small groups of languages exist, as do quantitative analyses covering selected vocabulary items across a large number of languages. To date, however, there have not been any comprehensive surveys of the flora–fauna inventories of several languages at once with the aim of investigating broad semantic and geographic patterns of borrowing. This study attempts to carry out such an investigation on the languages of Arnhem Land, within the broader context of northern Australian languages. A thorough investigation of the flora–fauna lexica of 21 languages revealed a number of loanword ‘corridors’ within which borrowing frequently occurred; the principal corridors were two coastal corridors along the northern and eastern coasts of Arnhem Land, and an inland–coastal corridor between Non-Pama-Nyungan languages and Yolŋu languages. Several words, mostly bird names, were identified as being repeatedly borrowed (Wanderwörter), and in much larger numbers than previously reported. Finally, several correspondences, presumably long-distance loans, were detected in languages as far away as the Kimberleys, Queensland and north-central Australia.*

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*Keywords:* *Wanderwörter; Ethnobiology; Indigenous Australia; Loanword; Arnhem Land; Gunwinyguan*

## 1. Introduction

Questions regarding the importance of loanwords have played a central role in Australian linguistics, ever since the publication of Heath's (1978a, 1981a) seminal papers on lexical diffusion in some languages of eastern Arnhem Land. There has been much debate on the pervasiveness of borrowing, a topic which has major implications for the elucidation of genetic relations between languages (Dixon 2002; Evans 2005; Bower *et al.* 2011). Currently, the consensus seems to be that rates of borrowing were lower than previously thought, but diachronic analysis of Australian languages remains challenging because of overall low levels of phonological variation (Harvey 2011). This could obscure patterns of loan and inheritance, and potentially make it difficult to determine the direction of borrowing.

Several authors have examined loanwords through a historical and language-ecological framework, with one of the better-known case studies being the incorporation of Macassan loans into the languages of Arnhem Land. Walker and Zorc (1981) and Evans (1992a) have produced extensive lists of Macassan loanwords in the Yolŋu languages and the languages of western Arnhem Land, respectively, along with explanations of the phonological changes involved, and methods to distinguish early from late loans (Evans 1997a). Given the nature of the contact situation, it is not surprising that many of the Macassarese loanwords found in Australian languages are nautical, seasonal, culinary and clothing terms, as well as words relating to trade, introduced technologies, implements and weapons. Very few flora and fauna terms seem to have been borrowed from Macassarese, and those that can be identified relate to the few species that were traded (e.g. trepang, pearl shell) or introduced (e.g. tamarind, horse). From a cross-linguistic perspective, however, flora–fauna vocabulary seems to be involved in borrowing to a moderate degree. Analysis of the World Loanword Database found that 30% and 25.5%, respectively, of words falling into the semantic domains 'Agriculture and Vegetation' and 'Animals' (over the entire database) were borrowed (Tadmor 2009).

When carrying out historical reconstructions of Australian language families, it is generally assumed that plant and animal names (along with the names of artefacts) are associated with a high risk of being loans, and are therefore regarded as less-than-ideal indicators of inherited phonological patterns (e.g. see Harvey 2003). More detailed analyses of Australian loanwords by semantic domain have been carried out in recent years, with mixed results. The Gurindji lexicon, for instance, seems to have a higher than usual proportion of loanwords (compared to other Australian languages), with well over half its flora–fauna vocabulary originating in neighbouring languages (McConvell 2009). On the other hand, among a sample of Australian languages from various families, it appears that flora–fauna terms are

less likely to be borrowed multiple times (i.e. to qualify as *Wanderwörter*) than the names of artefacts (Haynie *et al.* 2014). It is interesting to note, however, that the rates of borrowing of flora–fauna terms and basic vocabulary show a significant positive correlation in a global sample of 130 languages, suggesting that the same processes are involved in the spread of items from both domains (Bowern *et al.* 2014). The latter study also found that items within some sub-domains of flora–fauna are more likely to be borrowed; these include the names of psychotropic plants and large animal species.

While the above studies address important typological and historical issues, they tend to not take into account the biology of the plants and animals, the names of which are borrowed, or the geographical distributions of these species or associated loanwords. Two noteworthy exceptions in this respect are Nash (1997), who investigated the flora common to northern and central Australia, in order to find name correspondences that might suggest historical ties, and McConvell *et al.* (2014), who analysed the spread of the names of the Boab tree in relation to its distribution in Western Australia.

This paper focuses exclusively on the domain of flora–fauna terms in Australian languages, and aims to address the following questions:

- How widespread is the borrowing of plant and animal names in Arnhem Land and beyond?
- Can non-linguistic data help identify loan direction and patterns of semantic shift?
- What are the geographical patterns in the movement and distribution of plant and animal names?
- Are there discernible differences in the behaviour of plant names vs. animal names?
- Are the names of some species more likely to be borrowed than others, and why?

The analysis presented here is based on a more in-depth coverage of flora–fauna terminology than previously attempted. The geographic distributions of individual loanwords are traced, with close attention paid to any changes in referent (biological species) wherever possible. It is hoped that this study will shed light on historic and current cultural connections between various language groups, and perhaps also provide indications of ancient patterns of human movement within and beyond Arnhem Land.

## 2. General Methodology

### 2.1. Data Collection

Fieldwork was carried out in the remote Arnhem Land town of Maningrida over repeated trips between October 2013 and December 2015. Interviews accompanied by prepared visual and auditory stimuli, were carried out with speakers of numerous Arnhem Land languages,<sup>1</sup> both in town, or at various outstations near Maningrida.

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<sup>1</sup> Language name abbreviations: Ani. Anindilyakwa, Bur. Burarra, Dal. Dalabon, Dji. Djinaŋ, Gup. Gupapuyŋu, Jaw. Jawoyn, Kay. Kayardild, Kbl. Kun-barlang, Kun. Kune, Mar. Marra, Maw. Mawng, Ndj. Ndjebbana, Ngb.

Speakers of the languages Kune, Rembarrnga, Kun-barlang, Burarra, Ndjebbana, Gupapuyŋu and Djinaŋ/Wurlaki were interviewed. The steps involved in preparing stimuli for the elicitation of bird names have been described in Agnihotri and Si (2012) (see also Lahe-Deklin & Si 2014), but briefly, the following was carried out for the present study. A species checklist was generated for Arnhem Land, using the Spatial Portal function of the Atlas of Living Australia (ALA) website ([www.ala.org.au](http://www.ala.org.au)). A representative set of roughly 170 bird species was selected from the total checklist, and pictures for these species were sourced from the Internet, along with audio recordings of the relevant birdcalls from the website Xeno-Canto ([www.xeno-canto.org](http://www.xeno-canto.org)). During interviews, consultants were shown pictures of the target bird species, and the corresponding audio recording (if any) was played. The elicitation of plant names was more straightforward, with the colour photographs in the book *Top End Native Plants* (Brock 1988) serving as visual stimuli. Mammal names were recorded based on a free recall procedure.

A number of other languages of Arnhem Land and beyond were investigated in this study. Published and unpublished dictionaries and word lists of these languages were searched for translation equivalents for the plant and animal names recorded in the interviews, as well as for words showing formal similarities to the recorded names, but having undergone semantic shift. Dictionaries of some of the languages investigated through interviews were also searched for words that might have been missed or forgotten by consultants. The languages investigated included Mawng (Singer n.d.), Tiwi (Lee 2013), Rembarrnga (Saulwick 2003), Dalabon (Evans *et al.* 2004), Jawoyn (Merlan & Jacq 2005), Kun-barlang (Coleman n.d.), Nunggubuyu (Heath 1982), Ngandi (Heath 1978b), Ngalakan (Ngukurr Language Centre 2015), Burarra and Gun-nartpa (Glasgow & Glasgow 2011), Djinaŋ (Waters 2011), Gupapuyŋu (Lowe 2014), Ritharrngu (Heath 1980a), Yanyuwa (Bradley *et al.* 1992), Marra (Heath 1981b), Warndarrang (Heath 1980b) Yolŋu Matha (Greatorex 2014) and Kayardild (Evans 1992b). In addition, flora–fauna wordlists for Rirratjingu (Specht 2006) and Anindilyakwa (Waddy 1988) were also consulted. The dataset used in this paper comprises approximately 90 plant species<sup>2</sup> (for which there are 137 loanword correspondence sets), 78 bird species<sup>3</sup> (135 loanword correspondence sets) and 17 mammal species (44 loanword correspondence sets).

Two or more lexemes related in form (i.e. representing the same etymon), and found in two or more languages, are said to have undergone borrowing if the languages in question belong to two or more families (*sensu* Evans 2003). In this

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Nunggubuyu, Ngn. Ngandi, Ngl. Ngalakan, Rem. Rembarrnga, Rir. Rirratjingu, Rit. Ritharrngu, Tiw. Tiwi, Wan. Wandarrang, Yan. Yanyuwa.

<sup>2</sup> The figure is approximate because of the frequent instances of semantic shift (i.e. to a different species).

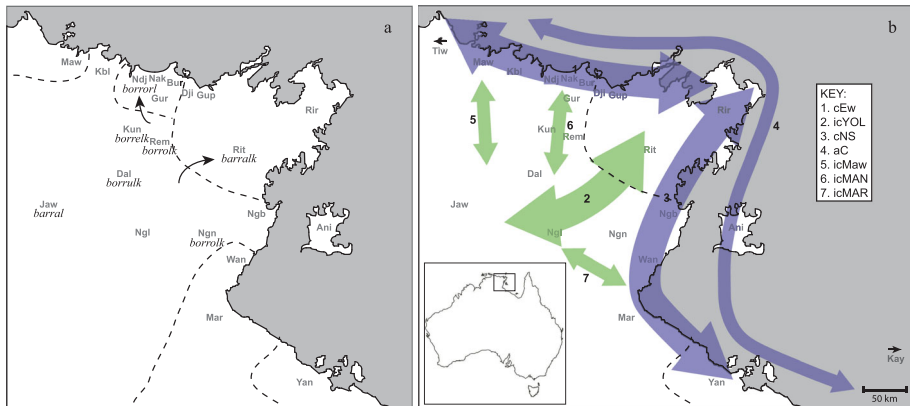
<sup>3</sup> Here, 'species', especially in the context of birds and mammals, refers to mostly biological species as well as a handful of ethnospecies, which may cover two or more biological species. Examples include categories such as 'white ibises' or 'small bats'. Words for different life stages or a particular species (especially wallabies) are counted as separate correspondence sets. There are more correspondence sets than species for each group because of the existence of multiple names for a particular plant or animal, sometimes as synonyms in a particular language or group of languages.

paper, the Yolŋu languages, Yan and Kay are treated as distinct ‘families’, and the sharing of a lexeme among them is treated as a loan event (or more than one event). Similarly, Ani is treated as distinct from the GUN languages, despite Van Egmond’s (2012) proposal that it is related to Ngb. The justification is that even if Ani and Ngb are indeed members of the GUN family (cf. Van Egmond 2012), any shared flora–fauna vocabulary is likely to be due to borrowing. In the present corpus (Appendix A) there are only six tokens shared exclusively between Ani and mainland GUN languages; this does not have a bearing on the percentages of Wanderwörter calculated below. A final issue is that potential loans occurring exclusively among members of a single large family, such as GUN, remain undetected in current analyses. The detection of such phenomena will require more detailed investigations of sound changes within individual families.

## 2.2. Data Analysis

The distributions of plant species, whose names appeared to show interesting loan patterns, were investigated through the record search function of the ALA website. The maps thus generated were used to search for any correlations between the distribution of particular species in Arnhem Land and the distributions of loan correspondences for those species. In addition, loan correspondence sets were assigned to a number of ‘loan corridors’, based on their geographic distribution. This allowed a rough quantification of the relative importance of each corridor within the context of Arnhem Land, as well as the relative importance of each biological taxon (plant, bird or mammal) within a particular corridor. Patterns of repeated borrowing can be broadly classified as ‘chain’ or ‘star’, depending on whether the loan etymon is transmitted linearly from one language to another (contiguous) language, or whether the word is simultaneously borrowed by two or more languages from a single source language (pers. comm. P. McConvell). The current approach effectively stacks all such representations onto a map, in order to determine the zones of highest loanword traffic. Briefly, loans were categorized as occurring within a coastal east–west corridor (cEW), a coastal north–south corridor (cNS), an all-coastal corridor (aC) and four inland–coastal corridors, involving YOL languages (icYOL), MAN languages (icMAN), MAR languages (icMAR) or Maw (icMaw) (Figure 1). Note that the names of these corridors do not imply directionality of borrowing, reflecting instead an observable geographic distribution. The distribution of many correspondence sets could only be explained by invoking two or more corridors. For instance, the names of the tree *Acacia dimidiata* have the following distribution:<sup>4</sup>

<sup>4</sup> A common standardized orthography has been developed for this paper, loosely based on Bininj Kun-wok orthography and Harvey (2003): retroflex consonants are written with a preceding *r*, as in *rd*, *rn*, *rl*; dental consonants are written with a following *h*, as in *dh*, *lh*, *nh*; voiceless stops (when contrastive) are indicated with a double consonant, as in *bb*, *dd*, *kk*, *rrd*, *ddh*; velar nasal *ng*, palatal nasal *nj*, glottal stop *h*, alveolar approximant *r*, alveolar trill *rr*, high central vowel (Rem only) *v*.



**Figure 1** (a) Borrowing of the name for the plant *A. dimidiata* from GUN languages into Ndj and Rit. Dashed lines indicate language families. (b) Loanword corridors in Arnhem Land and beyond. Thick arrows represent major corridors with a high volume of borrowing; thin arrows represent minor corridors. See Figure 4 and text for more details. The arrows are only an approximate geographical indication of the corridors, and may not necessarily coincide with all languages involved.

GUN: Kun *borrelk*, Rem *borrolk*, Dal *borruk*, Jaw *barral*, Ngn *borrolk*;  
 MAN: Ndj *borrolk*;  
 YOL: Rit *barralk*

As mentioned above, the existence of a related lexeme in two languages belonging to different families is taken to be a loan event. Here, the distribution suggests that the originally GUN name (inherited by five GUN languages) has been borrowed into Ndj (via the icMAN corridor), as well as into Rit (via the icYOL corridor) (Figure 1b). Furthermore, Rit has a three-vowel system, as opposed to five vowels in the GUN languages (Heath 1978a)—consistent with this is the form of the Rit. word *barralk*, presumably borrowed from Rem or Ngn, and accompanied by adaptation of GUN /o/ to Rit. /a/.

A further level of quantitative analysis was carried out on the loan correspondence sets as follows. Individual etyma loaned across two or more language families were ordered according to (a) overall frequency in terms of number of languages that possess those etyma, and (b) frequency in terms of language families or non-contiguous languages<sup>5</sup> that possess those etyma. This enabled the identification of high-frequency loans through estimation of the minimum number of loan events required to arrive at an observed distribution of loan etyma. Consider the example of the Black-necked Stork, which is identified as a Wanderwort:

<sup>5</sup> The families are Gunwinyguan (GUN), Iwaidjan (IWA), Yolŋu (YOL), Marran (MAR), Maningridan (MAN), along with the non-contiguous languages Tiwi, Anindilyakwa, Yanyuwa and Kayardild. Yanyuwa is included in this list because of its PN affiliation, and the fact that it is not contiguous with the YOL languages.

GUN: Kun *kandji*, Rem *kandji*, Dal *kandji*, Ngn. *kandji*, Ngb. *andji*;

MAR: Wan *karindji*, Mar *karindji*;

YOL: Dji *kandji*, Gup. *kandji*, Rit. *kandji*

Assuming that the name originated in the coastal languages Wan and Mar, and spread inland and northwards (with dropping of the medial *-ri-*), the etymon %*kandji*<sup>6</sup> would have had to be borrowed into eight languages. In the case of the GUN languages, it would appear that the etymon was borrowed before the lenition of the initial stop in Ngb, as described by Heath (1978a). It is theoretically possible to hypothesize that the MAR etymon was borrowed into the proto-languages pGUN and pYOL (thus requiring only two loan events), but this would require the original homelands of pGUN and pYOL speakers to both have been close to Mar and Wan territory (which, in turn, may have moved over time). Were the pGUN homeland further to the north and west (for instance, where Rem and Dal are nowadays spoken), it would be difficult to maintain that Mar/Wan speakers and pGUN speakers were in contact prior to the diversification of the extant GUN languages. Due to the lack of any corroborating evidence for either possibility, such hypotheses are not considered in the remainder of this paper.

### 3. Results

#### 3.1. General Findings

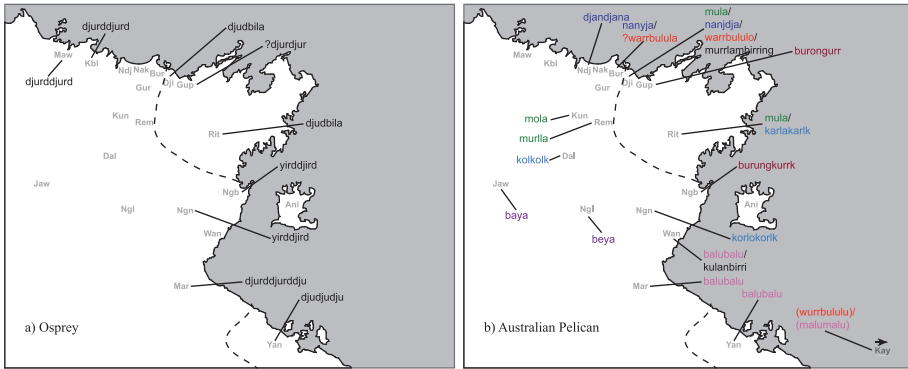
Loanwords associated with plant and bird names were found in all languages investigated, while mammal-related loan etyma were found in all languages except Ani and Kay. Several loanwords occurred across multiple language families, while a sizeable number were found to be in non-contiguous distributions. These are taken to be Wanderwörter or ‘areal roots’ (Haspelmath 2009) (Figure 2a). Haynie *et al.*’s definition of a Wanderwort, as a word that has been borrowed four or more times, is used in the remainder of this paper. There were also numerous referents (i.e. plant and animal species) whose names were borrowed repeatedly, but only across short distances, with each etymon extending over two or three contiguous languages. Unlike the Wanderwörter, these words show a mosaic-like distribution, as numerous unrelated lexemes for a particular referent occur synchronically in groups of languages (Figure 2b).

In addition to loanwords that are similar in form, there were also a small number of unrelated names linked by lexical and semantic relationships. One example involves shared calques found among the names for the plant *Antidesma ghaesambilla*, which is either called *djuppi(h)* in some GUN languages and Rit, or is known by a

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<sup>6</sup> Following Bowers *et al.* (2014) and Haynie *et al.* (2014) % is used to indicate a general form of an etymon that has been borrowed.





**Figure 2** Two types of repeated borrowing. (a) An example of a Wanderwort, where the same etymon, the name for the Osprey, is borrowed over a number of languages. (b) A mosaic-like borrowing pattern, where numerous etyma referring to the Australian Pelican are borrowed over shorter distances. A indicates an uncertain identification, while parentheses indicate semantic shift. The dotted line represents the PN–NPN boundary.

phrase meaning ‘wallaby blood’ in six languages of central and north-central Arnhem Land.

Kun. *kunj kurlba*, Dal. *kunj kurlba*, Rem. *kuweyn kurlba*, Bur. *kornabola an-boka*, Dji. *karrdjambal borde*,<sup>7</sup> Gup. *kulang werddi*

The Bur name is the only one in the above list that means ‘wallaby guts’ instead of ‘wallaby blood’. The plant in question bears small purple fruit that produce a blood-red juice when crushed, and plays an important role in hunting magic. A related species, identified as *A. parviflorum*, is named *kunjburdny* in Dal, and is probably also used in the same way (*burdny* means ‘blood clot’).

Shared patterns of polysemy were found in the names of one bird and one plant species. The Glossy Ibis is known by many unrelated names around Arnhem Land, and particularly in the coastal languages. In four languages to the northwest, however, the name is polysemous with ‘mosquito’, possibly in reference to the slender, curved beak of the bird:

Maw. *ngili*, Kbl. *weluwelu*, Kun. *birnrdu*, Ndj. *mardirrbala*

A plant name that exhibits polysemy is that of the tree *Terminalia grandiflora*, whose seeds are kidney-shaped. As a result, the name of the tree is polysemous with ‘kidney’ in at least three (and possibly six) languages that lie to the south and east.

<sup>7</sup> *Ngarrku-burdi* (sic.) in the related language Wurlaki also means ‘wallaby blood’ (pers. comm. M. Carew).

Jaw. *barndi*, Ngb. *wudu*, Ngn. *kudduh*, Dji. *barndiddj*, *rdirdiy*, Rir. *rdehddi*, *rdinjhrddinj*,<sup>8</sup> Rit. *rdinjhrdinj*, *kudduh*

While Jaw has a different word for ‘kidney’, the word *barndi* is no doubt related to the Kun word *barndidj-no* ‘kidney’.<sup>9</sup> In Ngb, the word *wudu* refers to both the tree as well as ‘kidney’; the Ngn dictionary does not provide an entry for ‘kidney’. In Dji, the word *barndiddj*, which is clearly a loan from GUN, means both ‘kidney’ as well as ‘log used for construction’. On the other hand, *rdirdiy* is the name of the ‘native almond tree’ (possibly a reference to *T. grandiflora*), as well as one of the YOL words for ‘kidney’. In Rir and Rit, *rdehddi*, *rdinjhrddinj* and *rdinjhrdinj* all refer to the tree, as well as to ‘kidney’. Previously, Evans (1997b) had described similar patterns of sign metonymy occurring in a number of Arnhem Land languages—in each of the languages Kunwinjku and Ndjebbana, the White Apple tree *Syzygium eucalyptoides* and the fish known as the Spangled Grunter (*Leiopotherapon unicolor*) are both known by a single term, encoding a trophic link between the two species. The presence of such calques, polysemy complexes and sign metonymies in nearby languages indicates that language and cultural contact may result in lexical convergence phenomena beyond the simple borrowing of words, and may involve complex concepts that may come to have differing language-dependent forms.

### 3.2. Detecting Loan Direction Using Biological Distribution Data

In a handful of cases, the distributions of the plants or animals, whose names have been extensively borrowed, are restricted to a discrete part of Arnhem Land. In such cases, it seems plausible that a name originated in the language(s) nearest to, or coinciding with the distribution of the plant or animal, and was borrowed into languages further away. This may not always be the case, however, as exemplified by the case of one of the names for the Boab tree in the languages of the southwestern Kimberleys. McConvell *et al.* (2014) present a likely scenario for the spread of the word *larrkarti*, where the word must have originated in a language spoken outside the normal geographic range of this plant. Diffusion among the languages well inside the Boab’s normal range must have therefore been driven by changes in human use patterns and possible symbolic functions.

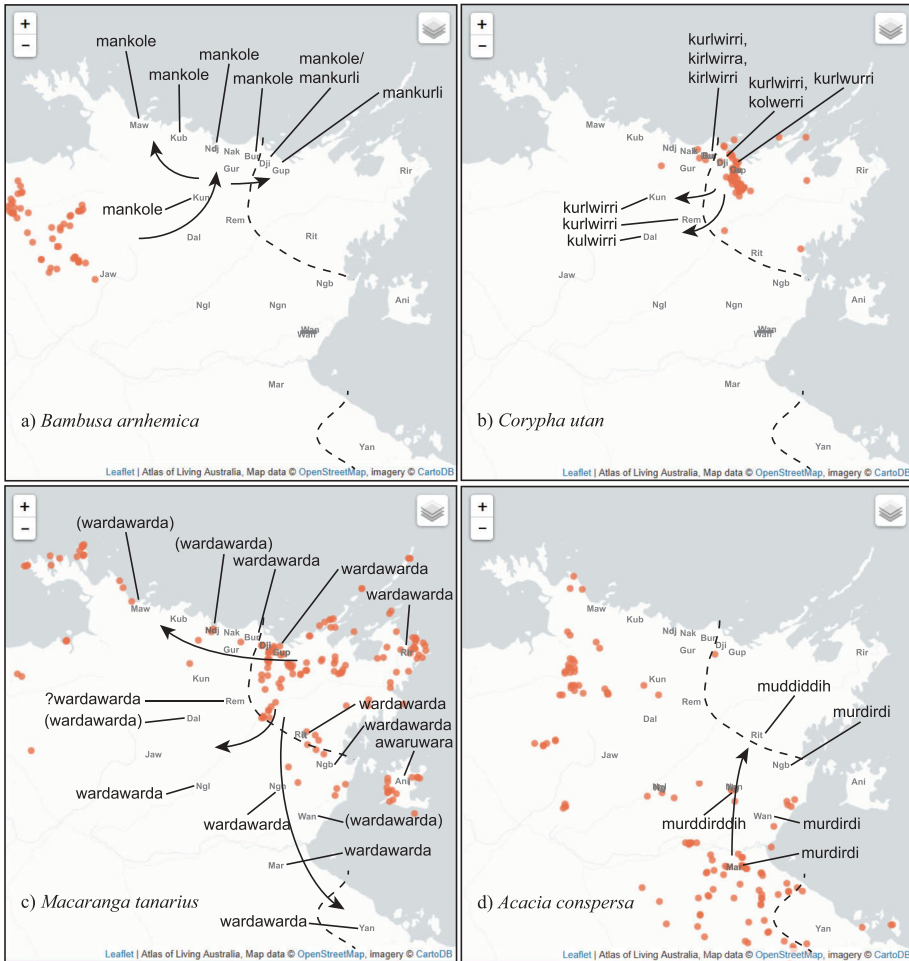
Biological distribution data for a number of organisms in Australia can be obtained from the online biodiversity portal Atlas of Living Australia website ([www.ala.org.au](http://www.ala.org.au)), and maps showing the distributions of individual or multiple species can be plotted. These distribution maps are based on records of sightings of the species in question, which have been compiled from various sources, including museum collections, field

<sup>8</sup> These may represent shared inheritance with the PN languages Warlmanpa—*tartaji* (*T. grandiflora*) and Mudburra—*dardaji* ‘nut of nutwood tree *T. arostrata*’. *T. grandiflora* does not occur south of Warlmanpa country, and cannot be a loan from southern languages (pers. comm. D. Nash).

<sup>9</sup> The Gun-nartpa name *an-barndi* refers to the Cedar Mangrove *Xylocarpus moluccensis* (pers. comm. M. Carew), but there is no connection to ‘kidney’.

surveys and non-professional naturalist organizations. While the ALA website provides a comprehensive and valuable collection of biodiversity information relating to Australian species, there are sometimes clear observer biases in the data, which need to be borne in mind. The distributions of birds show these biases most clearly. Individual records of sightings may be regarded with confidence, but care should be taken when making inferences on the basis of the absence of sightings. For instance, records of sightings for the Wedge-tailed Eagle clearly trace out the routes of major highways in central Australia, such as the Stuart Highway, the Carpentaria Highway and National Highway 1. In the *Top End*, large numbers of bird sightings are recorded within the borders of Kakadu National Park, presumably by teams of birdwatchers and members of citizen science programmes. These records provide a good indication of the species present in Kakadu and neighbouring Arnhem Land in general, but the sightings usually end in a sharp north–south line that coincides exactly with the eastern border of Kakadu. The records beyond this line are scant, possibly representing a lack of sampling effort, and it appears that few, if any, systematic surveys of bird biodiversity have been carried out across the inland regions of Arnhem Land. As a result, large areas of land contain no records for many species of interest. It cannot be automatically assumed that the lack of sightings indicates the lack of a particular species, especially for the spatial scale required in this study.

While similar biases can be seen in the records of mammal sightings, it appears that the plant distribution data are comprehensive enough to allow a comparison among areas where different languages are spoken. Examination of the distribution maps of a number of plant species does not show any recurring regional absences, which might have indicated a bias. In the following four examples, the restricted distributions of records for each species probably do reflect real-world patterns of occurrence in Arnhem Land. The first of these is the Arnhem Land bamboo *Bambusa arnhemica*, which only grows in western Arnhem Land and Kakadu (Figure 3a). It has been demonstrated that the English word ‘bamboo’ was borrowed into local languages in the area of Darwin, and spread eastwards to Arnhem Land and Queensland, and southwards to central Australia (Nash 2012). The word was borrowed as *pamp(u)*, and came to mean didgeridoo or the instrument known as an ‘emu caller’. On the basis of the species distribution data in Figure 3c alone, it would have been reasonable to posit a general movement of the name of this plant from the language nearest to the plant’s habitat (Kun. *man-kole*) towards the north and along the coast. This hypothesis is given additional support by linguistic, morphological data, as the borrowed word clearly has the Bininj Kun-Wok vegetable class noun prefix *man-*, which marks it as a loan from Kune (a BKW dialect) into its northern neighbours. Finally, the ethnographic record also demonstrates that bamboo spears originating in the region shown in Figure 3a were traded in Oenpelli (home to Kunwinjku people) during ceremonial exchanges. Through further exchanges with people along the north coast, i.e. from Coburg Peninsula, Maningrida and the area around Milingimbi (Yolŋu lands), these artefacts would have been obtained by the speakers of a number of languages to the north and east (Berndt 1951).



**Figure 3** Plant species with restricted geographical distributions. Noun class prefixes have been omitted, except in the case of *B. arnhemica*, where the prefix is also borrowed. Arrows indicate loan direction. (a) The bamboo *B. arnhemica*; (b) the Cabbage Palm *C. utan*; (c) the tree *M. tanarius*; (d) the wattle *A. conspersa*.

A similar example, but with the movement of a loanword in the opposite direction, is that of the cabbage palm *Corypha utan*, which occurs in a very restricted distribution along the Glyde River and in the Arafura Swamp east of Ramingining (Figure 3b). The species distribution suggests that the plant name is originally a Pama-Nyungan one (Gup. *kurlwurri*, Dji. *kurlwirri*), which was borrowed into Burarra in a range of forms. It is also likely that the word was borrowed into Gunwinyguan languages via Rembarrnga, whose speakers tend to have the most ceremonial contacts with those of Djinang and Burarra. Further evidence against a move of this word from the Gunwinyguan into the Yolŋu languages comes from the aberrant sound correspondences

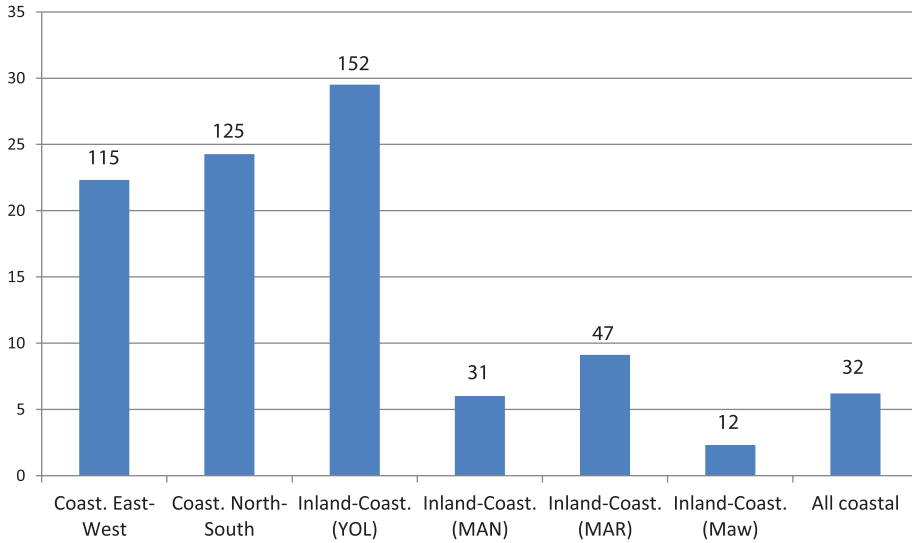
among the former. If *kurlwirri* were a Gunwinyguan word, one would expect a high central vowel to occur in the unstressed syllables with [-back] vowels in Dalabon (\**kulwvrrv*), and perhaps also in Rembarrnga (Harvey 2003).

The tree *Macaranga tanarius* is well known in eastern Arnhem Land as a good source of wood for spear shafts. Its name, *wardawarda*, has been recorded in no less than 14 languages, belonging to the Yolŋu, Gunwinyguan, Maningridan, Marran, Yanyuwan and Iwaidjan language families, along with Anindilyakwa (Figure 3c). On the mainland, the name has been borrowed virtually unchanged into numerous languages, but based on the species distribution, it can be hypothesized that it was originally a Yolŋu name that has been borrowed by languages to the south and east. Some support for this hypothesis comes from instances of semantic shift in a few of the languages to the west. For instance, the name *wardawarda* seems to denote a different tree species in Mawng, Ndjebbana and Dalabon. Mawng has a different name for *M. tanarius* (*mayinpalk*), and the dictionary notes that the name *wardawarda* applies to another tree used to make spear shafts. The name in Dalabon refers to a ‘light spear’ or to the soapbush *Acacia pellita*, whereas in Ndjebbana, the name may also refer to a spear, or to the tree *Thespesia populneoides*, from whose wood fish spears are made. Finally, the meaning ‘spear’ has been recorded in Rembarrnga for this word (Saulwick 2003), but this does not preclude the possibility that *wardawarda* is also the name for *M. tanarius* or some other tree species in this language. It is only along the eastern coast of Arnhem Land that *wardawarda* corresponds to the tree *M. tanarius* in most languages.

Finally, the fact that the wattle *Acacia conspersa* grows primarily in Mar and Wan territory (in addition to locations in western Arnhem Land and Kakadu, which are outside the study area) can be used to hypothesize that the name *murdirdi* has been borrowed from the Marran languages (Figure 3d). Languages to the north, namely Ngn, Ngb and Rit, seem to have acquired the name from MAR, as this tree becomes progressively rarer as one moves northwards along the coast.

### 3.3. Geographical Patterns of Borrowing

The high rate of lexical borrowing between Ngn and Rit is well documented (Heath 1981a), but the question of whether there are similarly high rates of borrowing in other parts of Arnhem Land has not been systematically investigated. My own fieldwork and perusal of published dictionaries of Arnhem Land languages suggest that Ngn–Rit is not the only corridor for Yolŋu and NPN languages to exchange lexical material. Frequent exchanges between Dji and Bur, between Yolŋu languages (possibly Rit) and Rem, as well as between Rit and Ngb have been detected, albeit in far fewer numbers than for Ngn–Rit. In fact, borrowing between Yolŋu languages and inland NPN languages (usually Ngn, Rem, Kun and Dal) constitutes the largest corridor of lexical flow in the study area (152 out of 514 detected borrowings of plant, bird and mammal names, or 29.5%; Figure 4). A related finding is the extensive and frequent movement of words across language family boundaries along the northern coast of



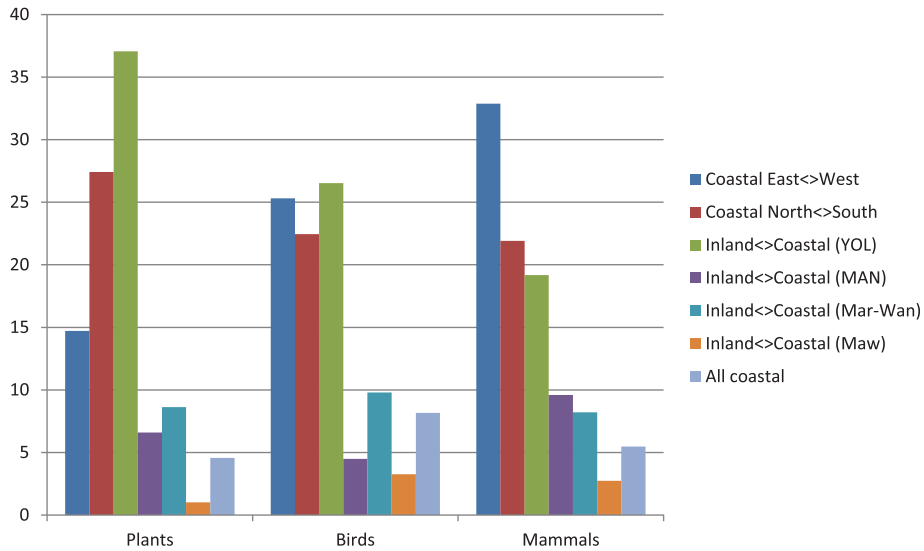
**Figure 4** Proportion (%) of all flora–fauna loanwords found in each geographical corridor. Numbers above the bars show counts for each category.

Arnhem (i.e. in an east–west direction), as well as along the eastern coast (in a roughly north–south direction). The languages commonly implicated in the former scenario include Maw, Kbl, Ndj, Bur, Dji and Gup, while those involved in the second include Rit,<sup>10</sup> Ngb, Wan, Mar, Yan and Ani. These two corridors rival the Yolŋu–inland–NPN corridor in importance, constituting 22.3% and 24.3% of all loanwords (115 and 125 correspondence sets) respectively. In addition to the three main corridors, a number of minor corridors also allow lexical exchange between coastal and inland languages. Right in the centre of the study area lies a corridor of lexical exchange between the MAN languages Bur and Ndj on the one hand, and the GUN languages Kun and Rem on the other. This accounts for 6% (31 sets) of all loans. A more important corridor lies to the southeastern periphery of the study site, and involves exchange between the MAR languages Mar and Wan, and GUN languages, such as Ngn, Ngl, Rem and Dal. This accounts for 9.1% of all loans (47 tokens). Yet another minor corridor lies to the northwestern periphery of the study area, and involves exchange between the IWA language Maw and inland GUN languages such as Kun and Dal.<sup>11</sup> This accounts for only 2.3% of all loans (12 sets).

Finally, a number of loanword correspondences have been found among languages that are located all along the Arnhem Land coastline, and in languages that are spoken

<sup>10</sup> Even though Rit territory does not quite extend to the coast, it is included with the coastal languages when words are shared primarily with Ngb, Wan and/or Mar. In the case of words shared primarily with Ngn and/or other inland languages, it is classed as an inland language.

<sup>11</sup> It is very likely that some western dialects of Bininj Gun-wok, which have not been surveyed in this study, are also involved in this corridor.



**Figure 5** The contribution (%) of each geographical corridor to the movement of plant-, bird- and mammal-name loanwords.

outside Arnhem Land. Correspondence sets may involve languages as far apart as Tiw and Kay, with perhaps a handful of non-contiguous coastal languages in between. Such words make up 6.2% of all loans (32 sets). One peculiarity of this corridor is the frequent involvement of *Dji*, which has contributed to 15 of the 32 correspondence sets. Another interesting observation is that most of these sets (19 of 32, or ~59%) are bird names, with the remainder being equally shared between plant and mammal names. A related phenomenon is that bird names are the dominant group among the words borrowed along the coastal E–W corridor, accounting for around 54% (62 sets) of borrowed etyma (Table 1).

An analysis of loanword correspondence sets by semantic domain reveals that plant, bird and mammal names are borrowed in varying proportions in the different corridors mentioned above (Figure 5). Overall, there is a statistically significant difference in the proportions of plant, bird and mammal names that are borrowed across the various corridors ( $\chi^2=23.23$ ,  $df=10$ ,  $p=0.009$ ).<sup>12</sup> Plant names were most likely to be borrowed across the icYOL corridor (73 correspondence sets, or 37.1%), followed by the coastal N–S (53, 27.4%) and the coastal E–W (29, 14.7%) corridors in second and third place, respectively. Bird names were borrowed in roughly equal proportions across these three corridors (~25% each), while mammal names exhibited a pattern opposite to that of the plants, with the coastal E–W corridor having the greatest proportion of mammal loans (29, 32.9%), followed by the coastal N–S (16, 21.9%) and

<sup>12</sup> The data for the ‘inland–coastal (Maw)’ corridor were excluded from this analysis, due to the very small sample size ( $n=12$ ).



icYOL (14, 19.2%) corridors. The remaining corridors accounted for  $\leq 10\%$  of loan-word correspondence sets for each of the three semantic domains.

### 3.4. High-frequency Loanwords

Previous work on loanwords in Australian languages has uncovered a small number of lexical items, from various semantic domains, which have been borrowed repeatedly into multiple related or unrelated languages. Such ‘Wanderwörter’, with four or more borrowings, appear to be distinct from ‘ordinary’ loanwords, the vast majority of which are borrowed only once (Haynie *et al.* 2014). The authors also found that 7.41% of the flora–fauna vocabulary (from a total of approximately 120 words) in their standard word list could be characterized as Wanderwörter, compared to only 3.35% for basic vocabulary items (totalling 204 words). However, far more material culture items fell into the Wanderwörter category (13.71%, 100). The data in the present paper have been encoded differently (i.e. as correspondence sets across languages), which makes it difficult to produce metrics that are comparable to those in the Haynie *et al.* article. However, it was possible to count the number of families or non-contiguous language groupings that share a particular etymon, and to estimate the number of loan events necessary to explain the observed distribution of etyma. An example containing at least four loan events, spread over six languages, would be one of the names for the Magpie Goose, whose distribution is as follows:

GUN Ngl. *rlangkurnang*, Ngn. *rlangkurna*; MAR Wan. *rlangkurna*, Mar. *rlangkurna*; YOL Rit. *rlangkurna*; PN Yan. *rlangkurna*

Note that the etymon is identical in five of the six languages (apart from the usual language-specific noun-class suffix, if any—not shown here). It is not possible to be absolutely certain of the source language, although the final *-ng* of the Ngl word suggests that this is a GUN word that has been borrowed by the other languages. The high degree of similarity also indicates a very recent set of loan events. Whatever the source, however, at least four loan events would be required to model the distribution of etyma shown above. Using such criteria, it is estimated that 54 out of 314 flora–fauna etyma have undergone at least four loan events, giving a much higher proportion (compared to Haynie *et al.* 2014) of 17.5%. There are a number of possible reasons for the discrepancy between the Wanderwort proportions in the two studies. While the current study dealt almost exclusively with ethnospecies (which largely corresponded to biological species, with a few exceptions—see Footnote 2), the Haynie *et al.* study deliberately included ‘life form’ and ‘generic’ level etyma, such as ‘bird’ and ‘tree’, which are borrowed less readily in Arnhem Land (but note that ‘bird’ is a Wanderwort in the Kimberley languages, according to Haynie *et al.*). The current study also investigated a much larger sample of plants, birds and mammals, without making assumptions about their abundance or cultural significance, whereas the Haynie *et al.* lexical lists ‘were biased towards commonly occurring



**Table 1** Proportion (%) of plant, bird and mammal loanwords per geographical corridor

	Coastal East– West	Coastal North– South	Inland– Coastal (YOL)	Inland– Coastal (MAN)	Inland– Coastal (MAR)	Inland– Coastal (Maw)	All- coastal
% Plants	25.2	43.2	48.0	41.9	36.2	16.7	28.1
% Birds	53.9	44.0	42.8	35.5	51.1	66.7	59.4
% Mammals	20.9	12.8	9.2	22.6	12.8	16.7	12.5
Total <i>N</i> per corridor	115	125	153	31	47	12	32

species in each region in order to increase the likelihood that terms would be recorded' (Bower *et al.* 2014: 221). Finally, although their coverage of languages in northwestern Australia was comprehensive, Haynie *et al.* sampled only four NPN languages of Arnhem Land, as opposed to an estimated 11 Yolŋu languages. This sampling imbalance may have led to the distributions of some etyma being underestimated, or being mistakenly labelled as 'unique', as in the case of the Rit name for the Bush Stone-curlew, *kuwirlungh*. This etymon is actually shared by a number of neighbouring languages, including Ngb, Ngn, Ngl, Mar and Wan.

Of the 54 Wanderwörter detected in the present study, 34 (63%) happen to be bird names. The remaining etyma comprise 13 plant names (24%) and seven mammal names (13%). The high proportion of bird names in this category (roughly equal numbers of plant and bird loan etyma were included in the original dataset; see Appendix A) possibly reflects the importance of these birds in ritual/ceremonial activities in Arnhem Land. Note that bird names tend to dominate the flow of words along the coastal corridors, especially the east–west corridor along the northern coast (Table 1). Among the Wanderwörter detected in this study are some bird species that are regularly hunted and eaten, or at least were eaten in the recent past. These include species such as the Magpie Goose, Green Pygmy Goose, Plumed Whistling-duck, Australian Pelican, Brolga, white herons, Black-necked Stork and perhaps the Pheasant Coucal. However, most of the birds in the list of Wanderwörter were probably never considered to be important food sources, although of course, it would be possible to eat practically any bird that one could catch. The remaining birds include small, colourful birds such as the Rainbow Bee-eater, small blue kingfishers, Little Corella, Red-winged Parrot and Galah, those known to have distinctive calls, such as the Asian Koel, Pied Butcherbird, Bush Stone-curlew, Masked Plover, Magpie Lark, various doves and pigeons and the Kookaburra, and raptors such as the Brown Falcon–Black Kite–Whistling Kite<sup>13</sup> complex, Brown Goshawk and Osprey. Birds known to exhibit unique behaviours, such as the Great Bowerbird and the fantails also appear in the list, as do well-known coastal birds, such as the Pied Oystercatcher, Silver Gull and Beach Stone-curlew.

<sup>13</sup> Based on identifications given in Bonta *et al.* (2017). The name in question is likely to be associated with other raptors in some languages.

Among the highly-borrowed plant names are 11 trees, including the Cabbage Palm *C. utan*. Of these, the most widespread is that of the tree *M. tanarius*, which has been discussed earlier. The etymon associated with *Casuarina* spp. is less widespread, occurring in six languages. This etymon has a wide geographic spread, with Tiw and Kay at the two extremes of its range, and mostly coastal/island languages (Bur, Dji, Rir, Yan, Ani) in between. One feature that the etyma for both *M. tanarius* and *Casuarina* spp. have in common is a polysemy with ‘spear’ in some languages. This is yet another example of the well-known phenomenon of ‘actual–potential polysemy’ (Dixon 1980), where timbers and the artefacts produced from them often have the same name. Other important trees in this category include the edible fruit-producing *Vitex glabrata*, the gum trees *Eucalyptus miniata* and *E. torulosa*, the wattles *Acacia auriculiformis* and the *A. platycarpa*–*A. torulosa*–*A. difficilis* complex, the Leichhardt Tree *Nauclea orientalis*, the tamarind *Tamarindus indica* and the banyan *Ficus virens*. The two non-tree plants, whose names are frequently borrowed, include *Cycas* spp. and the tree orchids. Each of these is represented in five language groups, albeit in very different numbers of languages: 12 and six respectively. The mammals whose names are frequently borrowed include large and small species, such as the Antilopine Wallaby, Agile Wallaby, Northern Nailtail Wallaby, Northern Brown Bandicoot, Quoll and Echidna.

### 3.5. Long-distance Correspondences

A number of etyma were found to occur in non-contiguous languages that are often separated by large distances. An example is the generic word for ‘honey’ in the languages Bur and Gurr-goni on the one hand (on the northern coast of Arnhem Land) and Jaw and Manggarayi on the other (which lie further inland).

‘honey’

Bur. *woma*, Gur. *wami* || Jaw. *wam*, Man. *wap*

It could be argued that these etyma represent not loan events, but shared inheritance at perhaps a proto-Arnhem level (or even at a higher node, as *pama/wama* in eastern Pama-Nyungan languages means ‘delicacy/honey’; pers. comm. Reviewer 1). On the other hand, there are numerous etyma, occurring in non-contiguous languages, that are far more likely to be loans. One of the names for tree orchids such as *Cymbidium canaliculatum* (Brock 1988) or *Dendrobium dicuphum* (Waddy 1988) was found to be shared between Maw, BKW and Ani, and for this reason, was posited to be a proto-Arnhem inheritance by Evans (1997a). This word is actually more widespread, and occurs in recognizable forms in Jaw, Ndj and possibly Mar as well:

Maw. *yalamari*, Kun. *djalamardi*, Jaw. *djalamardi*, Ndj. *yalamarda*, Mar. *?majalardi*,<sup>14</sup> Ani. *yilamara*

<sup>14</sup> Glossed in Heath (1981b) as ‘yam sp. (climbing vine)’.

Based on the current known distribution of this word (along with the metathesis observable in the Mar name), it seems reasonable to suggest an alternative scenario, where this set of etyma represents an ancient series of loan events across the breadth of Arnhem Land. The sticky resin obtained from tree orchids was traditionally used as a paint fixative or adhesive, and this technology would have been passed on from one language group to the next, along with the name of the plant. It can be further hypothesized that such a word would have once existed in the intervening languages which do not currently possess it, and that it has been replaced in more recent times with synonyms such as *durda*, *njarlkkān* or *djalkurrk*. Two or more of these terms may be found synchronically in a couple of languages: in Kun, for instance, *durda*, *njolkkān* and *djalāmardi* are considered to be acceptable synonyms, while Jaw has *njarlkan* and *djalāmardi*.

The best examples of long-distance correspondences are the numerous loan etyma borrowed through the all-coastal corridor. As mentioned above, the majority of these are bird names, and several of the birds are aquatic or marine species (Table 2). The etyma for the Australian Darter could be further supplemented by words for the Pied Butcherbird in Ngn, Ngb, Mar and Rit. Combining the names for both species, the complete set would be as follows:

Australian Darter/Pied Butcherbird

Bur. *korroburda* (Aus. Darter), Dji. *korrobordo* (Aus. Darter), Ngb. *wurruburduk* (Aus. Darter), *kurrurdu(k)* (Pied Butch.), *kurrburdu(k)* (fem. Pied Butch.), Ngn. *kurruwurduk* (Pied Butch.), Rit. *kurruwurduk* (Pied Butch.), Mar. *kurrurdukurrurdu* (form of Pied Butch.)

It would appear that the entire set of words represents a series of loan events through the all-coastal corridor, with further loans into the inland languages Ngn and Rit via Ngb. Note the dramatic semantic shift in Ngb, giving rise to three reflexes of the borrowed word that mean Australian Darter, Pied Butcherbird and female Pied Butcherbird. The fact that all subsequent loans into the inland languages, and into the southern language Mar, mean only Pied Butcherbird points to Ngb being the source of the loan into these languages. An alternative scenario is that there were two separate loan events into Ngb. The first of these introduced the word *wurruburduk* (Aus. Darter) via a coastal corridor (prior to the initial \*b > w lenition event (Heath 1978a)). The word for Pied Butcherbird, on the other hand, travelled from Rit into Ngn, and subsequently into Ngb and Mar. This scenario can be challenged on at least two fronts: the first is that the semantic change occurred between the two YOL languages Dji and Rit, which is unlikely; the second is that the sound change observed between Ngn and Ngb (in particular Ngn /w/ > Ngb /b/) cannot be explained by any known historical process. The most likely scenario is that while Ngb did receive at least two separate loans, (at least) one for each bird species, both occurred by a coastal route, with the word for Australian Darter appearing first in the Ngb lexicon. The etymon *kurrburdu(k)* was borrowed by Ngb at a later date, and

**Table 2** Plant and animal names that have likely been borrowed through the ‘all-coastal’ corridor, i.e. words present in at least one language of the northern coast *and* one language of the western coast of Arnhem Land (including island languages)

	Tiw	Maw	Kbl	Ndj	Bur	Dji	Gup	Rir	Ngb	Ani	Wan	Mar	Yan	Kay
<i>Avicennia marina</i>		mumbarri	mumbarri						rnambarra					
<i>Barringtonia acutangula</i>						mamarra							mururnrdu	?mararra, ?marrinda
<i>Casuarina</i> spp.	mirruwadji				mawurrk	mawurrk		mawurraki <sup>a</sup>		mawurraka			?	?mawurradji
<i>Eucalyptus miniata</i>						kurdurri, korderri				mawurdarra				
Common Sandpiper							kurdirdi					yirdirdi-ngarna	?yirdirdi-ngarna	
Australian Darter					korroburda	korrobbordo			wurruburduk					
Misc. birds		wural			korrlkorrl	kurralkurral			wurralk		kurralk-kurralk	kurralk-manindja		kurralk-kurralda
Brown Quail		ipid	djirribbidj <sup>b</sup>		djirapidj	?djiripidj						djardburruru	djalburruru	djurabuwinda
Pied Butcherbird		djidburuluk												
Blue-winged Kookaburra	djorri-djorringa										djirri-yirru			
Black-necked Stork	arntongi													ka(r)ndungka
Red Goshawk			karrkkarrk	yikarrk-karrk	mabarra-bbarrabba				nikarrka <sup>c</sup>	yinikarrka				
Bar-shouldered dove												marrababa	?marrabababa	
White-bellied Sea Eagle	?ngakngak						ngakngak		ngakangaka <sup>d</sup>		ngakngak	ngakngak		
Australian Pelican					warrbulula	warrbululo								?wurrbululu
White herons, egrets						karwarra								kalbarra
Helmeted Friarbird	djuruwa									didjaruwa	djyryarr			
Royal Spoonbill	ararrini													
Radjah Shelduck	dirrindirri												ararrawa	runrdurn
Radjah Shelduck						kirrkirring				rdirrdirr <sup>e</sup>			ngirrngirr-marni	ngarumadhi

(Continued)

Table 2 Continued

	Tiw	Maw	Kbl	Ndj	Bur	Dji	Gup	Rir	Ngb	Ani	Wan	Mar	Yan	Kay
Pied Oystercatcher		kadikadik	kaddikaddik	kaddi-kadda	kaddjarkka		kudhirka		kadhirk-kadhirk <sup>f</sup>			kudha-kudhayi		kadhuka
?Osprey		djurddjur	djurddjur <sup>g</sup>	djurddjur		?djurdbila	djurddjur		yirddjird <sup>h</sup>			djurddjur	djudjudju	
?Black Kite					kurrdjiri-ddjir	kurrdjir-ddjir			kurrudju-djurk					
Northern Brown Bandicoot	marinji, maruwinji	marunj										marumaru		
Agile Wallaby						ngarrku	ngarrku		ngarrku <sup>i</sup>		ngarrku-lamba	ngarrku-lamba		
Agile wallaby							mirn-dharrang		mandhirrang					

Note: Only words belonging to coastal and island languages are shown in the table; related words that have been borrowed by inland languages are shown in the table footnotes. Note that semantic shift is frequent in the words shown below, and the species identifications in the first column may only provide a general indication of the referents of some of the words; words that indicate a different referent are marked with a ?. See the section Semantic Shift in Loanwords for more details.

<sup>a</sup>Also occurs as Rit. *mawurrakih*, also occurs as Rem *djirppv*.

<sup>b</sup>Also occurs as Ngn *yikarrka*.

<sup>c</sup>Also occurs as Ngn *ngakngak*.

<sup>d</sup>Also occurs as Ngn *rdimrdirrng*, Rit *rdirrngdirrng*.

<sup>e</sup>Also occurs as Ngn *kadhirkadhirk*.

<sup>f</sup>Also occurs as Kun *djurddjur*.

<sup>g</sup>Also occurs as Ngn *yirddjird*.

<sup>h</sup>Also occurs as Ngl *ngarrkkuh*.

subsequently moved from Ngb to Rit via Ngn, accompanied by lenition of the medial /b/ to /w/.

The first two trees in Table 2 are aquatic species, the former being a mangrove (marine) species, and the latter growing near freshwater. It is possible that the names for both species actually belong to a single loan correspondence set, with perhaps the exception of Yan *murrurnrdu* and Kay *marrinda*. To the list of trees in Table 2, one could add *Terminalia carpentariae*, a name for which seems to appear in the coastal languages Maw (*marnbi*), Rir (*mamanbu*), Ngb (*marnba*) and Ani (*mamaburra*).<sup>15</sup> In addition, a similar set of forms exists in a number of inland languages:

*Terminalia carpentariae*

Kun. *mobban*, Rem. *mobban*,<sup>16</sup> Dal. *mobbarn*, Ngn. *murrbbunh*, Ngl. *murrbbunh*, Rit. *murrbbanh*, Gup. *mubban*, Kay. *murrbanda*

It is likely that the name for this important tree, which produces edible fruit along with a resin that is also used as a paint fixative (Ellersdorfer *et al.* 2012), has spread across Arnhem Land in at least two separate waves, one along the all-coastal corridor and one through an inland corridor that has yet to be discovered. It is interesting to note that the Kay word resembles more closely the latter set of words (instead of the etymon loaned through the all-coastal corridor), with its closest known sources being Rit and Ngn.

The preponderance of bird names in the all-coastal corridor suggests that ceremonial exchange is the principal driver of lexical sharing along the languages of this corridor. This hypothesis is supported by the presence of four raptor names among the borrowed items (i.e. birds that one would not normally eat or interact with), as well as the names of birds—the Pied Oystercatcher and Pelican, for instance—that are explicitly evoked in ritual songs or ceremonies.

### 3.6. Sound Changes

Regular sound changes were difficult to detect in the present dataset, mostly due to gaps in the data, the large number of potential language pairs to be investigated, the occurrence of loan events at multiple points in history and uncertainty about loan direction. One of the few general principles that provided some indication of the existence and possible direction of a loan event was the breaking of the family-level sound correspondences, as reconstructed by Harvey (2003) for the GUN languages. The lenition of stops that distinguishes Ngn and Ngb was particularly useful in this respect. For

<sup>15</sup> The superficial similarities between these names and the names for *Avicennia marina* and *Barringtonia acutangula* are probably not meaningful, as *Terminalia carpentariae* occurs in a very different habitat (sandstone country and well-drained sandy soils) (Brock 1988).

<sup>16</sup> *Mopan* is also found in Gun-nartpa (glossed as *T. ferdinandiana*, pers. comm. M. Carew), the inland dialect of Burarra, and is likely a loan from GUN languages (probably Rem).

instance, it can be confidently stated that one of the names for the Agile Wallaby is a GUN loan into Bur and Rit, and not the other way around, based on the expected lenition of initial /dj/ to /y/ and the loss of voicing contrast in Ngb (Heath 1978a):

Agile Wallaby

GUN: Rem. *djarrurddu*, Ngn. *djarrurddu*, Ngb. *yarrurdu*, Ngl. *djarrurdduh*

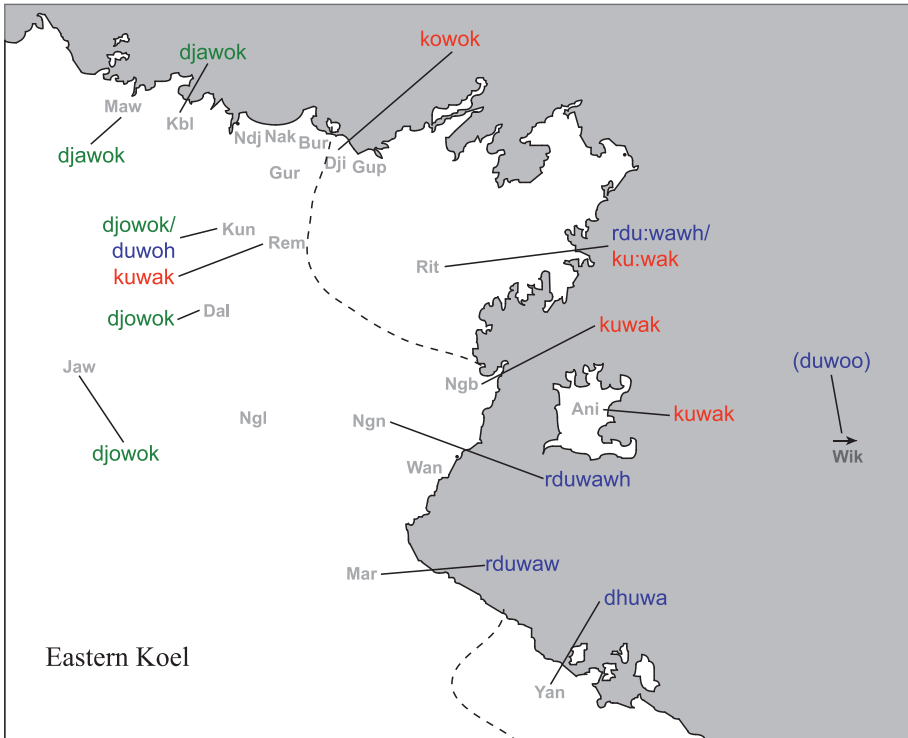
Bur. *djarradu*, Rit. *djarrurddu*

Some conclusions on the relative timing of loan events (or lexical stratigraphy) can also be made to a limited extent. Based on the lack of the expected sound correspondences between Ngb and other GUN languages, it can be hypothesized that certain loan events occurred more recently than others (i.e. after the phonological innovations that distinguish Ngb from, say, Ngn). One of the names for ‘tree orchid’ has the following forms in the eastern Arnhem Land languages:

Ngn. *dhurndah*, Ngb. *dhurnda*, Rit. *dhurndah*, Wan. *dhurndah*

Regardless of whether this etymon originated in Rit. or Wan., it appears to be a relatively recent loan into Ngb, because of the absence of lenition of the initial /dh/ to /lh/. Examples of earlier loans into Ngb, prior to the phonological innovations mentioned above, would be the words for the male and female Antilopine Wallaby, most likely borrowed from YOL languages, where the forms are *karrdjambal* and *karndalbburru* respectively. The forms in Ngb show lenition of the initial /k/ and lack of voicing contrast, and are *arrdjambal* and *arnda:lburru* respectively (while the corresponding forms in neighbouring Ngn are identical to the YOL forms). These are likely to be particularly old loans, due to the time required to complete the sequence /k>/w/>/Ø/ (cf. the later loan events that would have introduced *wurruburduk* (Aus. Darter), *kurrurdu* (*k*) (Pied Butch.), *kurrburdu*(*k*) (fem. Pied Butch.) to Ngb, mentioned above). The occurrence of lenition in etyma that represent inheritances from pGUN, as well as loans from non-GUN sources (or perhaps even from other GUN languages), poses a problem for the reconstruction of ancestral forms and phonologies that do not take into account potential sources of loanwords among neighbouring languages. This problem may be compounded if plant and animal names form a significant part of the lexical items being reconstructed.

Unfortunately, many of the sound changes observed in the present dataset are difficult to explain on the basis of current knowledge of the genetic relationships between languages and known sound change rules. This is particularly true of the Wanderwörter, which in some cases may be present in as many as 16 languages in the present dataset. The names for the Eastern Koel illustrate the complexities of the Arnhem Land situation well, with at least three forms beginning with initial /d~rd~dh/, /k/ and /dj/ (Figure 6). The first of these also seems to occur in Wik Mungkan, on the other side of the Gulf of Carpentaria, but as the name for some species of friarbirds. It is possible to discern an approximate geographic range for each variant of the



**Figure 6** Various names for the Eastern Koel.

name. While the /d~rd~dh/-initial names tend to occur along the east coast of Arnhem Land, the /dj/-initial etyma appear to favour the western languages. The /k/-initial etyma could be said to occur in an intermediate distribution. Individual loan events can be detected between contiguous languages (e.g. between Maw and Kbl, between Kun and Rit, and between Rem and Rit), but it is difficult to explain the overall distribution of etyma, as well as the motivation for the sound changes (presumably /d~rd~dh/ > /k/ and /k/ > /dj/). No other instances of similar sound changes have been detected in the present dataset, and it is possible that the onomatopoeic origins of the borrowed word somehow counteract the normal transmission of consonants, such as stops, across languages. There is the possibility that the overall similarity in form of the Koel names (initial consonant notwithstanding) represent a shared phoneticization of the birdcall in the various languages. Indeed, the eastern name %duwaw very closely resembles the two-note, plaintive call of this bird, which can be heard at the start of the wet season. However, even if the convergence scenario were the sole explanation, it still would not explain why the names beginning with /d/-/rd/ mostly cluster along the coast, while the names beginning with an affricate only occur in western Arnhem Land. Clearly, there must be at least some contact-related



phenomena in play, even if convergence is responsible for the overall similarity among the names. The existence of two variants in Kun and Rit also suggests the borrowing of at least one of those variants.

In contrast to the unpredictability of the above phonemes, it is striking that the rhotics /r/ and /rr/ are highly conserved, even among loan etyma that have travelled large distances. Rhotics may be lost, or replaced by other phonemes (such as /d/ or /rd/), but if two or more related etyma possess one or more rhotics in equivalent position(s), they are almost invariably the same. Note, for instance, the preservation of the two rhotics in the etyma for Royal Spoonbill in Tiw and Yan, as well as the /r/ in the /rk/ cluster in the Bur, Gup, Ngn and Ngb etyma for Pied Oystercatcher (Table 2). In fact, there exists in the current dataset only a small handful of etyma where there is alternation between /r/ and /rr/. A rare example is the Mar word for Whistling Kite *rdirdidjarr*, which has a different final rhotic from Ngn *rdirdiddjurh* and Ngl *rdirdiddjar*.

Another interesting pattern to emerge from the loanword dataset is the unusual behaviour of the western GUN languages Kun, Rem and Dal (and occasionally Jaw) in comparison to other languages of the Gun family, as well as YOL languages, in the case of certain loan etyma. Unexpected sound changes have been detected for a handful ( $N = 14$ ) of etyma, and these are listed in Table 3. The range of sound changes reflected in the Kun, Rem, Dal (and some Jaw) words include /k/ > /b/ initial stop alternations, initial /w/ > /k/ fortition, simplification of /nj/ clusters to /y/, rhotic loss and retroflex > alveolar alternation, among others. The fact that these changes affect the names of plants, birds and mammals argues against the possibility that the observed patterns are the result of aberrant borrowing or inheritance of loanwords (as might be expected for some bird names). It could well be that the highlighted forms indicate the original GUN forms of the etyma, and that the corresponding etyma in the eastern GUN languages represent later innovations due to contact with YOL and MAR languages. This is not a wholly convincing argument, however, as four of the species names have Kbl equivalents to the northwest, which resemble the eastern forms more than they do the forms in Kun, Rem and Dal. Another possibility is that the forms in Kun, Rem and Dal have undergone innovations due to the influence of western GUN languages (or other languages further west). This possibility remains to be tested, as investigating languages further west is beyond the scope of the current study. In any case, it would be reasonable to hypothesize that the unusual forms shared by Kun, Rem and Dal are the result of greater cultural (perhaps ceremonial or matrimonial) exchange among speakers of the three languages, as opposed to people living further east or along the northern coast.

### 3.7. Semantic Shift

Semantic shift was frequently encountered in the present dataset, and was one of the main obstacles in the way of finding loaned etyma in dictionaries and word lists. Significant semantic change in the case of the tree(s) denoted by *wardawarda* and the

**Table 3.** Etyma with unexpected sound or formal correspondences primarily in Kun, Rem and Dal (highlighted in grey), in contrast to surrounding languages

	Kbl	Kun	Rem	Dal	Jaw	Ngn	Ngb	Rit	Dji
<i>Vitex glabrata</i> <sup>^</sup> Great Bowerbird <sup>^</sup>	djured	kurnrdalh djuweh	wudjal djurerkk	kurnrdalh djuwe	woyal djuwe	wurnrdanh djurerh	wu:ng (Ngl) djurerh	wurdanh djurirrh	wurdan
Beach Stone Curlew <sup>^</sup>	kalorr- wirdwird	bulu- wirdwird	bulu- wirdwird	bulu-wirdwird	bamkulu- wirdwird	kurlu- widibidi	kurla:-bidjbidj	kurlu- widjbidj	bili-wirrdwirrd
Bush Stone Curlew <sup>^</sup>	kurru- wirluk	kurru-birla	kurru- bvrla	kurru-wirlah	korr-welak		kurru-wirlak		kurr-wirkka
Quoll		yuluk- yuluk	yuluk- yuluk	yuluk-yuluk		njurluk	nja:rlik		njuluk-njuluk
<i>Owenia vernica</i>		ngarnarru	ngarnarr	ngarnarrngh	barnarr	barnarrh	barnarr	barnarrh	
<i>Nauclea orientalis</i> <sup>^</sup>		dubal	dubal	dubal		rdubal	(Ngl) rdubal	rdu:bal	rdubal
<i>Terminalia carpentariae</i>		mobban	mobban	mobbarn		murrbbunh	(Ngl) murrbbunh	murrbbunh	
Finches		ninhnih	ninhnih	nin	nin	rminh	(Ngl) rninhrnih	njin	(Wan/Mar) rminin
Misc. small birds		njuridj	njuridj	njuridj		rduridj	rduridj; (Ngl) rduridj		
<i>Bossiaea bossiaeoides</i>		lerleerre	lerleerre		lerleerre	rlererlerreh	wurliirri-rlirri	gurliirri- rlirrih	(Wan/Mar) rlirrirliirri
Tree orchids		durda	durda	durda		dhurnrdah	dhurnrda	dhurnrdah	(Wan) dhurnrdah
Australian Darter		barrak- barrak	barrak- barrak	barrak-barrak	barrak- barrak	karrak- karrak	arkark; (Ngl) karrak-karrak	karrak- karrak	
Water Rat	yirrkub	yirrkbadj	yirrkub	yirrkbadj, yirrkub		yirrkkuh	(Ngl) yirrkub		

Note: Note that some related Ngl, Mar and Wan etyma are presented in the Ngb and Dji columns to save space.

<sup>^</sup>Represents a Wanderwort.

Australian Darter–Pied Butcherbird complex have already been discussed above. Another bird name that has travelled along the all-coastal corridor, and undergone repeated semantic shift is the etymon %kurral~wural (listed in Table 2 as ‘misc. birds’). This set of names has been recorded in coastal languages from Maw to Kay, and has the following referents:

Maw. *wural* (Channel-billed Cuckoo<sup>17</sup>), Bur. *korrlkorrl*<sup>18</sup> (Blue-winged Kookaburra), Dji. *kurrarlkurrarl* (Blue-winged Kookaburra), *kurralkurral* (quails), Ngb. *wurralk* (Blue-winged Kookaburra), Wan. *kurralkkurralk* (Eastern Koel), Mar. *kurralkmanindja* (Blue-winged Kookaburra), Kay. *kurralkurralda* (quails)

The repeated appearance of the Blue-winged Kookaburra in this set suggests that this is the original meaning of the loaned etymon, with independent instances of semantic shift in Maw and Wan. Note also, in Table 2, the existence of another pair of coastal long-distance loan etyma, related to the Blue-winged Kookaburra, and shared by Tiw and Wan. The shared referent ‘quails’ for Dji and Kay in the above loan correspondence set is striking, and possibly represents a long-distance loan event from the latter to the former language, resulting in two similar-sounding words in Dji, but with two very different bird species as referents. The above set of names is likely onomatopoeic in origin (see also Channel-Billed Cuckoo in the section Connections beyond Arnhem Land below), and while it could be argued that the Kookaburra and the Cuckoo have similar calls, it is difficult to explain why quails and the Koel are also referred to by the same name. The case of the Kookaburra-*etc.*-complex contrasts sharply with that of the Pied Oystercatcher, a bird whose name occurs in eight coastal languages without any variation in referent (Table 2).

Among the loaned etyma relating to plants, a common pattern of semantic shift is for a plant name to become the name of the implement or substance derived from that plant (e.g. the plant name *wadawarda* coming to mean ‘spear’ or becoming the name for a different plant species at the extremes of its range). Similar phenomena can be observed in the loan correspondence set for the name of various She-Oak species (*Casuarina* spp., Table 2). Across the languages where this etymon has been recorded, the referent has been documented as one of two species, including *C. cunninghamiana* and *C. equisetifolia*. Here too, semantic shift has proceeded in a predictable way, with the Yan and Kay etyma meaning ‘barbed spear’, and no longer referring to a plant species. The etymon recorded from Bur has also lost its botanical referent, and is now merely a toponym. A more complicated example of semantic shift involves three sets of loaned etyma and three or four related, similar-looking plant species, all belonging to the family Malvaceae. The etyma involved are as follows:

<sup>17</sup> *Kurrakurra* is also Channel-billed Cuckoo in Mudburra (pers. comm. Reviewer 1).

<sup>18</sup> Variants include *gorrgolkol*, *gurrukorlkorl*, *gurrorlkorl* (sic., pers. comm. M. Carew).

Tiw. *arlabandjiya* (*Gossypium hirsutum*, *Hibiscus tiliaceus*, *Thespesia populneoides*<sup>19</sup>), Maw. *alabandja* (*H. tiliaceus*)

Maw. *warnmalk* (*T. populneoides*), Kbl. *barnmalk* (*T. populneoides* ‘spearshaft tree’), Bur. *malwarn* (‘tree for making spearshafts’), Dji. *marlwan* (‘tree sp.’), Gup. *malwan* ‘tree for fish spears’, Rir. *malwar* (*H. tiliaceus*), Rit. *malwan* (*H. tiliaceus*), Ngb. *malwad* (*T. populneoides*)

Kun. *manyalhmanyalh* (*H. meraukensis*), Rem. *manyalhmanyalh* (*H. meraukensis*), Dal. *yarl-no* (‘bark’), Ngb. *ya:rl* (*H. tiliaceus*)<sup>20</sup>, Ngn. *ya:rl* (*H. tiliaceus*), Ngl. *yarl* (‘bark’), Rir. *yarl* (*H. tiliaceus*), Rit. *ya:rl* (*H. tiliaceus*)

This is clearly an important set of plants, but their similar appearance leaves open the possibility that some of the species identifications shown above may be the result of misunderstandings or errors made during the elicitation process. The uses attributed to the plants are also a matter of debate—while the Tiw dictionary states that all three plants listed as referents for *arlabandjiya* are used for making rope (from strips of their bark), the Maw dictionary states unequivocally that only *alabandja* (*H. tiliaceus*) is used to make rope, while *warnmalk* (*T. populneoides*) is used for making spearshafts. The Kbl, Bur and Gup dictionaries seem to agree with this assessment, but the Rit dictionary claims that the terms *malwan* and *ya:rl* (synonyms for *H. tiliaceus*) plus an additional term *mi:rl* (*T. populneoides*) all refer to trees from which spearshafts are made, and that all three are used interchangeably. The third set of etyma seems to point uncontroversially to a *Hibiscus*-like plant, whose bark is used for making rope. It therefore appears that the spread of loanwords across Arnhem Land can be accompanied by not only semantic shift (i.e. change in the referent) but also by the primary use associated with the referent in the case of plant names. Note that Brock (1988) lists rope-making from the bark of *H. meraukensis* and *H. tiliaceus* as one of the uses of these species, but not for *T. populneoides*, which is said to be used for making fire-sticks (possibly fire-drills?) and spearshafts. Incidentally, *H. tiliaceus* can grow to be a 5–8m-high tree (whereas *H. meraukensis* is a much smaller annual shrub), and Brock states that this tree can also be used for the production of woomearas, spears and fire-sticks. This may explain why Rir *malwar* and Rit *malwan* refer to *H. tiliaceus* (a plant Maw people use only for rope), even though the other etyma in the set are associated with the production of spearshafts.

Another plant from which bark-rope can be made is also closely associated with honey harvesting and consumption in north-central Arnhem Land. Three species of *Brachychiton* are known to occur in Arnhem Land (*B. diversifolius*, *B. megaphyllus* and *B. paradoxus*), and at least two names exist for two of the species in most languages investigated. An interesting form of polysemy exists among Bur, Dji and

<sup>19</sup> And/or *T. populnea*. The validity of the two species names is currently being reviewed, and it is possible that they will be officially regarded as synonyms for a single species ([www.theplantlist.org](http://www.theplantlist.org), accessed 16 May 2018).

<sup>20</sup> Like Ngb, Wan and Mar have distinct names for the two species: *ngardinj/ngardidj* respectively for *H. tiliaceus* and *djirnrdidjirnrdi* for *T. populneoides*.

some GUN languages with respect to this plant and to honey. For instance, in both Dji and Bur, the word for possibly *B. paradoxus*, as well as the stick made from this plant, which is used to transfer honey from a beehive to the mouth (by means of one end that has been hammered into a brush) is *bongberre*. However, Kun, Rem, Dal and Jaw have the term *budbud* for *B. paradoxus*, but in Dji, *burdburd* is the name for a type of soft grass that is rolled up into a sponge, and dipped into honey. Unlike the previously noted examples of actual–potential polysemy (e.g. *man-kole*, *wardawarda*), where the name of the plant precedes that of the derived artefact, *burdburd* and *bongberre* are probably examples of the reverse, where the function comes first, and the names of the artefacts are applied to the source plants.

### 3.8. Connections Beyond Arnhem Land

Given the high frequency with which plant and animal names are borrowed among the languages of Arnhem Land, and given the long distances that many of these words are able to travel, it would be surprising if languages outside the present study area did not also share some ethnobiological vocabulary with the languages discussed so far. Some correspondences have been discovered in the languages to the east, south and west of Arnhem Land, either in the lexical database made publicly available by Haynie *et al.* (2014),<sup>21</sup> or in other published sources. The most dramatic case of a widely dispersed etymon is the name of the Red Goshawk–Brown Falcon–Black Kite–Whistling Kite complex (glossed in the Haynie *et al.* word lists as the Brown Goshawk *Accipiter fasciatus*), which occurs not only in most of the Arnhem Land languages (Appendix A, Item 122), but also in the following languages from the Kimberleys and North Central Australia<sup>22</sup> (language family in parentheses):

Nyikina (Nyulnyulan) *karrkidja*, Kija (Jarrakan) *karrkanj(dji)*, Goondiyandi (Bunuban) *kirrkani*, Jaru (Ngumbin) *karrkanj*, Mudburra (Ngumbin) *karrkanja* (Bowern *et al.* n.d.)

In addition, the Bidjara and Gugu-Badhun languages of southwest Queensland (spoken just north of the town of Charleville, approximately 1,700 km away from the border of Arnhem Land) have the words *karrkanj* and *karrkay* respectively, possibly meaning ‘sparrowhawk’ (Breen 1973, 1990). Whether the word *kerrke* in the Pakanh language of Cape York is related remains to be seen. A number of other bird names found in Arnhem Land occur sporadically in the languages of the Kimberleys, the Barkly Tablelands, central deserts or Queensland. These include:

<sup>21</sup> Appendix A of this paper is available on the Ampersand journal website. The complete word lists used by Haynie *et al.* (2014) and Bowern *et al.* (2014) are available at <https://huntergatherer.la.utexas.edu/home> (Bowern *et al.* n.d., accessed 16 May 2018).

<sup>22</sup> Nash (2016) suggests that this name may be onomatopoeic in origin; a parallel may be found in the name *berigora* for the raptor *Falco berigora* in a number of languages of New South Wales.

Australian Pelican

Tjaapukay (Qld.) *wurmbul* (cf. Bur. *warrbulula*, Dji. *warrbululo*, Kay. *wurmbululu*)  
 Jingulu (Mirndi) *walanjbirri*, Alyawarr *walaymberr*, also other languages of the  
 central deserts, such as Warlpiri (Ngumbin-Yapa) *walanybirri* (pers.  
 comm. P. McConvell) (cf. Dal. *walabi*, Wan. ?*gulanbirri*, Dji. ?*murlambirring*)

Peaceful Dove

Bardi (Nyulnyulan) *kurrurdurd(u)*, Worrorra (Worrوران) ?*kurlukok*, Miriwung (Jar-  
 rakan) *kulududuk*, Kija (Jarrakan) *kurlurdurdukidjil*, Yidiny (Qld.) *kulu:du* (cf.  
 Tiw. *kurluduki*, Kun. *korlododoh*, Bur. *kurlurddark*, Rit. *kurluddu(du)k* etc.)

Blue-winged Kookaburra

Worrorra (Worrوران) *karrakarroya* (cf. e.g. Kun. *korrokkorow*)

Channel-billed Cuckoo

Kija (Jarrakan) *kurralkurral*, Jingulu (Mirndi) *kurrakurriji* (cf. ‘misc. birds’ in Table 2;  
 the Maw. word refers to Channel-billed Cuckoo); also Mudburra *kurrakurraka*  
 and Warlmanpa *kurrakurraja* (Channel-Billed Cuckoo, storm bird, pers.  
 comm. D. Nash)

Willy Wagtail

Kija (Jarrakan) *djikirriddji* (cf. Dal. *djikkirdidj*, etc.)

Black-necked Stork (Jabiru)

Jingulu (Mirndi) *karrindji* (cf. GUN (*k*)*andji*, MAR *karrindji*, YOL *kandji*)

Red-tailed Black Cockatoo

Worrorra (Worrوران) *darra:nma* (cf. Ngn. *rdarrabiyah* etc.)

Great Bowerbird

Ngarinyin (Worrوران) *djuwiban*, Kija (Jarrakan) *djuwidjngarrinj* (cf. Kun etc.  
*djuweh*)

A rare plant name correspondence between Arnhem Land and Gurindji (Ngumbin) may be the word *wurtpurl* (sic.), which refers to the plant *Grewia retusifolia* (Nash 1997; given as *wutpul* (sic.) in Meakins *et al.* 2013). The Arnhem Land equivalent (e.g. Dal. *wadbar*) refers to *Grevillea pteridifolia*, and due to the very different appearance of the two plants, and the lack of any overlap in the traditional uses of the two species (Brock 1988), it is difficult to be confident that the two etyma are related. A more likely loan candidate is *ngirirri*, the Warlpiri and Gurindji name for *Grevillea striata* and *Hakea arborescens*, respectively (Nash 1997). The latter etymon is represented in Arnhem Land in the form of Wan *yingirri* and possibly Ngb *lhangkarirri*, both of which refer to *H. arborescens*. *Ngirirri* is glossed in the Gurindji dictionary (Meakins *et al.* 2013) as ‘boomerang tree’; although the wood of this tree is not used for making boomerangs, it may indicate a trade/exchange

connection between Arnhem Land and communities further south (pers. comm. P. McConvell).

The wide geographic distribution of these words may be an indication that at least some etyma are inheritances from an early proto-language from which the various families have diverged. However, two observations militate against this possibility: the first, that they are almost all culturally-important bird names (and therefore very likely to be borrowings), and second, that they are still very similar in form (and therefore most likely acquired by the languages relatively recently). Nevertheless, the precise pathways by which these etyma arrived at their current distribution remain mysterious, and will require further investigation that takes into account a much larger number of languages, along with input from the archaeological sciences. Ideally, this input would take the form of a high-resolution (geographic and temporal) timeline of human settlement at key sites all over Arnhem Land. While it would probably be impossible to link archaeological evidence conclusively with individual language or clan groups, a settlement timeline would at least give an indication of likely regions where historical contact could have taken place, as well as shed light on patterns of human migration and habitat colonization. At the same time, paleobotanical studies could provide crucial information on the historic distributions and spread of key plant species, whose names have travelled across large distances.

#### 4. Discussion

The results of this study demonstrate that there are clear geographical patterns in the movement of loanwords within Arnhem Land, with the coastal corridors being important conduits for bird names in particular. Bird names were at least as important as plant names (in terms of the proportion of all loans within a given corridor) in all the loanword corridors identified here. As many of the borrowed bird names are of species that probably do not make up a large part of traditional diets, it seems likely that the spread of these names can be attributed to ritual/ceremonial reasons. An in-depth investigation of this possibility is beyond the scope of this study, but this topic will be investigated in a forthcoming article. Briefly, there are intriguing suggestions that this might be the case: the Pied Oystercatcher, for instance, is the subject of a set of songs in Kbl (O’Keeffe 2010), while the bird(s) indicated by *karrkanj* and its variants (Brown Falcon–Black Kite–Whistling Kite etc.) are known to spread fires in Arnhem Land, Western Australia and Queensland, and are celebrated in myth and ceremony (Bonta *et al.* 2017). Previous research has also shown that the only native honeybee names that are commonly borrowed in Arnhem Land are those of the two ethnospecies that play important roles in Duwa and Yirridja ceremonies (Si and Carew 2018). Among the plant species that are widely borrowed, there seems to be a correlation with technological innovation and subsequent trade/exchange: notable examples are plant species that can be used for making spears, cycads

whose nuts need to be treated in a specific manner to be rendered edible, or orchids whose extract can be used as a paint fixative.

The observation that coastal languages share more loan vocabulary amongst each other than with inland languages is in line with the findings reported by Heath (1978a, 1981a). Based on interviews with Ngn, Rit, Ngb and Wan speakers, Heath concluded that the latter two coastal languages enjoyed close and friendly contact, with Ngb people depending on Wan people to officiate at their ceremonies. On the other hand, ‘the Ritharrngu were traditional enemies’ (of the Ngb), in spite of some inter-marriage, some joint participation in ceremonies and some trade. The Ngb also had ‘little to say about their relationship with the Ngandi’ (Heath 1978a: 16). The close Rit and Ngn relationship, as is well known, has resulted in not only the sharing of lexical material, but also significant phonological and grammatical diffusion. Both groups are said to have come together for ceremonies that could last for months, and one Rit consultant even stated that Rem belonged to the same ‘company’ (i.e. network of close associations) as Ngn and Rit (Heath 1978a). This may explain the frequent loans between Rem and Rit, or YOL languages in general, which sometimes puts Rem at odds lexically with the closely related neighbouring languages Kun and Dal (see items Australian Pelican, Brolga, Eastern Koel, Great Bowerbird, Red-tailed Black Cockatoo, Sulphur-crested Cockatoo, Northern Brown Bandicoot, Echidna, *Erythrophleum chlorostachys*, *Eucalyptus tetradonta*, *Brachychiton* sp. ‘kerr’ in Appendix A for examples of loans from Rit; *Cartonema spicatum* is an example of a loan from Rem into Rit). Overall, Heath describes the pattern of cultural associations as follows:

One important distinction which Aborigines make is between ‘bottom’ (coastal) people and ‘top’ (inland) people. The Dhay?yi, Nunggubuyu, Warndarang, and Mara are basically bottom people, while the Ritharrngu, Ngandi, Ngalakan, and Alawa are top people. Some of the most important social contact was between groups of bottom people (for example, Nunggubuyu and Warndarang), or between groups of top people (for example, Ngandi and Ritharrngu). (Heath 1978a: 14)

The same patterns of association may well apply along the northern coast of Arnhem Land, and explain why Kun, Rem and Dal appear to behave differently (lexically speaking) from Kbl (Table 3), while Kbl engages in much lexical sharing with the neighbouring coastal languages Maw, Ndj and Bur. Overall, the proportion of loanwords moving along the coastal E–W corridor is far greater (23.8%) than the proportion of words borrowed through the inland–coastal (MAN) corridor (6.1%).

The results presented here differ from recent studies on Australian flora–fauna loanwords in some important ways. First, as discussed earlier, the proportion of Wanderwörter is much higher in the present sample. This highlights the importance of a more randomized and comprehensive sampling procedure for such studies, as opposed to the use of a wordlist prepared on the basis of the researcher’s expectations. Second, the names of both large and small species (as well as those of uncommon species, or species with restricted geographical ranges) were borrowed, in contrast



to Bower *et al.*'s (2014) finding that significantly more borrowings occurred in the case of larger species. Bower *et al.* also found that 'mythological or other ritually significant' terms were more likely to be borrowed, but not at a statistically significant level in their overall sample. This may be the result of excessive restraint in coding certain species as ritually significant. For instance, while the Great Bowerbird is coded as mythological/ritually significant in their dataset, other birds such as the Jabiru, Pied Butcherbird and Brown Goshawk (their gloss for the bird known as *karrkanj*) are coded as not significant, even though they feature prominently in the myths and ceremonies of Arnhem Land (e.g. Bonta *et al.* 2017; see also Taylor (1996) for a discussion on the importance of the Jabiru in Kunwinjku art and ceremony). In the languages of the Victoria River District, *karrkanj* is associated with the Coal Sack Nebula and types of sorcery killing (pers. comm. P. McConvell).

This study has taken an ethnobiological approach towards identifying, and elucidating the distributions of, flora–fauna loanwords in Australian languages. The results presented here have been able to demonstrate long-distance links not only among non-contiguous languages within Arnhem Land, but also much further afield in the languages of the Kimberleys, the central deserts, and northern and southern Queensland. However, it has to be acknowledged that this paper leaves unanswered many questions regarding the geographic, phonological and phylogenetic trajectories of the loanwords investigated, and in general, of the languages they belong to. The exact nature of the links between the languages investigated here remains a mystery for the moment, but it is hoped that future research will shed light on the various mechanisms and contacts through which so many loanwords arrived at their current distributions. Basic, language(-family)-specific information on the phonological behaviour of loanwords, as opposed to inherited vocabulary, is required, along with statistics on the proportions of loan events occurring before and after known sound changes. This should allow a chronological ordering of contact events between languages/families, and perhaps shed light on the movements of language groups and even the spread of language families across Arnhem Land. Future research on loanwords may also benefit by treating onomatopoeia-derived lexemes as a separate category (a point that has been omitted in the present study), and investigating whether such words are borrowed more readily and/or with aberrant sound correspondences. Finally, an ethnographically-/anthropologically-informed investigation of loanwords with a sub-language (i.e. dialectal) level of resolution is likely to yield meaningful patterns of language and cultural contact and exchange. For instance, it would be more appropriate to divide the language labelled Burarra in this study into an inland Gun-nartpa dialect (the speakers of which often have Rembarnga ancestry) and a coastal Burarra 'proper' (pers. comm. M. Carew). It would be interesting to see, for example, if Gun-nartpa shares more of its ethnobiological lexicon with Rembarnga, while coastal Burarra favours contacts with the coastal dialect of its neighbour, Ndjebbana. A forthcoming publication will investigate in detail the motivations for the borrowing of some loanwords from an ethnographic/anthropological perspective.

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## Appendix A

Plant and animal names that are borrowed across language families, along with the geographic corridor(s) within which the loan event takes place. cEW coastal East–West corridor, cNS coastal North–South corridor, icYOL inland–coastal corridor involving Yolŋu languages, icMAR inland–coastal corridor involving Marran languages, icMAN inland–coastal corridor involving Maningridan languages, icMaw inland–coastal corridor involving Mawng, aC all-coastal corridor. A? before a language name indicates uncertainty regarding whether the corresponding word is related to the other words in the correspondence set; a? before a loanword indicates uncertainty regarding the identity of the referent, or semantic shift (the latter is indicated in parentheses, if the new

referent is known). Hypotheses regarding loan direction are indicated with >, and hyphens are used between language names when loan direction is unclear.

PLANTS			
#	Referent	Loanwords	Loan corridor and notes
1	<i>Abrus precatorius</i>	Maw. <i>irriwukirriwuk</i> , Kbl. <i>kirriwukkirriwuk</i> , Kun. <i>?kirrikirri</i> , Rem. <i>kirringkirring</i>	cEW; Kbl > Maw
2	<i>Acacia conspersa</i>	Ngb. <i>murdiridi</i> , Ngn. <i>murddirdidih</i> , Rit. <i>murddirdidih</i> , Mar. <i>murdiridi</i> , Wan. <i>murdiridi</i>	cNS; Rit-Ngb-Ngn-Wan-Mar
3	<i>Acacia dimidiata</i>	Kun. <i>borrelk</i> , Rem. <i>borrolk</i> , Dal. <i>borrulk</i> , Ngn. <i>borrolk</i> , Jaw. <i>?barral</i> ( <i>A. holosericea</i> ), Ndj. <i>borrorl</i> , Rit. <i>?barralk</i>	icYOL: GUN > Rit; icMAN: GUN > Ndj,
4	<i>Acacia holosericea</i>	Ngb. <i>wudhukul</i> , Ngn. <i>dhukul</i> , Rit. <i>dhukul</i> , Wan. <i>djukul</i> , Mar. <i>?dhukul</i> , <i>rdukurlurlan</i>	cNS; Rit-Ngb-Ngn-Wan-Mar
5	<i>Acacia shirleyi</i>	Rem. <i>djurluh</i> , Ngb. <i>yurlu</i> , Ngn. <i>djurluh</i> , Ngl. <i>djurluh</i> , Rit. <i>djurluh</i>	icYOL; Rem-Ngn-Ngl-Ngb > Rit
6	<i>Allosteropsis semialata</i>	Maw. <i>?munmun</i> , Kun. <i>munmun</i> , Rem. <i>munmunh</i> , Dal. <i>munmun</i> , Jaw. <i>?munmun</i> , Ngn. <i>munmunh</i> , Ngl. <i>?munmunh</i> , Rit. <i>munmunh</i>	icYOL: GUN > Rit; icMaw: GUN > Maw
7	<i>Alphitonia excelsa</i>	?Kun. <i>dird</i> , Ngb. <i>dhirwik</i> , Rit. <i>dhiriwh</i>	icYOL: Ngb-Rit
8	<i>Amyema thalassia</i>	Maw. <i>?rlamburda</i> (poss. <i>Aegiceras cirniculatum</i> ), <i>?lamurdba</i> , Kbl. <i>lamurdba</i> , Ndj. <i>?lamurdba</i>	cEW: Maw-Kbl-Ndj
9	<i>Ampelocissus acetosa</i>	Ngb. <i>wuyarrangarl</i> , Wan. <i>yarrangarl</i> , Mar. <i>djarrangarl</i>	cNS: Mar-Wan-Ngb
10	<i>Antidesma ghaesembilla</i>	Rem. <i>djubbi</i> , Dal. <i>djubbi</i> , Ngl. <i>djubbih</i> , Ngn. <i>djubbih</i> , Rit. <i>djubbih</i> ; Kun. <i>djulukkurn</i> , Bur. <i>djurlukkun</i>	icYOL: GUN > Rit; icMAN: Kun-Bur
11	<i>Avicennia marina</i>	Ngb. <i>lhalkur(k)</i> , Ngn. <i>dhalkurk</i> , Rit. <i>dhalkurk</i> ; Maw. <i>mumbarri</i> , Kbl. <i>mumbarri</i> , Ngb. <i>rnambarra</i> ; Gup. <i>manyarr</i> , Rir. <i>manyarr</i> , Kun. <i>?manyarr</i> ( <i>Barringtonia acutangula</i> ), Rem. <i>manyarr</i> ( <i>B. acut.</i> ), <i>?Jaw. menjdjel</i> ( <i>B. acut.</i> )	icYOL: Ngn-Ngb > Rit, Ngn-Rit; aC: Maw-Kbl-Ngb; icYOL: YOL > Rem-Kun-Jaw;
12	<i>Bambusa arnhemica</i>	Maw. <i>mankole</i> , Kun. <i>mankole</i> , Kbl. <i>mankole</i> , Ndj. <i>mankole</i> Bur. <i>mankole</i> , Dji. <i>mankole</i> , <i>mankurle</i> , Gup. <i>mankurli</i>	cEW: Kun-Kbl > Maw-Ndj-Bur-Dji-Gup
13	<i>Banksia dentata</i>	Tiw. <i>mayili(nga)</i> , Maw. <i>mayirli</i>	cEW: Tiw-Maw

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
14	<i>Barringtonia acutangula</i>	Yan. <i>murrurnrdu</i> , Kay. ? <i>marrinda</i> ( <i>Avicennia marina</i> ); Ngb. <i>murrnganawuy</i> , Mar. <i>murrnganawu</i> ; Dji. <i>mamarra</i> , Kay. <i>mararra</i> ( <i>A. mar.</i> )	cNS: Yan-Kay, Ngb-Mar; aC: Kay-Dji
15	<i>Boerhavia diffusa</i>	Mar. <i>rdu:dja</i> , Wan. <i>rdudjardudja</i> , Ngb. <i>ri:dja</i> , Ngn. <i>dhudhuh</i>	icMAR: Mar-Wan-Ngb-Ngn
16	<i>Bossiaea bossiaeoides</i>	Kun. <i>lerrelerre</i> , Rem. <i>lerrelerre</i> , Jaw. <i>lerrelerre</i> , Ngb. <i>wurlirririrri</i> , Ngn. <i>rlerrerlerreh</i> , Rit. <i>gurlirririrri</i> , Wan. <i>rlirririrri</i> , Mar. <i>rlirririrri</i>	icMAR: Mar-Wan > Ngn-Rem-Kun; icYOL: GUN > Rit; cNS: Wan > Ngb
17	<i>Brachychiton</i> spp.	Dji. <i>bongberre</i> , Bur. <i>bongburra</i> ; Dji. ? <i>budaka</i> , Bur. <i>burdaka</i> ; Ngb. <i>adidja</i> , Ani. <i>erridja</i> ; Ngb. <i>lhalharrang</i> , Yan. <i>lhalhaki</i> ; Gup. <i>bulkud</i> , Rit. <i>bulkud</i> , Ngl. <i>bulkud</i> ; Gup. <i>balkurr</i> , Rit. <i>barlkurr</i> , Ngb. <i>arlwurr</i> , Ngn. <i>barlkurr</i>	cEW: Dji-Bur; Dji-Bur; cNS: Ngb > Ani; Ngb-Yan; icYOL: Gup-Rit > Ngl, Gup-Rit-Ngb-Ngn
18	<i>Buchanania obovata</i>	Maw. <i>kurnbi</i> , Kbl. <i>kurnbe</i> ; Mar. ? <i>biriwiri</i> ( <i>Canarium australianum</i> ), Kay. <i>biribiri</i> ; Gup. <i>munjdjudj</i> , Rit. <i>munjdjudj</i> (fruit), Rir. <i>mungdjudj</i> , Ngb. <i>munjdjudj</i> , Wan. <i>mundjudj</i> ; Rem. <i>birrkv</i> , Rit. <i>birrkih</i> , Ngn. <i>berrkeh</i> , ?Yan. <i>bikiki</i> ;	cEW: Maw-Kbl; cNS: Mar-Kay; (Gup-Rit)-Rir > Ngb-Wan; Rit-Ngn-Yan?; icYOL: Ngn-Rit; Rem-Rit; Dal-Rem-Kun > Dji
19	<i>Callitris intratropica</i>	Tiw. <i>kardirrikani</i> , Maw. <i>karndirrikan</i> , Kbl. <i>kandarrkken</i> Dji. <i>derrka</i> ; Ani. <i>yimindungwa</i> , Ngb. <i>yimbird</i> , Wan. <i>yimbird</i>	cEW: Tiw-Maw-Kbl; cNS: Ani-Ngb-Wan
20	<i>Calytrix exstipulata</i>	Bur. <i>barnabbarna</i> , Dji. <i>barnabbarna</i> , Gup. <i>barnabbarna</i> , Kun. <i>barnabbarna</i> , Rem. <i>barnabbarna</i> ; Rit. <i>ngarnanyihngarnanyih</i> , Ngn. <i>ngarningarninjdji</i> , Rit. <i>marddinjdjarr</i> , Ngb. <i>marddinjdjarr</i>	cEW: Bur-Dji-Gup; icMAN: Kun-Rem-Bur; icYOL: Rit-Ngn, Rit-Ngb
21	<i>Capparis umbonata</i>	Gup. <i>bundjarranga</i> , <i>burndjungu</i> , Rit. <i>burndjunguh</i> , Ngn. <i>burndjunguh</i>	icYOL: Gup-Rit > Ngn
22	<i>Carissa lanceolata</i>	Mar. <i>djingkurlirli</i> , Wan. <i>djingkurlirli</i> , Ngb. <i>djingkurlirli</i>	icMAR: Mar-Wan-Ngb
23	<i>Cartonema spicatum</i>	Kun. <i>rdikkala</i> , Rem. <i>rdikkala</i> , Dal. <i>didjkala</i> , Ngn. <i>rdamurrkalangh</i> , Rit. <i>rdikkalah</i> , <i>rdimarrkalang</i>	icYOL: BKW > Rit
24	<i>Cassytha filiformis</i>	Kun. <i>burrunburrun</i> , Rem. <i>burrunburrun</i> , Dal. <i>burrunburrun</i> , Ngb. <i>wurrurnbururn</i> , Ngn. <i>burrurnburrurnh</i> , Rit. <i>burrurnburrurnh</i> , Gup. <i>bururnburrurn</i>	icYOL: GUN > Rit; GUN > Gup

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
25	<i>Casuarina</i> spp.	Maw. <i>ngurrum</i> , Kbl. <i>ngurrum</i> ; Ndj. <i>djawala</i> , ?Gup. <i>djomola</i> ; Ngb. <i>wakuwaku</i> , Wan. <i>wakuwaku</i> , Mar. <i>wakuwaku</i> , Yan. <i>waynkuwaynku</i> ; Ngb. <i>wungkararr</i> , Wan. <i>ngararr</i> , Mar. <i>ngararr</i> ; Rem. <i>borkvrrh</i> , Dal. <i>borakurrk</i> , Ngn. <i>borokorrh</i> , Ngl. <i>borokorr</i> , Rit. <i>barakarrh</i> , <i>burukurrh</i> ; Kun. <i>djarah</i> , Rem. <i>djarah</i> , ?Mar. <i>djarburr</i> ; Tiw. <i>mirruwadji</i> , Bur. ? <i>mawurrk</i> (place name), Dji. <i>mawurrk</i> , Rir. <i>mawurraki</i> , Rit. <i>mawurrakih</i> , Ani. <i>mawurraka</i> , Yan. ? <i>mawurradji</i> (barbed spear), Kay. <i>mawurradji</i> (barbed spear)	cEW: Maw-Kbl; Ndj-?Gup; cNS: Ngb-Wan-Mar-Yan, Ngb-Wan-Mar; icYOL: GUN > Rit; icMAR: GUN > Mar? aC: Tiw-Bur-Dji-Rit-Rir- Ani-Yan-Kay
26	<i>Clerodendrum floribundum</i>	Dji. <i>budaka</i> , Rit. <i>burdukah</i> , Ngn. <i>burduka</i> , Ngb. <i>burduka</i> , Wan. <i>burduka</i> , ?Yan. <i>burdala</i> ; Kun. <i>molorrk</i> , Rem. <i>morlorrk</i> , <i>mororrk</i> , Dal. <i>molorrk</i> , Jaw. <i>morlorrk</i> , Ndj. <i>molorrk</i>	cNS: Dji-Rit > Ngn-Ngb- Wan-Yan? icMAN: GUN > Ndj
27	<i>Clerodendrum cunninghamii</i>	Kun. <i>walbburungku</i> , Rem. <i>walbburungku</i> , Dal. <i>walbburungku</i> , Ngb. <i>albburungku</i> , Ngn. <i>ganda-walbburungkuh</i> , Rit. <i>walbburungkuh</i>	cNS: GUN > Rit
28	<i>Cochlospermum fraseri</i>	Rem. <i>kandikulk</i> , Rit. <i>dhandikulk</i>	icYOL: Rem-Rit
29	<i>Coelospermum reticulatum</i> ( <i>Pogonolobus reticulatus</i> )	Kun. <i>kumurduk</i> , Rem. <i>kumurduk</i> , Dal. <i>kumurduk</i> , Ndj. <i>mankumurduk</i>	icMAN: Kun-Rem-Dal > Ndj
30	<i>Corypha utan</i>	Gup. <i>kurlwurri</i> , Dji. <i>kolwerri</i> , <i>kurlwirri</i> , Bur. <i>kirwirra</i> , Kun. <i>kurlwirri</i> , Rem. <i>kurlwirri</i> , Dal. <i>kulwirri</i>	cEW: Gup-Dji > Bur; icYOL: Gup-Dji > Kun- Rem-Dal
31	<i>Crinum uniflorum</i>	Mar. <i>rdirringkirlrdirringkirl</i> , Yan. <i>rdangkarlrdangkarl</i>	cNS: Mar-Yan
32	<i>Cucumis melo</i>	Ngb. <i>warmurrng</i> , Ngn. <i>baramurrk</i> , Rit. <i>barmurrk</i>	Ngb-Ngn > Rit
33	<i>Cycas</i> spp.	Gup. <i>ngaddhu</i> , Rir. <i>naddhu</i> , Rit. <i>ngaddhu</i> , Bur. <i>ngaddju</i> , Kbl. <i>ngadjo</i> , <i>kumungadju</i> , Maw. <i>ngadjo</i> , Ngb. <i>ngadhu</i> , Ngn. <i>ngaddhu</i> , Wan. <i>mangadju</i> , Mar. <i>mangadju</i> , Rem. <i>ngarddu</i> , Dal. <i>ngaddu</i>	cEW: YOL > Bur-Kbl-Maw; cNS: Rit > Ngb-Ngn; Ngn > Wan-Mar (Ngn. <i>ma-</i> in Wan., Mar); icYOL: Rit > Rem, Dal

(Continued)

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
34	<i>Cymbidium canaliculatum</i> , <i>Dendrobium dicuphum</i> (and other tree orchids)	Bur. <i>marndaddja</i> , Dji. <i>marndaddja</i> ; Wan. <i>rdalkirr</i> , Rit. <i>rdalkirr</i> ; Gup. <i>djalkkurrk</i> , Rir. <i>djalkkurrk</i> , Rit. <i>djalkkurrk</i> , Ngn. <i>djalkkurrk</i> , Ngb. <i>yalgurk</i> , Wan. <i>djalkkurrk</i> ; Wan. <i>dhu:rnrdah</i> , Ngb. <i>dhu:rnrdah</i> , Ngn. <i>dhurnrdah</i> , Rit. <i>dhu:rnrdah</i> ; Rem. <i>durda</i> , Kun. <i>durda</i> , Dal. <i>durda</i> ; Maw. <i>yalamari</i> , Kun. <i>djalamardi</i> , Jaw. <i>djalamardi</i> , Ndj. <i>yalamarda</i> , Mar. <i>madjalardi</i> , Ani. <i>yilamara</i>	cEW: Bur-Dji; cNS: Wan-Rit, YOL(Gup-Rir-Rit)-Ngb-Ngn-Wan, Wan-Ngn-Ngb-Rit; icYOL: Rit > Rem, Dal; icMaw: Maw-Kun-Jaw; aC: Maw-Ndj-?Mar-?Ani
35	<i>Denhamia obscura</i>	Rit. <i>karngkarng</i> , Rem. <i>karnkkah</i>	icYOL: Rit-Rem
36	<i>Dioscorea bulbifera</i>	Tiw. <i>kurlama</i> , Maw. <i>kuli</i> ; Mar. <i>djalma</i> , Wan. <i>djalma</i> , Ngn. <i>djalma</i> , Rit. <i>djalma</i> , Rem. <i>djalma</i>	cEW: Tiw-Maw; icYOL: Mar-Wan-Ngn-Rit, Rit > Rem
37	<i>Dioscorea transversa</i>	Gup. <i>kankuri</i> , Rit. <i>kankurih</i> , Ngn. <i>kankurih</i> , Rem. <i>kankurih</i> ; Mar. <i>ngarrbarda</i> , Kun. <i>karrbarda</i>	icYOL: Gup-Rit-Ngn-Rem; icMAR: Mar-Kun
38	<i>Eleocharis</i> spp.	Ngb. <i>mardika</i> , Wan. <i>mardika</i> ; Mar. <i>karrabi</i> , Wan. <i>ngkarrabi</i> , Ngb. <i>mangkarrabi</i> ; Mar. <i>mulalu</i> , Wan. <i>mulalu</i> , Ngn. <i>mulalu</i> , Rit. <i>mulalu</i> ; Ngn. ? <i>mulkmulk</i> , Rit. <i>mulkmulk</i>	cNS: Ngb-Wan; Mar-Wan-Ngb; icYOL: Ngn-Rit
39	<i>Erythrophleum chlorostachys</i>	Tiw. <i>kardukuni</i> , Maw. <i>kardungkun</i> ; Bur. <i>ngardiddjala</i> , Dji. <i>ngardiddjali</i> ; Rit. <i>djirrbbara</i> , Ngb. <i>yirrbara</i> ; Rem. <i>mirniyarr</i> , Ngn. <i>mirniyarrh</i> , Rit. <i>miniyarrh</i> ; Gup. <i>maybbin</i> , Rir. <i>maybbinj</i> , Rit. <i>maybbinj</i> , Rem. <i>maybbinj</i> ; Mar. <i>malbamba</i> , Wan. <i>malbamba</i> , Ngl. <i>malbah</i>	cEW: Tiw-Maw, Bur-Dji; cNS: Rit-Ngb; icYOL: Rem-Ngn > Rit, YOL > Rem; icMAR: Mar-Wan > Ngl
40	<i>Eucalyptus camaldulensis</i>	Mar. <i>ngalangka</i> , Ngb. <i>ngalangka</i> , Ngn. <i>ngolongko</i> , Ngl. <i>ngolongkoh</i> , Rit. <i>ngalanggah</i>	cNS: Mar-Ngb-Ngn-Ngl-Rit
41	<i>Eucalyptus ferruginea</i>	Mar. <i>kurrdjarda</i> , Wan. <i>kurrdjarda</i> , Ngb. <i>kurrdjarda</i> , Ngn. <i>kurrdjardah</i> ; Rem. <i>djiwinj</i> , Gup. <i>djiwinj</i> , Rit. ? <i>djewinj</i>	cNS: Mar-Wan-Ngb-Ngn; icYOL: Rem-Ngn-Gup-Rir
42	<i>Eucalyptus microtheca</i>	Ngl. <i>muddju</i> , Ngn. <i>muddju</i> , Ngb. <i>wimudju</i> , Rit. <i>muddju</i> , Wan. <i>mudju</i>	icYOL: Ngl-Ngn-Ngb > Rit; icMAR: Ngl-Ngn-Ngb > Wan

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
43	<i>Eucalyptus miniata</i>	Ngb. <i>wungurruk</i> , Ngn. <i>rungurruh</i> , Rit. <i>kungurruh</i> , Rir. <i>kungurru</i> , Rem. <i>kungurru</i> , Dal. <i>kungurru</i> , Bur. <i>kongkurra</i> , Dji. <i>kungirri</i> , Gup. <i>kongorro</i> , Mar. <i>wungkurrun</i> ; Mar. <i>mangarda</i> , Wan. <i>mangarda</i> , Ngl. <i>mankardah</i> ; Dji. <i>korderre</i> , ?Ani. <i>mawurdarra</i>	icYOL: Ngb-Ngn > Rit-Rir; icMAN: Rem-Dal > Bur; cEW: Bur-Dji-Gup; icMAR: Ngn-Ngb > Mar, Mar-Wan > Ngl; aC: Dji-Ani?
44	<i>Corybmia (Eucalyptus) polycarpa</i>	Rem. <i>dumurluh</i> , Ngn. <i>dhumurluh</i> , Ngl. <i>rdumuluh</i> , Ngb. <i>lhumuluk</i> , Rit. <i>dhumurluh</i> , Rir. <i>dhumulu</i>	icYOL: Rem-Ngn-Ngl-Ngb > Rit-Rir
45	<i>Eucalyptus tectifica</i>	Dal. <i>walanh</i> , Jaw. <i>warlan</i> , Ngb. <i>warlan</i> , Ngn. <i>warlanh</i> , Ngl. <i>warlanh</i> , Rit. <i>warlanh</i> , Bur. <i>wolankurra</i> , Mar. <i>warlan</i> , Wan. <i>warlan</i> , Yan. <i>warlan</i>	icYOL: GUN > Rit; icMAN: GUN > Bur; icMAR: GUN > Mar-Wan; cNS: Mar-Wan > Yan
46	<i>Eucalyptus tetradonta</i>	Bur. <i>darrkka</i> , Dji. <i>rderrkka</i> ; Gup. <i>kardaykka</i> , Rir. <i>kadaykka</i> , Rit. <i>kadaykka</i> , Ngn. <i>kardaykka</i> , Rem. <i>kardaykka</i>	cEW: Bur-Dji; icYOL: Gup-Rir-Rit > Ngn, Rit > Rem
47	<i>Excoecaria parviflora</i>	Ngn. <i>djilarrah</i> , Ngl. ? <i>djilarra</i> , Rit. <i>djilarrah</i> ; Ngb. <i>wurlibilu</i> , Wan. <i>riibulu</i>	icYOL: Ngn-Ngl-Rit; cNS: Ngb-Wan
48	<i>Ficus opposita (scobina?)</i>	Gup. <i>muddhir</i> , Rit. <i>muddhih</i> , Ngn. <i>muddheh</i>	icYOL: Gup-Rit > Ngn
49	<i>Ficus racemosa</i>	Gup. <i>kurninji</i> , Rit. <i>kurninjarrah</i> , Ngb. <i>kurninjarra</i> , Mar. <i>kurninjarra</i> , Ngl. <i>kuniyerra</i>	cNS: (Gup)-Rit-Ngb-Mar-Ngl
50	<i>Ficus virens</i>	Kun. <i>djarnhba</i> , Rem. <i>djarnhba</i> , Dal. <i>djarnhba</i> , Jaw. <i>djarndja</i> , Ngn. <i>djarnbah</i> , Rit. <i>djarnbah</i> , Bur. <i>djarnba</i> , Dji. <i>djarnba</i> , Gup. <i>djarnhbba</i> ; Bur. <i>karlawun</i> , Dji. <i>karlarra</i> ; Ngb. <i>marnbarnburru</i> , Ani. <i>mambamburra</i>	icMAN: GUN > Bur; icYOL: Ngn > Rit; cEW: Bur-Dji-Gup, Bur-Dji; cNS: Ngb-Ani
51	<i>Flagellaria indica</i>	Ndj. <i>karrawukka</i> , Kbl. <i>ngarawuka</i> , Rem. <i>karrawukka</i> ; Mar. <i>rilkarra</i> , Wan. <i>rilkarra</i> , Yan. <i>rilkarra</i>	cEW: Ndj > Kbl-?Rem; cNS: Mar-Wan > Yan
52	<i>Gomphrena canascens</i>	Rem. <i>kanbukbuk</i> , Dal. <i>kanbukbuk</i> , Ngb. <i>yambubuk</i> , Rit. <i>kanbukbuk</i> , Ani. <i>yambumba</i>	icYOL: GUN > Rit, cNS: Ngb > Ani
53	<i>Grevillea pteridifolia</i>	Rem. <i>wadbar</i> , Dal. <i>wadbar</i> , Ngb. <i>wadbar</i> , Ngn. <i>wadbar</i> , Ngl. <i>wardbar</i> , Rit. <i>wadbar</i> , Bur. <i>wadbark</i> , Wan. <i>wadbar</i>	icYOL: GUN > Rit; icMAN: GUN > Bur; icMAR: GUN > Wan

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
54	<i>Grewia multiflora?</i>	Rit. <i>buyuh</i> , Ngn. <i>buyuh</i> , Ngb. <i>mabuyu</i> , Ani. <i>makbiya</i> ; Kun. <i>murriddjan</i> , Rem. <i>murriddjan</i> , Gup. <i>murrddj(u/i)mun</i>	cNS: Rit > Ngn-Ngb; Ngn-Ngb > Ani icYOL: Kun-Rem > Gup
55	<i>Grewia retusifolia</i>	Bur. <i>burdadduma</i> , Dji. <i>borroddime</i> ; Mar. <i>kuyiya</i> , Wan. <i>kuyiya</i> , Yan. <i>kuyiya</i> ; Ngn. <i>murrnjah</i> , Ngb. <i>murrnjang</i> , Rit. <i>murrny(a/i)h</i> , Ani. <i>mamurrinya</i>	cEW: Bur-Dji; cNS: Mar-Wan > Ngl, Mar-Wan > Yan, Ngn-Ngb > Rit, Ngn-Ngb > Ani
56	<i>Hakea arborescens</i>	Wan <i>yingirri</i> , Ngb. <i>lhangkarirri</i> ; Ngn. <i>njirrinjirrih</i> , Rit. <i>njirrinjirrih</i> ; Mar. <i>rdilyarr</i> , Wan. <i>rdilyarr</i> , Jaw. <i>dilyarr</i>	cNS: Wan-Ngb; icYOL: Ngn-Rit; icMAR: Mar-Wan-Jaw
57	<i>Hibiscus</i> spp.	Tiw. <i>arlabandjiya</i> , Maw. <i>alabandja</i> ; Maw. <i>warnmalk</i> , Kbl. <i>barnmalk</i> , Bur. <i>?malwarn</i> , Dji. <i>?marlwan</i> , Gup. <i>?malwan</i> , Rir. <i>malwar</i> , Rit. <i>malwan</i> , Ngb. <i>malwad</i> ; Kun. <i>manyalhmanyalh</i> , Rem. <i>manyalhmanyalh</i> , Dal. <i>?yarl-no</i> (bark), Ngb. <i>ya:rl</i> , Ngn. <i>ya:rl</i> , Ngl. <i>yarl</i> (bark), Rit. <i>ya:rl</i> , Rir. <i>yal</i>	cEW: Tiw-Maw aC: Maw-Kbl-Dji-Gup-Rir-Rit-Ngb; icYOL: Kun-Rem-Dal-Ngb-Ngn-Ngl-Rit-Rir
58	<i>Ipomoea pes-caprae</i>	Bur. <i>kongora</i> , Dji. <i>kongora</i> ; Mar. <i>barnbarnkarri</i> , Wan. <i>barnbarnkarri</i> , Yan. <i>warnbarnkarra</i>	cEW: Bur-Dji; cNS: Mar-Wan > Yan
59	<i>Jacksonia</i> spp.	Ngb. <i>dhurrurungki</i> , Rit. <i>dhurrurungkidj</i> ; Rem. <i>wungku</i> , Yan. <i>wungan</i>	cNS: Ngb-Rit; icMAR: Rem-Yan
60	<i>Livistona humilis</i>	Dal. <i>djadjak</i> , Rem. <i>djakdjak</i> , Kun. <i>djarnkele</i> , Bur. <i>djarnkala</i> , Ndj. <i>djakora</i> , Dji. <i>djardarrk</i> , Ngl. <i>djadjak</i> , Ngn. <i>djadjak</i> , Rit. <i>dja:djak</i> ; Gup. <i>dhalbbi</i> , Rir. <i>dhalbbi</i> , Ngb. <i>lhalbidj</i> ;	icMAN: Dal-Rem-Kun > Bur-Ndj; cEW: Ndj-Bur-Dji; icYOL: Ngl-Ngn > Rit, aC: Gup-Rir > Ngb
61	<i>Livistona loriphylla</i>	Wan. <i>wulida</i> , Mar. <i>wulirda</i> , Yan. <i>wulirda</i>	cNS: Wan-Mar > Yan
62	<i>Macaranga tanarius</i>	Gup. <i>wardawarda</i> , Rir. <i>wardawarda</i> (spear), Rit. <i>wardawarda</i> , Bur. <i>wardawarda</i> , Ndj. <i>?wardawarda</i> (spear), Maw. <i>wardawarda</i> (spear), Rem. <i>?wardawarda</i> (spear), Kun. <i>wardawarda</i> , Dal. <i>wardawarda</i> ( <i>A. pellita</i> ), Ngb. <i>wardawarda</i> , Ngn. <i>wardawarda</i> , Ani. <i>awaruwara</i> , Wan. <i>?wardawarda</i> , Mar. <i>wardawarda</i> , Yan. <i>wardawarda</i>	cEW: YOL > Bur-Ndj-Maw; icYOL: YOL > Rem-Kun-Dal; cNS: YOL > Ngb-Ngn-Ani-Wan-Mar-Yan

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
63	<i>Melaleuca acacioides</i>	Rit. <i>kulukkuluh</i> , Ngl. <i>kulukkulun</i>	icYOL: Rit-Ngl
64	<i>Melaleuca cajuputi</i>	Mar. <i>kandarr</i> , Wan. <i>kandarr</i> , Ngb. <i>makandarr</i>	cNS: Mar-Wan > Ngb
65	<i>Melaleuca leucadendra</i>	Ngb. <i>lhulwu</i> , Ngn. <i>dhulku</i> , Rit. <i>dhulku</i> , Rir. <i>dhulwu</i> , Gup. <i>dhul(k/w)u</i> ; Mar. <i>kurrurlwul</i> , Wan. <i>kurrurlwul</i> , Rem. <i>kurruwul</i>	icYOL: Ngb-Ngn < Rit-Rir-Gup; icMAR: Mar-Wan > Rem
66	<i>Melaleuca nervosa</i>	Ngn. <i>rdila</i> , Rit. <i>rdila</i> , Gup. <i>?rdila</i> (paperbark cup); Dji. <i>rangan</i> , Gup. <i>rangan</i> , Rir. <i>rangan</i> , Wan. <i>rangka</i> , Mar. <i>rangka</i>	icYOL: Ngn-Rit-Gup; aC: Dji-Gup-Rir-Wan-Mar
67	<i>Melaleuca symphyocarpa</i>	Kun. <i>mandomoddomo</i> , Ngn. <i>rdomorddomoh</i> , Rit. <i>rdamarddamah</i>	icYOL: Kun-Ngn > Rit
68	<i>Melaleuca viridiflora</i>	Dal. <i>rakkala</i> , Rit. <i>rakkalah</i> , Yan. <i>dirrikala</i> ; Ngn. <i>birdibbirdi</i> , Rit. <i>birdibbirdi</i>	icYOL: Dal-Rit-Yan, Ngn-Rit
69	<i>Melaleuca</i> sp.	Rem. <i>baldjarray</i> , Ngl. <i>barrdjarray</i> , Rit. <i>barrddjaray</i>	Rem-Ngl > Rit
70	<i>Nauclea orientalis</i>	Kun. <i>dubal</i> , Rem. <i>dubal</i> , Dal. <i>dubal</i> , Ngn. <i>rdubal</i> , Ngl. <i>rdubal</i> , Rit. <i>rdubal</i> , Dji. <i>rdubal</i> , Mar. <i>rdubal</i> , Wan. <i>rdubal</i>	icYOL: GUN-Rit-Dji; icMAR: GUN-Wan-Mar
71	<i>Owenia vernicosa</i>	Ngn. <i>djenkiridj</i> , Rit. <i>djinkiridj</i> ; Jaw. <i>barnarr</i> , <i>barnaddja</i> , Ngl. <i>barnarrh</i> , Ngb. <i>barnarr</i> , Ngn. <i>barnarrh</i> , Rit. <i>barharrh</i> , Mar. <i>barnarr</i> , Wan. <i>barnarr</i>	icYOL: Ngn-Rit, Jaw-Ngl-Ngb-Ngn > Rit; icMAR: Ngl-Ngn-Ngb > Mar-Wan
72	<i>Pandanus ?aquaticus</i>	Gup. <i>kunga</i> , Rir. <i>kunga</i> , Rit. <i>kunga</i> , Ngn. <i>kunga</i> ; Gup. <i>kundjalk</i> , Ngn. <i>kundjak</i>	icYOL: Gup-Rir-Rit > Ngn; Gup > Ngn
73	<i>Pandanus spiralis</i>	Mar. <i>wakurru</i> , Wan. <i>wakurru</i> , Yan. <i>wukarra</i> ; Kun. <i>dayarr</i> , Rem. <i>dayarr</i> , Dal. <i>dayarr</i> , Dji. <i>djayarr</i>	cNS: Mar-Wan > Yan; icYOL: Kun-Rem-Dal > Dji
74	<i>Persoonia falcata</i>	Rem. <i>dakirridj</i> , Rit. <i>dhakirridj</i>	icYOL: Rem-Rit
75	<i>Petalostigma pubescens</i>	Dal. <i>dorroh</i> , Ngb. <i>lharrak</i> , Ngn. <i>dhorrowh</i> , Ngl. <i>?rdarrawh</i> , Rit. <i>dharrawh</i>	Dal-Ngb-Ngn-Ngl > Rit
76	<i>Planchonella pohlmaniana</i>	Ngb. <i>yi:mid</i> , Rit. <i>djimid</i>	icYOL: Ngb-Rit
77	<i>Planchonia careya</i>	Rem. <i>dhangkih</i> , Ngb. <i>lhangki</i> , Gup. <i>dhangki</i> , Rir. <i>dhangki</i>	icYOL: Rem-Ngb-Gup-Rir
78	<i>Santalum lanceolatum</i>	Mar. <i>rdumbuyumbu</i> , Wan. <i>rdubuyumbu</i> , Ngb. <i>rdumburumbu</i> , Ngn. <i>rdumbuyumbu</i> , <i>dhumbudhumbuh</i> , Rit. <i>dhumbudhumbuh</i>	cNS: Mar-Wan > Ngb-Ngn-Rit

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PLANTS			
#	Referent	Loanwords	Loan corridor and notes
79	<i>Sterculia quadrifida</i>	Gup. <i>barlkbbark</i> , Rir. <i>balkbbalk</i> , Rit. <i>barlkbarlk</i> , Ngb. <i>barlbi</i> , Ani. <i>mabalba</i>	cNS: YOL > Ngb, Ngb-Ani
80	<i>Syzygium suborbiculare</i>	Ngl. <i>rderreneh</i> , Rem. <i>derreneh</i> , Rir. <i>rlarrarni</i> , <i>rnarrarni</i>	cNS: Ngl-Rem-Rir?
81	<i>Tacca leontopetaloides</i>	Bur. <i>bardala</i> , Rir. <i>birdila</i>	cEW: Bur-Rir
82	<i>Tamarindus indica</i>	Mar. <i>rnukurnu</i> , Yan. <i>nukurnu</i>	cNS: Mar-Yan
83	<i>Terminalia carpentariae</i>	Mar. <i>walmarn</i> , Wan. <i>walmarn</i> , Rit. <i>balmarnh</i> ; Maw. <i>marnbi</i> , Rir. <i>mamanbu</i> , Ngb. <i>marnba</i> , Ani. <i>mamaburra</i> ; Mar. <i>marlawal</i> , Yan. <i>marlawal</i> ; Kun. <i>mobban</i> , Rem. <i>mobban</i> , Dal. <i>mobbarn</i> , Gup. <i>mubban</i> ; Ngn. <i>murrbbunh</i> , Ngl. <i>murrbbunh</i> , Rit. <i>murrbbunh</i> , Kay. <i>murrbanda</i>	cNS: Mar-Wan > Rit, Mar-Yan; aC: Maw-Rir-Ngb-Ani; icYOL: Kun-Rem-Dal > Gup; Ngn-Ngl-Rit-Kay
84	<i>Terminalia ferdinandiana</i>	Rem. <i>mardabulah</i> , Ngl. <i>mardabulah</i> , Ndj. <i>mardukudj</i> , Bur. <i>mardangkidj</i>	icMAN: Rem-Ngl-Ndj-Bur
85	<i>Terminalia grandiflora</i>	Nb. <i>wudu</i> , Ngn. <i>kudduh</i> , Rit. <i>kudduh</i>	icYOL: Ngb-Ngn-Rit
86	<i>Thespesia populenoides</i>	Tiw. <i>arlabandjiya</i> , Maw. <i>alabandja</i> ; Mar. <i>djirnrdidjirnrdi</i> , Wan. <i>djirnrdidjirnrdi</i> , Ngb. <i>djirnrdidjirnrdi</i>	cEW: Tiw-Maw; cNS: Mar-Wan > Ngb
87	? <i>Tribulus terrestris</i> , ‘cane grass’	Kun. <i>birnrdayay</i> , Rem. <i>birnrdayay</i> , Dal. <i>birnrday</i> , Jaw. <i>bernrdeyn</i> , Ngb. <i>wubirnrday</i> , Ngn. <i>birnrday</i> , Ngl. <i>birnrday</i> , Rit. <i>birnrday</i> , Mar. <i>birnrday</i> , Wan. <i>birnrday</i>	icYOL: GUN > Rit; icMAR: GUN > Mar-Wan
88	<i>Triodia</i> spp.	Ngl. <i>djalng</i> , Ngb. <i>ya:lng</i> , Ngn. <i>djalng</i> , Rit. <i>dja:lng</i>	icYOL: Ngl-Ngb-Ngn > Rit
89	<i>Vitex glabrata</i>	Kun. <i>kurnrdalh</i> , Dal. <i>kurnrdalh</i> , Ngn. <i>wurnrdanh</i> , Rit. <i>wurnrdanh</i> , Rir. <i>wundan</i> , Gup. <i>wurnrdanh</i> ; Rit. <i>wudjal</i> , Rem. <i>wudjal</i> , Jaw. <i>woyal</i> ; Ngl. <i>wom</i> , Ngb. <i>wu:ng</i> , Bur. <i>wombadjarr</i>	icYOL: Kun-Dal-Ngn-Rit-Rir-Dji, Rit-Rem-Jaw; icMAN: Ngl-Ngb-Bur?
BIRDS			
#	Referent	Loanwords	Loan corridor and notes
90	Babbler, Grey-crowned	Ngb. <i>kurlangagak</i> , Ngn. <i>kurlangangangh</i> , Ngl. <i>kurangangangh</i> , Mar. <i>kurlangangi</i> , Rit. <i>kurlangangangh</i>	icMAR: Ngb-Ngn-Ngl > Mar; icYOL: Ngb-Ngn-Ngl > Rit

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
91	Bee-eater, Rainbow	Tiw. <i>wudirriwudirri</i> , Maw. <i>wurrudwurrud</i> , Dji. <i>wirrirwirrirr</i> , Gup. <i>wurrirwirrirr</i> , <i>wirrirhwirrirh</i> , Jaw. <i>wirriwdwirriid</i> ; Kun. <i>berrerhberrerh</i> , Rem. <i>berrerhberrerh</i> , Dal. <i>berrerdberred</i> , Ngn. <i>barrirhbarrirh</i> , Rit. <i>barrirhbarrirh</i>	cEW: Tiw-Maw-Dji-Gup; icMaw: ?Maw-Jaw; icYOL: Kun-Rem-Dal-Ngn > Rit
92	Bowerbird, Great	Kbl. <i>djidjarok</i> , Ndj. <i>djidjarok</i> ; Kun. <i>djuweh</i> , Rem. <i>djureerrk</i> , Dal. <i>djuwe</i> , Jaw. <i>djuwe</i> , Rit. <i>djurirrh</i> , Gup. <i>djurwirri</i> , Ngn. <i>djureerrh</i> , Ngl. <i>djureerrh</i> , Mar. <i>djurirr</i> , Wan. <i>djurirr</i> , Yan. <i>djurin</i>	cEW: Kbl-Ndj; icYOL: ?Kun-Rem-?Dal-? Jaw-Ngn-Rit-Gup; icMAR: Ngl-Ngn > Wan- Mar; cNS: Mar-Wan > Yan
93	Brolga	Gup. <i>kudurrko</i> , Dji. <i>kurdorrke</i> , Bur. <i>manikurdorrk</i> , Ndj. <i>kabbukudurrk</i> , Ngb. <i>kurdarrku</i> , ?Ani. <i>dukwururrkwa</i> , Wan. <i>kurdarrku</i> , Mar. <i>kudurrku</i> , Yan. <i>kurdarrku</i> ; Kun. <i>ngalkordoh</i> , Rem. <i>kodorrkko</i> , Dal. <i>ngalkordow</i> , Ngl. <i>burdolkoh</i> , Kbl. <i>ngalkordo</i> ; Rit. <i>barnami</i> , Ngn. <i>barnami</i>	cEW: Gup-Dji > Bur-Ndj; cNS: YOL > Ngb-?Ani; Ngb > Mar-Wan; Mar > Yan; icYOL: YOL > Kun-Rem- Dal-Kbl, Rit > Ngn
94	Bustard, Australian	Bur. <i>buwardda</i> , Ndj. <i>buwardda</i> , Kbl. <i>buwardda</i> ; Dji. ? <i>buwardda</i> (Bush Stone Curlew), Gup. <i>bordda</i> ; Mar. <i>kurnrdama</i> , Yan. <i>kurnrdabarra</i> ; Kun. <i>walbburrungku</i> , Rem. <i>walbburrungku</i> , Dal. <i>walbburrungku</i> , Ngn. <i>walbburrungkuh</i> , Ngb. <i>alburrungku</i> , Ani. <i>malburrungkwa</i> , Rit. <i>walbburrungkuh</i>	cEW: Bur-Ndj > Kbl, Bur-Ndj > Dji-Gup; cNS: Mar-Yan, Ngb-Ani; icYOL: GUN > Rit
95	Butcherbird, Pied	Kun. <i>warrhdjird</i> , Rem. <i>worrdjvrd</i> , Dal. <i>warrkdjird</i> , Jaw. <i>warrkdjird</i> , Kbl. <i>wordword</i> , Maw. <i>wardward</i> , Ndj. ?wordword (Magpie Lark); Rit. <i>kurruwurduk</i> , Ngn. <i>kurruwurduk</i> , Ngb. <i>kurrurdu(k)</i> , <i>kurrburduk</i> , Ngn. <i>kurruwurduk</i> , Mar. <i>kurrurdukurrurdu</i> ; Maw. <i>djidburuluk</i> , Mar. <i>djardburrurru</i> , Yan. <i>djalburrurru</i> , Kay. <i>djurdabuwinda</i>	cEW: GUN(Kbl)>Maw, Kbl > Ndj; cNS: Rit-Ngb-Ngn-Mar (also see Australian Darter); icYOL: GUN > Rit; aC: Maw-Mar-Yan-Kay
96	Cockatiel	Rem. <i>wirrirhwirrirh</i> , Rit. <i>wirrirwirrir</i>	icYOL: Rem-Rit

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
97	Cockatoo, Red-tailed Black	Ndj. <i>bangkararrk</i> , Bur. <i>barkurukkur</i> , <i>bangkurarrk</i> , Dji. <i>bangkirarrk</i> , <i>kangkirarr</i> ; Wan. <i>rlirrarduma</i> , Mar. <i>rlirrarduma</i> , Yan. <i>lirra</i> ; Rit. <i>rdarrabiyah</i> , Rem. <i>darrabiya</i> , Ngl. <i>rdarrabiya</i> , Ngn. <i>rdarrabiyah</i> ; Dal. <i>karrak</i> , Jaw. <i>karrak</i> , Ngb. <i>warrag</i> , Maw. <i>karrak</i>	cEW: Ndj-Bur > Dji; cNS: Wan-Mar > Yan; icYOL: Rit > Rem-Ngl-Ngn; icMaw: Dal-Jaw-Ngb > Maw
98	Cockatoo, Sulphur-crested	Kay. <i>ngarnala</i> , Ndj. <i>ngarrangala</i> ; Rit. <i>ma: rrbuh</i> , Rem. <i>marrbburl</i> ; Dji. <i>ngarrkngarrk</i> , Gup. <i>njarrk</i> , Rit. <i>ngirrkngirrk</i> , Ngn. <i>ngerrkngerrk</i> , Ngl. <i>ngerrk</i> , Wan. <i>ngirrkngirrk</i>	aC: Kay-?Ndj; icYOL: Rit-Rem; YOL-Ngn-Ngl; icMAR: Ngn > Wan
99	Corella, Little	Kun. <i>ngaled</i> , Rem. <i>ngalelek</i> , Dal. <i>ngalelek</i> , Jaw. <i>ngalelek</i> , Ngb. <i>ngangarrik</i> , Ngn. <i>ngalalak</i> , Maw. <i>ngalakayu</i> , Bur. <i>ngalalak</i> , Dji. <i>?ngirlirlik</i> , Wan. <i>ngilili</i> , Mar. <i>ngilili</i> , Yan. <i>ngulili</i> , Rit. <i>ngalalak</i>	cEW: GUN > Maw, Bur-Dji; icMAN: GUN > Bur cNS: Ngn > Wan-Mar, Mar > Yan; icYOL: Ngn > Rit
100	Cormorant, Great	Bur. <i>korroburda</i> , Dji. <i>korrobbodo</i> , Yan. <i>?kurrbarnku</i> ; Ngb. <i>?kulmumbarkarra</i> (Little Pied Cormorant?), Ngn. <i>?kurlnbarlkarra</i> , Rit. <i>?kurlunbarlkarra</i> ; Ngn. <i>karrawarr</i> , Rit. <i>karrawarr</i>	aC: Bur-Dji-?Yan; icYOL: Rit-NgnNgb, Ngn-Rit
101	Coucal, Pheasant	Kbl. <i>bob</i> , Kun. <i>bukbuk</i> , Rem. <i>bukbuk</i> , Dal. <i>bukbuk</i> , Jaw. <i>bukbuk</i> , Ngb. <i>wubuk</i> , Maw. <i>wudbud</i> , Wan. <i>bukbana</i> , Mar. <i>bukbana</i> , Ani. <i>yikba</i> ; Mar. <i>bulbulkidja</i> , Yan. <i>bulbulkidja</i> , Kay. <i>bulbulka</i> ;	icMAR: GUN > Mar-Wan; icMaw: GUN > Maw; cNS: Yan > Kay, Wan-Mar > Ani, Mar > Yan
102	Cuckoo Shrike, While-bellied	Jaw. <i>wirriwirriyak</i> , Kbl. <i>wirriwirriyak</i> , Maw. <i>wirriwirriyak</i> , Ndj. <i>wirriwirriyak</i>	cEW: (Jaw)-Kbl > Maw, (Jaw)-Kbl > Ndj
103	Cuckoo-Shrike, Black-faced	Kyn. <i>widjiwidjik</i> , Rem. <i>widjiwidjik</i> , Bur. <i>widjiwidjik</i>	icMAN: Kun-Rem > Bur
104	Curlew, Beach Stone/Whimbrel	Dji. <i>biliwirrdwirrd</i> , Bur. <i>?biliwirtwirt</i> , Kbl. <i>kalorrwirdwird</i> , Maw. <i>kalawerdberd</i> , <i>?widbid</i> (Sandpiper); Mar. <i>kurlambidbidj</i> , Ngb. <i>kurla: bidbidj</i> ; Jaw. <i>?bamkuluwirdwird</i> (Cockatiel), Ngn. <i>kurluwidbidj</i> , Rit. <i>kurluwidbidj</i> , Kun. <i>buluwirdwird</i> , Rem. <i>buluwirdwird</i> , Dal. <i>?buluwirdwird</i> (Gouldian Finch)	cEW: Dji-Bur-Kbl-Maw; cNS: ?Mar-Ngb; icYOL: Jaw-Ngn-Rit, Dji > Kun-Rem-Dal

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
105	Curlew, Bush Stone	Bur. <i>kumurnrda</i> , Gup. <i>kumirnda</i> ; Kun. <i>kurrubirla</i> , Rem. <i>kurrubvrla</i> , Dal. <i>kurruwirlah</i> , Jaw. <i>kuluwurr</i> , <i>korwelak</i> , Kbl. <i>kurrwirluk</i> , Maw. <i>kurrwirlu</i> , Ndj. <i>kuyluk</i> , Dji. <i>kurrwirkka</i> , Ngb. <i>kurruwirlak</i> , <i>kuwirlu</i> , <i>wuwarlurlu</i> , Ngl. <i>kuwerluh</i> , Ngn. <i>kuwarlurlu</i> , Rit. <i>kuwarlurlu</i> , <i>kuwirlungh</i> , ?Gup. <i>wirla</i> , Mar. <i>kuwirlu</i> , Wan. <i>kuwirlu</i> , Yan. <i>ngualili</i> , ?Ani. <i>duwalya</i>	cEW: Bur-Gup, (GUN)Kbl > Maw, Kbl > Ndj-Dji; icYOL: Ngb-Ngl-Ngn > Rit-?Gup; cNS: Mar-Wan > Yan, Ngb>? Ani
106	Darter, Australasian	Kun. <i>barrakbarrak</i> , Rem. <i>barrakbarrak</i> , Dal. <i>barrakbarrak</i> , Jaw. <i>barrakbarrak</i> , Ngb. <i>arkark</i> , Ngl. <i>karrakkarrak</i> , Ngn. <i>karrakkarrak</i> , Rit. <i>karrakkarrak</i> , Mar. <i>karrakkarrak</i> , Wan. <i>karrakkarrak</i> ; Dal. <i>djingardarr</i> , Ngn. <i>djingardarr</i> , Rit. <i>djingarnrdarr</i> ; Rit. <i>dhangkarlan</i> , Ngb. <i>yangarlan</i> ; Bur. <i>korroborda</i> , Dji. <i>korrobodo</i> , Ngb. <i>wurruburduk</i>	icYOL: GUN > Rit; Dal-Ngn > Rit; Rit > Ngb; icMAN: GUN > Mar-Wan; ac: Bur-Dji-Ngb
107	Dollarbird	Kun. <i>rdewrdew</i> , Jaw. <i>dewdew</i> , Ngn. <i>rdewhrdew</i> , Rit. <i>rdiwhrdiw</i>	icYOL: Kun-Jaw-Ngn > Rit
108	Dove, Bar-shouldered	Kun. <i>bokodjbokodj</i> , Rem. <i>bokodjbokodj</i> , Dal. <i>bokodjbokodj</i> , ?Ngb. <i>budjbudj</i> , Ngn. <i>bokodjbokodj</i> , Rit. <i>bukudjkukudj</i> ; Ndj. <i>mabarrabbarrabba</i> , Mar. <i>marrababa</i> , Yan. <i>marabababa</i>	icYOL: Kun-Rem-Dal-?Ngb-Ngn > Rit; ac: Ndj-Mar-Yan
109	Dove, Diamond/Peaceful	Kun. <i>korlododoh</i> , Rem. <i>korlordorddo(h/k)</i> , Dal. ? <i>koloddok</i> , <i>kolorddorodo</i> , <i>korloddodok</i> Ngn. <i>korloddok</i> , Ngl. <i>kolododok</i> , Jaw. ? <i>kolododok</i> (Bar-sh. Dove), Kbl. <i>korloddod</i> , Tiw. <i>kurluduki</i> , Ndj. <i>karloddod</i> , Bur. <i>kuloddok</i> , Dji. <i>kurlude</i> ; Ngb. <i>kurukuku(k)</i> , Mar. <i>kurungkuk</i> , Yan. <i>kulakuku</i> , Kay. ? <i>kurukuku</i> ; Rit. <i>kurluddu(du)k</i> , Gup. <i>kurudut</i> ; Gup. <i>kurubuk</i> , Dji. <i>kurubuk</i> , Rem. <i>korobok</i> , Jaw. <i>kolobok</i>	cEW: (GUN)Kbl > Tiw, Kbl > Ndj-Bur > Dji; cNS: Ngb-Mar-Yan-Kay; icYOL: Ngn > Rit-Gup, Gup-Dji > Rem-Jaw
110	Duck, Pacific Black	Ngn. <i>warlmanj</i> , Rit. <i>warlmanj</i> , Wan. <i>warlmanj</i> ; Jaw. ? <i>ngarnkurr</i> (any duck), Kun. <i>ngarnkul</i> , Kbl. <i>ngarnkul</i> , Ndl. ? <i>ngarnkul</i> (any duck); Ngl. <i>ngurlirri</i> , Wan. <i>ngulirri</i>	cNS: Ngn-Rit-Wan; cEW: (Jaw-Kun)-Kbl > Ndj; icMAR: Ngl-Wan
111	Eagle, Wedge-tailed	Rit. <i>rdamala</i> , Gup. ? <i>rdamala</i> , Dji. <i>damile</i> , Bur. <i>damalkurra</i> ; Ngn. <i>rdamala</i>	cEW: YOL > Bur; icYOL: YOL > Ngn

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
112	Emu	Rit. <i>wurrbbarn</i> , Gup. <i>wurrubbarn</i> , Dji. <i>wurrbbarn</i> , <i>wurrbardabbarda</i> , Bur. <i>wurrbbarn</i> , Ngn. <i>wurrbbarn</i> , Ngb. <i>wurrbarn</i> (y. male, rare), Wan. <i>wurrukayin</i> , Rem. <i>wurrbbarn</i> , Kun. <i>wurrbbarn</i>	cEW: YOL > Bur; cNS: YOL > Ngn-Ngb-?Wan, YOL > Rem-Kun
113	Fantail, Rufous; Willie Wagtail	Kun. <i>djikkirridjdjikkirridj</i> , Dal. <i>djikkirridj</i> , Jaw. <i>djikkirridjdjikkirridj</i> , <i>djiningkirridj</i> , Kbl. <i>djikkirridjdjikkirridj</i> , Maw. <i>djikkirridjdjikkirridj</i> , Ndj. <i>djakkardadjekkarda</i> , Bur. <i>djikkirridjdjikkirridj</i> ; ?Mar. <i>djindikirridjdjindikirri</i> , <i>djirringarddjirringard</i> , Yan. <i>djikirridjdjikirri</i> , <i>kidjirridjirri</i> , Bur. <i>djibirridjdjibirridj</i> , <i>djidjibirrdjdjibirri</i> , Gup. <i>djirribidjirribi</i> , Rit. <i>djirrimiddjirrimi</i> , Ngn. <i>djirrimidjirrimi</i> , Ngb. <i>birridjirribirridjirri</i>	aC: Maw-(GUN)Kbl-Ndj-Bur- ?Mar-Yan, Bur-Gup(-Rit- Ngn)-Ngb; icYOL: Gup-Rit > Ngn
114	Finches	Rem. <i>ninhnin</i> , Dal. <i>nin</i> , Jaw. <i>nin</i> , Ngn. <i>rninh</i> , Ngl. <i>rninhrninh</i> , Rit. <i>nyinh</i> , Wan. <i>rninin</i> , Mar. <i>rninin</i>	icYOL: GUN > Rit; icMAR: GUN > Wan-Mar
115	Friarbird, Helmeted	Dal. <i>mardawk</i> , Jaw. <i>marawk</i> , Ngb. <i>almaruk</i> , Ngn. <i>mardawk</i> , Ngl. <i>mardaw</i> ( <i>h/k</i> ), Kbl. <i>marawk</i> , Maw. <i>marawk</i> , Rit. ? <i>ma:rdawk</i> (Silver-crowned Friarb.); Gup. <i>kirlawun</i> , Dji. <i>kilawun</i> , Bur. <i>kulawurn</i> ; Tiw. <i>djuruwa</i> , Wan. <i>djiryarr</i> , Ani. <i>didjaruwa</i>	cEW: (GUN)Kbl > Maw, Gup- Dji > Bur; icYOL: GUN > Rit; aC: Tiw-Wan-Ani
116	Frigatebird	Tiw. <i>djabarrika</i> , Maw. <i>kaladjbarri</i>	cEW: Tiw-Maw
117	Frogmouth, Tawny	Gup. <i>dhurdudhurdu</i> , Rit. <i>dhurdudhurdu</i> , Ngb. <i>dhurdudhurduk</i> ; Dji. <i>djurudjurdu</i> , Rem. <i>djurudjurdumun</i> , Kun. <i>djurudjurdumun</i> ; Kun. <i>kuluykkuluy</i> , Dal. <i>kuluyhkuluy</i> , Kbl. <i>kulumuyukkulumuyuk</i> , Bur. ? <i>kulikkuli</i> ('type of owl') Rit. <i>kuluykkuluy</i>	cNS: (Gup)Rit > Ngb; icYOL: YOL > Rem-Kun, Kun-Dal-Kbl > Rit; cEW: Kun-Dal-Kbl > Bur
118	Fruit-Dove, Banded	Kbl. <i>lumbuk</i> , Kun. <i>lumbuk</i> , Dal. <i>lumbuk</i> , Jaw. <i>lumbuk</i> , Rit. <i>rlumbuk</i> , Maw. <i>rlumbuk</i> , Ndj. <i>lumbuk</i> , Bur. <i>lumbuk</i>	icYOL: GUN > Rit; cEW: Kbl > Maw, Kbl > Ndj- Bur

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
119	Galah	Kun. <i>wirlihwirlih</i> , Rem. <i>wirlihwirlih</i> , Dal. <i>wirlihwirlih</i> , Jaw. <i>bilkbilk</i> , Kbl. <i>wirliwiri</i> , Maw. <i>wiliwili</i> , Bur. <i>wirliwirla</i> , Dji. <i>wurliywurliy</i> , Rit. <i>wilikwilik</i> ; Ngn. <i>kulikulih</i> , Ngl. <i>kilikilih</i> , Mar. <i>ngilingkilinga</i>	cEW: (GUN)Kbl > Maw, Kbl > Bur-Dji; icYOL: Rem > Rit; icMAR: Ngl-Ngn > Mar
120	Goose, Magpie	Mar. <i>rlangkurna</i> , Wan. <i>rlangkurna</i> , Yan. <i>rlangkuna</i> , Ngn. <i>rlangkurna</i> , Ngl. <i>rlangkurnang</i> , Rit. <i>rlangkurna</i> ; Kun. <i>murnubbarr</i> , Ndj. <i>marnubarr</i>	cNS: Mar-Wan > Yan; icYOL: Ngn-Ngl > Rit; icMAN: Kun-Ndj; icMAR: Mar-Wan > Ngn-Ngl
121	Goshawk, Brown	Kun. <i>malawirdiwirdi</i> , Rem. <i>malawirdwirdv</i> , Dal. ? <i>malawirdiwirdi</i> ('chicken hawk'), Jaw. ? <i>malawirdiwirdi</i> (Collared Sparrowhawk), Ngn. <i>malawirdiwirdi</i> , Ngl. <i>malaradi</i> , Ngn. <i>malawirdiwirdi</i> , Kbl. ? <i>marrawuddi</i> (White-bellied Sea Eagle), Maw. <i>marrawadi</i> , Rit. <i>malawirdiwirdi</i> , Ndj. ? <i>mawirlwirliba</i> (Black-shouldered Kite), Mar. <i>malawidiwirdi</i> , Kay. ? <i>malawuruwuru</i>	cEW: GUN > Maw; icYOL: Ngn > Rit; icMAN: GUN > Ndj; icMAR: GUN > Mar; cNS: ?Mar > Kay
122	Goshawk, Red	Maw. <i>karrkanj</i> , Kun. <i>karrkanj</i> , Rem. <i>karrkanj</i> , Dal. <i>karrkanj</i> , Jaw. <i>karrkanj</i> , Ngn. <i>karrkanjh</i> , Ngl. <i>karrkaj</i> , Bur. <i>karrkinj</i> , Dji. <i>karrkinj</i> , Rit. <i>karrkanjh</i> , Gup. <i>karr(o)kanj</i> , Yan. <i>karankangu</i> , Kay. <i>karrkungka</i> ; Kbl. <i>karrkkarrk</i> , Ndj. <i>(k/y)ikarrkkarrk</i> , Ngn. <i>nikarka</i> , Ngl. <i>yikarrka</i> , Ani. <i>yinikarka</i>	? icMaw: GUN > Maw aC: Kbl-Ndj-Ngb(Ngn)-Ani
123	Grasswren, White-throated	Ngn. <i>wiridjirrwiridjirr</i> , Rit. <i>wiridjirrhwiridjirrh</i>	icYOL: Ngn-Rit
124	Gull, Silver	Mar. <i>wunakarrka</i> , Yan. <i>wunarrkarrka</i> , Kay. <i>kaarku</i> ; Gup. <i>djarrak</i> , Dji. <i>djarrak</i> , Rit. <i>djarrak</i> , Ngl. <i>djarrak</i> , Wan. <i>djarrak</i> , Bur. <i>djarrak</i> , Rem. <i>djarrak</i>	cNS: Mar > Yan, Yan > Kay, (YOL)Rit > Ngl, Ngl > Wan; cEW: Dji > Bur; icYOL: Rit > Rem
125	Heron, Great-billed	Kun. <i>kulu</i> , Rem. <i>kulu</i> , Dji. <i>kuwurlu</i> , Gup. <i>kulumirrdha</i> , Maw. <i>kulapaku</i> ; Ngl. <i>wurrurluluk</i> , Ngn. <i>wurrurlulu</i> , Mar. <i>mawurrurlulu</i>	icYOL: Kun-Rem-Dji-Gup; icMaw: Maw-Kun-Rem, icMAR: Ngl-Ngn > Mar
126	Hérons, egrets (white)	Kun. <i>komorlo</i> , Rem. <i>komoro</i> , Dal. <i>komorlo</i> , Ngn. <i>komorlo</i> , Ngl. <i>komorlo</i> , Kbl. <i>komorlok</i> , Ndj. <i>komorlok</i> , Bur. <i>komarla</i> , Rit. <i>kumurlu</i> ; Rem. <i>kalkarawk</i> , Bur. <i>karlurkkur</i> , Dji. <i>kalkuruk</i> ; Dji. <i>karwarra</i> , Kay. <i>kalbarra</i>	cEW: (GUN)Kbl > Ndj-Bur; icYOL: (GUN)Rem > Rit; icMAN: Rem > Bur-Dji; aC: Dji-Kay

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
127	Ibis, Straw-necked	Ngb. <i>djurluwu</i> , Ngn. <i>djurlubu</i> , Rit. <i>djurlubu</i>	icYOL: Ngb-Ngn-Rit
128	ibises (white)	Rit. <i>karrala</i> , Gup. <i>karrarla</i> , Dji. <i>kirrarla</i> , Bur. <i>kurralar</i> , <i>karrarla</i> , Kbl. <i>karrarla</i> , Kun. <i>karrarla</i> , Rem. <i>karrarla</i> , Dal. <i>karrala</i> , Ngn. <i>karrala</i> , Ngb. <i>karra:lak</i> , Mar. <i>karrurlana</i> ; Mar. <i>kurnrdirnrdi</i> , Yan. <i>kurnrdirnrdi</i>	cEW: YOL > Bur, Bur > Kbl; icYOL: YOL > Kun-Rem-Dal-Ngn; cNS: YOL > Ngb-Mar, Mar-Yan
129	Jacana, Comb-crested	Mar. <i>rdirdibawaba</i> , Wan. <i>rdirdibawaba</i> , Ngn. <i>kirdiba:bba</i> , Ngl. <i>rdirdiwaba</i>	icMAR: Mar-Wan > Ngn-Ngl
130	Kingfishers, small (blue or red)	Gup. <i>djirrirdirdi</i> , Dj. <i>djirrirdirdi</i> , Rit. <i>djirrirdirdi</i> , Ndj. <i>djirrirdirdi</i> , Ngb. <i>djirrirdirdi</i> , Ngn. <i>djirrirdirdi</i> , Kun. <i>djirridih</i> , Rem. <i>djirrirdirdi</i> , Dal. <i>djirrirdirdi</i> , Ngl. <i>?djirrirdirdi</i> (Boat-billed flycatcher); Maw. <i>djirriyingking</i> , Kbl. <i>djirrikinkin</i>	? cEW: Kbl > Maw
131	Kite, Black	Bur. <i>kurrddjirddjir</i> , Dji. <i>kurrddjirddjir</i> , Ngb. <i>?kurrudjudjurk</i> (Whistling Kite)	aC: ?Bur-Dji-Ngb
132	Kite, Fork-tailed	Rit. <i>bundul</i> , Rem. <i>bundul</i> , Ngn. <i>bundul</i>	icYOL: Rit > Rem-Ngn
133	Kite, Whistling	?Bur. <i>djiddjarl</i> , Ngn. <i>rdirdiddjurh</i> , Ngl. <i>rdirdiddjar</i> , Mar. <i>rdirdiddjar</i>	icMAR: ?Bur-Ngn-Ngl-Mar
134	Koel, Eastern	Kun. <i>djowok</i> , Dal. <i>djowok</i> , Jaw. <i>djowok</i> , Kbl. <i>djawok</i> , Maw. <i>djawok</i> ; Rit. <i>ku:wak</i> , Dji. <i>kowok</i> , Rem. <i>kuwak</i> , Ngb. <i>kuwak</i> , Ani. <i>kuwak</i> ; Mar. <i>rduwaw</i> , Ngn. <i>rduwawh</i> , Rit. <i>rduwawh</i> , ?Kun. <i>duwoh</i> , Yan. <i>dhuwa</i>	cEW: (GUN)Kbl > Maw; icYOL: Rit-Dji-Rem, Rit-Ngb, Ngn > Rit; cNS: Ngb > Ani, Mar > Ngn-?Kun, Mar > Yan
135	Kookaburra, Blue-winged	Maw. <i>kalurkalkurk</i> , Kbl. <i>kaldurk</i> ; Kun. <i>korrowkkorow</i> , Rem. <i>korrokkorro</i> , Ngn. <i>korrowkkorow</i> , Ngl. <i>korrbkorrb</i> , Wan. <i>kurrkurr</i> ; Tiw. <i>djorridjorringa</i> , Wan. <i>djirriyirku</i>	cEW: Maw-Kbl; icMAR: (GUN)Ngn > Wan; aC: Tiw-Wan?
136	Lapwing, Masked	Kbl. <i>bererberreb</i> , Maw. <i>wererberreb</i> , Tiw. <i>birrambirrama</i> , Ndj. <i>barrabbarrabba</i> , Bur. <i>bariyarrbariyarrb</i> , <i>burrebbarrebba</i> , Kun. <i>bererberreb</i> , Dal. <i>bererberreb</i> , Rem. <i>bererberreb</i> , Dji. <i>birribbirrib</i> , Gup. <i>birribbirrib</i> , Ngb. <i>birrbbirrk</i> , Rit. <i>birrbbirrk</i> ; Wan. <i>bidilirrilirri</i> , Mar. <i>bidirrirri</i> , Yan. <i>bidirrirri</i> , Dal. <i>beddelerlelerre</i> , Jaw. <i>?beddelerlelerre</i> (Jacana), Ngl. <i>beddelerlelerreh</i> , Ngn. <i>baddjurlerrerrlerreh</i>	cEW: Kbl > Maw-Tiw, Kbl > Ndj-Bur; icYOL: ?Kun-Dal-Rem > Dji-Gup; cNS: Ngb > Rit, Wan-Mar > Yan; icMAR: Dal-Jaw-Ngl-Ngn > Wan-Mar

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
137	Lorikeet, Varied	Wan. <i>mlinjmarr</i> , Yan. <i>milinjma</i> ; Gup. <i>birlidjbirlidj</i> , <i>wirlidjwirlidj</i> , Dji. <i>bilidjbilidj</i> , Rit. <i>wirridjwirridj</i> , Ngb. <i>wilidjbilidj</i> , <i>wirriwirri</i> , <i>warraywarray</i> , Ngn. <i>werreywerrey</i> , <i>wirriwirri</i> ; Kun. <i>djurrih</i> , Rem. <i>djurrih</i> , Dal. <i>djurrih</i> , Jaw. <i>djurri</i> , Maw. <i>djurri</i>	cNS: Wan-Yan, YOL > Ngb-Ngn; icMaw: Kun-Rem-Dal-Jaw > Maw
138	Magpie-Lark	Mar. <i>rdilrdilkurrurru</i> , Wan. <i>rdilrdilkurrurru</i> , Ngn. <i>rdirlkrdirlk</i> , Ngl. <i>rdirlkrdirlk</i> , Rit. <i>birlkbirlk</i> , <i>rdilililbirlkbirlk</i> , <i>rdilili</i> , Kun. <i>diladila</i> , Bur. <i>diladila</i> , Dji. <i>dildil</i> , Gup. <i>dilili</i>	icMAR: Mar-Wan > Ngn-Ngl; icYOL: Ngn > Rit; icMAN: Kun-Bur; cEW: Bur-Dji-Gup;
139	Misc. birds	Maw. <i>wurral</i> , Bur. <i>korrlkorrl</i> , Dji. <i>kurrarlkurrarl</i> , <i>kurralkurral</i> , Ngb. <i>wurralk</i> , Wan. <i>kurralkurral</i> , Mar. <i>kurralkmanindja</i> , Kay. <i>kurralkurralda</i>	aC: Maw-Bur-Dji-Ngb-Wan-Mar-Kay?
140	Mistletoebird (misc. small birds)	Kun. <i>?njuridj</i> , Rem. <i>?nuridj</i> , Dal. <i>?njuridj</i> (Blue-faced Honeyeater), Ngb. <i>?rduridj</i> , Ngl. <i>rduridj</i> , Ngn. <i>rduridj</i> , Rit. <i>dhupididj</i>	icYOL: (GUN)Ngn-Rit
141	Night-Heron, Nankeen	Mar. <i>karkundja</i> , Wan. <i>karkundja</i> , Ngn. <i>karkunjdjah</i> , Rit. <i>karkunjdjah</i> ; Kun. <i>kalkorowk</i> , Dal. <i>kalk</i> , Jaw. <i>?karrkorlo</i> (Little Egret), Ngb. <i>ngarlkurk</i> , Rem. <i>kalkarawk</i> , Dji. <i>kalkuruk</i> , Gup. <i>kalkuruk</i> , Bur. <i>karlkurkkur</i>	cNS: Mar-Wan > Ngn, Ngn > Rit; icYOL: GUN(Rem)>Dji-Gup; icMAN: Kun-Rem > Bur
142	Nightjar, Large-tailed	Kun. <i>lablab</i> , Dal. <i>lablab</i> , Kbl. <i>lablab</i> , Maw. <i>rlablab</i>	cEW: Kun-Dal-Kbl > Maw
143	Nightjar, Spotted	Maw. <i>djorndjorndok</i> , Dji. <i>djundjunnuk</i>	cEW: Maw-Dji
144	Osprey	Maw. <i>djurddjur</i> , Kbl. <i>djurddjur</i> , Kun. <i>?djurddjur</i> (Brahminy Kite), Ndj. <i>?djurddjur</i> , <i>?Dji. djurdbila</i> , Gup. <i>?djurddjur</i> , Rit. <i>djurdbila</i> , Ngb. <i>yirddjird</i> , Ngn. <i>yirddjird</i> , Mar/ <i>djurddjurddju</i> , Yan. <i>djudjudju</i>	aC: Maw-(Kun)-Kbl-Ndj-?Dji-Gup-(Rit)-Ngb-(Ngn)-Mar-Yan
145	Owl, Barking	Kun. <i>ngokngok</i> , Rem. <i>ngokngok</i> , Kbl. <i>ngokngok</i> , Maw. <i>nguknguk</i> , Ndj. <i>ngokngok</i> , Bur. <i>ngokngok</i> , Dji. <i>ngokngok</i> ; Rit. <i>rdudburrk</i> , Gup. <i>dolbburruk</i> , Bur. <i>wurrbburrk</i> ; Dal. <i>mukmuk</i> , Jaw. <i>?mukmuk</i> , Ngl. <i>?kurnmuk</i> , Ngn. <i>kurnmuk</i> , Wan. <i>mukmuk</i> , Rit. <i>mukmuk</i>	cEW: GUN(Kun-Rem-Kbl)>Maw; GUN > Ndj-Bur; Bur > Dji; ?Rit-Gup > Bur; icMAR: GUN(Dal-Jaw-?Ngl-?Ngn)>Wan; icYOL: GUN > Rit
146	Owl, Eastern Grass	Rit. <i>djirikkikkih</i> , Gup. <i>?djirikidj</i> (quail), Bur. <i>djirakidj</i>	cEW: Rit-Gup > Bur

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
147	Oystercatcher, Pied	Maw. <i>kadikadik</i> , Kbl. <i>kaddikkaddik</i> , Ndj. <i>kaddikadda</i> , Bur. <i>kadjarkka</i> , Gup. <i>kuthirkka</i> , Ngb. <i>kadhirkadhirk</i> , Ngn. <i>kadhirkadhirk</i> , Mar. <i>kudhakudhayi</i> , Kay. <i>kadhuka</i>	aC: Maw-Kbl-Ndj-Bur-Gup-Ngb-Ngn-Mar-Kay
148	Parrot, Red-winged	Rit. <i>bilidjbilidj</i> , Gup. <i>bilidjbilidj</i> , Dji. <i>bilidjbilidj</i> , Ndj. <i>balidjbalidj</i> , ?Maw. ? <i>wilidbilid</i> (Magpie Lark), Ngn. <i>bilidjbilidj</i> , Ngb. <i>wilidjbilidj</i>	cEW: YOL > Ndj-?Maw; icYOL: YOL > Ngn-Ngb
149	Pelican, Australian	Ndj. <i>djandjana</i> , Bur. <i>nanjdja</i> , Dji. <i>nanjdja</i> ; Ngb. <i>burungkurrrk</i> , Gup. <i>burongurr</i> ; Mar. <i>balubalu</i> , Wan. <i>balubalu</i> , ?Kay. ? <i>malumalu</i> (Pied Cormorant); Dji. <i>murlambirring</i> , Wan. <i>kulanbirri</i> , Dji. <i>mula</i> , Rit. <i>mula</i> , Rem. <i>mola</i> , Kun. <i>mola</i> ; Dal. <i>kolkolk</i> , Ngn. <i>korlokorlk</i> , Rit. <i>karlakarlk</i> ; Bur. <i>warrbulula</i> , Dji. <i>warrbululo</i> , Kay. ? <i>wurrrbululu</i> (Magpie Goose)	cEW: Ndj-Bur > Dji; cNS: Ngb-Gup, Mar-Wan > Yan, ?Yan > Kay, Dji-Wan; icYOL: Dji-Rit-Rem-Kun; Ngn-Dal > Rit; aC: Bur-Dji-Kay
150	Pigeon, Partridge	Dji. <i>rlabbarr</i> , Gup. ? <i>rlabbar</i> (Common Bronzewing), Rit. <i>rla:bbar</i> , Ngb. ? <i>rlabarrk</i> (Peaceful Dove), Ngn. ? <i>rlabbarr</i> (Common Bronzewing), Kbl. <i>dabbarr</i> , Kun. <i>dabbar</i> , Dal. ? <i>dabbarr</i> (Red-eye Pigeon), Ngl. <i>dabbarr</i>	icYOL: YOL-Ngb-Ngn- (?GUN)
151	Pigeon, Pied Imperial	Dji. <i>mukumburl</i> , Bur. <i>mukumul</i>	cEW: Dji-Bur
152	Pygmy-Goose, Green	Kun. <i>diwidj</i> , Rem. <i>diwidj</i> , Dal. <i>diwidj</i> , Ngb. <i>rdiwadj</i> , Ngn. <i>rdiwadj</i> , Rit. <i>rdiwadj</i> , Bur. <i>diwidj</i> , ?Maw. <i>biwudj</i> , Wan. <i>madiwadj</i> , <i>rdiwadj</i> , ?Kay. <i>djiwi</i> (Plumed Whistle-Duck)	icYOL: GUN > Rit; icMAN: GUN > Bur; icMaw: GUN>?Maw; icMAR: GUN > Wan-?Kay
153	Quail, Brown	Gup. <i>djirikidj</i> , Rit. <i>djirkidj</i> , Ngb. <i>djirkidj</i> , Ngn. <i>djirkidj</i> ; Wan. <i>djirrirnrdir</i> , Mar. <i>djirrirnrdir</i> , Kun. <i>djirrirddih</i> , Dal. <i>djirrihrdi</i> , Jaw. <i>djirirddi</i> ; ?Maw. <i>ibid</i> , Kbl. <i>djirddibbidj</i> , Bur. <i>djirabbidj</i> , Dji. ? <i>djiribbidj</i> (Stubble Quail), Kay. <i>djiribi</i> , Rem. <i>djirbbv</i>	cNS: Gup-Rit > Ngb-Ngn; icMAR: Wan-Mar > GUN (Kun-Dal-Jaw); aC: ?Maw-Kbl-Bur-Dji-Kay; icYOL: ?Dji > Rem
154	Rail, Chestnut	Wan. <i>djarardadbuwa</i> , Mar. <i>djarardadbuwa</i> , <i>alandharrbura</i> , Yan. <i>walandharrbura</i> , Ani. <i>karridalbuwa</i> , Ngn. <i>djarardadbuwa</i> , Ngb. <i>djarardadbuwa</i> , Rit. <i>djarardadbuwa</i>	cNS: Wan-Mar > Yan-Ani, Mar-Wan > Ngn-Ngb-Rit
155	Rock-Pigeon, Chestnut-quilled	Kun. <i>borrobborro</i> , Rem. <i>borrobboroh</i> , Dal. <i>borrobborro</i> , Ndj. <i>borrobborro</i>	icMAN: Kun-Rem-Dal > Ndj

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
156	Sandpiper, Common	Gup. <i>kurdirdi</i> , Mar. <i>yirdirdingarna</i> , Yan. <i>yirdirdingarna</i>	aC: Gup-Mar-Yan
157	Sea-Eagle, White-bellied	Dal. <i>marrawuddi</i> , Kbl. <i>marrawuddi</i> , Maw. <i>marrwadi</i> ; Mar. <i>djardbarramba</i> , Wan. <i>djardbarramba</i> (nest of Wedge-tailed Eagle), Ngb. <i>djardbarramba</i> , Yan. <i>djalbarramba</i> ; Maw. <i>?ngakngak</i> (sound of Sea-Eagle), Gup. <i>ngakngak</i> , Ngb. <i>ngakangaka</i> , Ngn. <i>ngakngak</i> , Wan. <i>ngakngak</i> , Mar. <i>ngakngak</i>	cEW: (Dal)-Kbl > Maw; cNS: Mar-Wan > Ngb; Mar-Wan > Yan; aC: Maw-Gup-Ngb-(Ngn)-Wan-Mar
158	Shelduck, Radjah	Kun. <i>karrkarala</i> , Rem. <i>karrkarali</i> , Kbl. <i>ngarrkiyala</i> , Ndj. <i>nakkariyala</i> ; Mar. <i>rnarrkrnarrk</i> , Ngl. <i>rnarrkrnarrk</i> ; Tiw. <i>dirrindirri</i> , <i>arnrdirringa</i> , Rit. <i>rdirrnrdirrng</i> , Ngb. <i>rdirrnrdirr</i> , Ngn. <i>rdirrnrdirrng</i> , Yan. <i>rurndurn</i> ; Dji. <i>kirrkirrmirring</i> , Yan. <i>ngirrngirrarni</i> , Kay. <i>ngarumadhi</i>	cEW: (Kun-Rem)-Kbl > Ndj; icMAR: Mar-Ngl; aC: Tiw-(Rit)-Ngb-(Ngn)-Yan; Dji-Yan-Kay
159	Small birds	Gup. <i>djikkay</i> , Rit. <i>djikkayh</i> , Ngn. <i>djikkayh</i> , Wan. <i>djikdjik</i>	icYOL: YOL > Ngn; icMAR: Ngn > Wan
160	Spoonbill, Royal	Bur. <i>karnariya</i> , <i>kanarra</i> , Dji. <i>ngurrkarnarra</i> ; Dal. <i>karrala</i> , Ngn. <i>karrala</i> , Rit. <i>karrala</i> ; Mar. <i>burlunburlun</i> , Wan. <i>burlunburlun</i> , Ngl. <i>bulubbulun</i> , Ngn. <i>djiwulunbulun</i> ; Tiw. <i>ararrini</i> , Dji. <i>karwarra</i> , Yan. <i>ararawa</i>	cEW: Bur-Dji; icYOL: Dal-Ngn-Rit; icMAR: Mar-Wan > Ngl-Ngn; aC: Tiw-?Dji-Yan
161	Stork, Black-necked	Gup. <i>kandji</i> , Dji. <i>kandji</i> , Rit. <i>kandji</i> , Ngn. <i>kandji</i> , Wan. <i>karindji</i> , Mar. <i>karindji</i> . Rem. <i>kandji</i> , Kun. <i>kandji</i> , Ngb. <i>andji</i> ; Tiw. <i>arndongi</i> , Kay. <i>ka(r)ndungka</i>	cNS: YOL > Ngn > Wan-Mar; icYOL: YOL > Rem-Dal-Kun-Ngn-Ngb (Kbl, Dal and Jaw have the word <i>djarnarran</i> ); aC: Tiw-Kay
162	Swamphen, Purple	Mar. <i>murrurrungkurna</i> , Ngn. <i>murrurrungkurna</i> , Rit. <i>murrurrungkurnah</i> , Yan. <i>murrurrungkurna</i>	cNS: Mar > Ngn; Ngn > Rit; Mar > Yan
163	Whistle-Duck, Plumed	Bur. <i>kudjidjimiya</i> , Dji. <i>kudjidji</i> , Gup. <i>?kuyiyi</i> (White-eyed Duck); Kun. <i>djirribiyuk</i> , Dal. <i>djirribiyuk</i> , Jaw. <i>djirriwiyuk</i> , Ngn. <i>djirribiyuk</i> , Ngl. <i>djirribiyuk</i> , Tiw. <i>djurriyi</i> , Rit. <i>djirribiyuk</i> , Mar. <i>djirribiyu</i> , Wan. <i>djirribiyuk</i> ; Kbl. <i>djilikuybi</i> , Kun. <i>?djilikuyibi</i> (Grey Teal), Rem. <i>?djilvkuyibi</i> (Pacific Black Duck), Dal. <i>djilikuybi</i> , Ngb. <i>yililidj</i> , Ngn. <i>djilili</i> , Rit. <i>djilili</i>	cEW: Bur > Dji-Gup, GUN-? Tiw; icMAR: GUN > Mar-Wan; icYOL: GUN > Rit, GUN > Rit

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BIRDS			
#	Referent	Loanwords	Loan corridor and notes
164	Woodswallow, Black-faced	Kun. <i>djerededjerd</i> , Rem. <i>djvrddvdjvrn</i> , Ngn. <i>djerledjerlh</i> , Ngl. <i>djeledjelh</i> , Rit. <i>djirlidjirlh</i>	icYOL: Kun-Rem-Ngl-Ngn > Rit
165	wrens	Wan. <i>djarrbirlidjarrbirli</i> , Yan. <i>yarnbalyarnba</i>	cNS: Wan-Yan
MAMMALS			
#	Referent	Loanwords	Loan corridor and notes
166	Bandicoot	Gup. <i>warnhkurra</i> , Rit. <i>wangkurrah</i> , Dji. <i>warrurnkurra</i> , Bur. <i>warnkurra</i> , Ngb. <i>warnkurak</i> , Ngn. <i>wangkurrah</i> , Wan. <i>warnkurak</i> , <i>wangkulinya</i> ; Rit. <i>dhungkah</i> , Ngn. <i>dhungkah</i> , Rem. <i>dungkah</i> ; Tiw. <i>marinji</i> , <i>maruwinji</i> , Maw. <i>marunj</i> , Mar. <i>marumaru</i>	cEW: YOL > Bur; cNS: YOL > Ngb-Ngn- Wan-Yan; icYOL: Rit > Rem, Rit > Ngn; aC: Tiw-Maw-Mar
167	Bats (small)	Kun. <i>malabbibbi</i> , Ngn. <i>malabbinjinjin</i> , Kbl. <i>malabbinbin</i> , Bur. <i>karnabbinjinjin</i> , Ndj. <i>malabbinbin</i> , ?Gup. <i>winjiwinji</i> ; Mar. <i>binjbindjarla</i> , Wan. ? <i>binjbindjarla</i> , Ngn. <i>binjinjinjarla</i> ; [cf. Kbl. <i>djirribinbin</i> , Dal. <i>djirribinjinjin</i> , Jaw. <i>djirriwinjinjin</i> ]	cEW: Kun-Kbl-Ngn > Ndj, Ndj > Bur, Bur?> Gup; icMAR: Mar-Wan-Ngn; [cf. similar forms in Kbl, Dal and Jaw]
168	Echidna	Bur. <i>kadjarkddjarrk</i> , Dji. <i>kadjarkdjarrk</i> ; Dji. <i>djirmmanga</i> , Gup. <i>djirmmanga</i> , Rit. <i>jirngamah</i> , Wan. <i>yirmmanga</i> , Wan. <i>djirmmaka</i> , Ngb. <i>yirmmanga</i> , Rem. <i>djirmmanga</i> ; Mar. <i>wubularr</i> , Yan. <i>wabalarra</i> ; Kun. <i>bambirl</i> , Maw. <i>wambirlbaya</i>	cEW: Bur > Dji; cNS: YOL > Ngb-Wan- Mar, Mar-Yan; icYOL: YOL > Rem; icMaw: Kun-Maw
169	Euro	Kbl. <i>kalkberd</i> , Ndb. <i>kalkberd</i> ; Kun. <i>worlerrk</i> , Rem. <i>worlerrk</i> , Dal. <i>worlerrk</i> , Ngn. <i>dhirrk</i> , Kbl. <i>wolerrk</i> , Ndj. <i>wolerrk</i> , Bur. <i>warlirrk</i> ; Kun. <i>namarr</i> , Rem. <i>namarr</i> , Dal. <i>namarr</i> , Bur. ? <i>namarr</i> (Black Wallaroo), Ndj. <i>namarr</i> ; Dji. <i>murrbburnkurla</i> , ?Gup. ? <i>marrabal</i> , Rit. <i>murrbbunkurla</i> , Ngn. <i>murrbbunkurla</i> , Ngb. <i>murrbbunkurla</i>	cEW: Kbl-Ndj, GUN > Ndj, Ndj-Bur; icMAN: GUN-Bur-Ndj; cNS: YOL > Ngn-Ngb
170	Flying Fox, Black	Mar. <i>madjurr</i> , Wan. <i>madjurr</i> , Ngn. <i>maddjurr</i>	icMAR: Mar-Wan > Ngn
171	Flying Fox, Little Red	Dji. <i>warrinju</i> , Gup. <i>warrnju</i> , Rit. <i>warrnju</i> , Ngn. <i>warrnju</i> , Rem. <i>warrnju</i>	icYOL: YOL > Rem, YOL > Ngn
172	Possum, Brush- tailed	Rit. <i>mirddiwirrih</i> , Ngn. <i>mirddiwirrih</i>	icYOL: Rit > Ngn
173	Quoll	Kun. <i>yulukyuluk</i> , Rem. <i>yulukyuluk</i> , Dal. <i>yulukyuluk</i> , Ngl. <i>njuluk</i> , Ngn. <i>njuluk</i> , Ngb. <i>njarlik</i> , Bur. <i>njuluknjuluk</i> , Dji. <i>njuluknjuluk</i> , Wan. <i>njalinjali</i>	icMAN: GUN > Bur; cEW: Bur-Dji; cNS: Ngb-Wan
174	Rock Wallaby, Short-eared	Kun. <i>karnrdawulh</i> , Rem. <i>karnrdawulh</i> , Ngb. <i>karnrdawul</i> , Ngl. <i>djurnrdubolh</i> , Ngn. <i>karnrdawulh</i> , Rit. <i>karnrdawul</i>	icYOL: GUN > Rit

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MAMMALS			
#	Referent	Loanwords	Loan corridor and notes
175	Rodents (small)	Rit. <i>burudburud</i> , Mar. <i>burudburud</i> ; Kun. <i>djirrkkinj</i> , Ngn. <i>djirrkkinjh</i> , Rit. <i>djirrkkinjh</i>	cNS: Rit-Mar; icYOL: Kun-Ngn > Rit
176	Sugar Glider	Bur. <i>lambalk</i> , Kun. <i>lambalk</i> , Rem. <i>lambalk</i> , Dal. <i>lambalk</i> , Jaw. <i>lambalk</i> , Ndj. <i>dambalkka</i> , Dji. <i>rlambalk</i> ; Dji. <i>warbburr</i> , Gup. <i>warbburr</i> , Rit. <i>warbburrh</i> , Ngn. <i>warbburrh</i> , Wan. <i>warmurr</i>	icMAN: Bur > GUN; cEW: Ndj-Bur-Dji; cNS: YOL > Ngn; Ngn > Wan
177	Wallaby, Agile 1	Kun. <i>merlbbe</i> , Dal. <i>merlbbe</i> , Jaw. <i>merlbbe</i> , Kbl. <i>merlbbe</i> , Ndj. <i>merlbbe</i> , Bur. <i>merlbba</i>	cEW: (GUN)Kbl > Ndj; Ndj > Bur
178	Wallaby, Agile 3	Rit. <i>balkkidj</i> , Gup. <i>balkkidj</i> , Dji. <i>barlkkidj</i> , Bur. <i>balkkidj</i> , Ndj. <i>balkkidj</i> , Rem. <i>balkkidj</i> , Dal. <i>balkkidj</i> , Ngn. <i>balkkidj</i>	cEW: YOL > Bur, Bur > Ndj; icYOL: YOL > Rem-Dal, YOL > Ngn
179	Wallaby, Agile 5	Ngl. <i>djarrurdduh</i> , Ngb. <i>yarrurdu</i> , Ngn. <i>djarrurddu</i> , Rit. <i>djarrirddu</i> , Rem. <i>djarrurttu</i> , Bur. <i>djarrarddu</i>	icYOL: (Ngl-Ngb-)Ngn > Rit; icMAN: Rem > Bur
180	Wallaby, Agile 6	Dal. <i>labud</i> , Dji. <i>?rlaburd</i>	cNS: Dal-Dji
181	Wallaby, Agile 7	Dji. <i>ngarrkku</i> , Gup. <i>ngarrkku</i> , Ngb. <i>ngarrku</i> , Wan. <i>ngarrkulamba</i> , Mar. <i>ngarrkulamba</i> , Ngl. <i>ngarrkkuh</i>	aC: Dji-Gup-Ngb-Wan-Mar; icMAR: Wan > Ngl
182	Wallaby, Agile (others)	Ngn. <i>borongkol</i> , Rit. <i>barrangkal</i> ; Wan. <i>malurrungkurruna</i> , Mar. <i>malurrungkuna</i> , Yan. <i>malurrungkurru</i> ; Rit. <i>kambalalah</i> , Ngb. <i>kambalala</i> ; Rit. <i>djibirlirri</i> , Ngb. <i>djibirlirri</i> , Mar. <i>djibirlirri</i> , Ngl. <i>djibirlirri</i> ; Gup. <i>mirndharrang</i> , Ngb. <i>mandhirrang</i>	icYOL: Ngn-Rit; cNS: Wan-Mar > Yan, Rit-Ngb, Rit-Ngb-Mar; icMAR: Mar > Ngl; aC: Gup-Ngb
183	Wallaby, generic	Ndj. <i>?kudjbarra</i> (generic wallaby), Maw. <i>kudjbakarri</i> ; Kbl. <i>kornobolo</i> , Kun. <i>kornobolo</i> , Bur. <i>kornabola</i>	cEW: Ndj-Maw, (Kun)-Kbl > Bur
184	Wallaby, Antelope 1	Tiw. <i>kandakidji</i> , <i>kadakidji</i> , Maw. <i>kandakidj</i> , Kbl. <i>karndakkidj</i> , Kun. <i>karndakkidj</i> , Gup. <i>kandakki</i> , Ngb. <i>kandarrkidj</i>	aC: Tiw-Maw-Kbl-(Kun)-Gup-Ngb
185	Wallaby, Antelope 2	Kun. <i>karndayh</i> , Rem. <i>karndayala</i> , Dal. <i>karndayh</i> , Bur. <i>kandayala</i> , <i>karnday</i> , Dji. <i>kandayala</i> , Gup. <i>kandayala</i>	icMAN: Kun-Rem-Dal > Bur; cEW: Bur > Dji-Gup
186	Wallaby, Antelope 3	Dji. <i>karnrdalbburru</i> , Bur. <i>karnrdalbburra</i> , Gup. <i>karnrdalbburru</i> , Rit. <i>karnrdalbburru</i> , Ngb. <i>arnrda:lburru</i> , Ngn. <i>karnrdalbburru</i> , Wan. <i>karnrdalbburru</i> , Mar. <i>karnrdalbburru</i> , Rem. <i>karnrdalbburru</i> , Ngl. <i>karnrdalbburru</i>	cEW: Dji > Bur; cNS: YOL > Ngb-Ngn-Wan-Mar; icYOL: YOL > Rem-Ngl
187	Wallaby, Antelope 4	Rit. <i>karrddjambal</i> , Gup. <i>karrddjambal</i> , Dji. <i>karrddjambal</i> , Bur. <i>?karrddjambal</i> (totem name), Ngb. <i>arrdjambal</i> , Ngn. <i>karrddjambal</i> , Wan. <i>karrdjambal</i>	cEW: YOL > Bur; cNS: YOL > Ngb-Ngn-Wan

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MAMMALS			
#	Referent	Loanwords	Loan corridor and notes
188	Wallaby, Northern Nailtail	Bur. <i>bardibbardi</i> , Gup. <i>bardibbardi</i> ; Kbl. <i>ngabudj</i> , Bur. <i>ngabudj</i> ; Dal. <i>ngorlomorro</i> , Ngl. <i>ngorlomorro</i> , Ngn. <i>ngorlomorro</i> , Rit. <i>ngarlamarra</i> , Wan. <i>ngurlumurru</i> , Mar. <i>ngurlumurru</i> , Yan. <i>ngurluku</i> ; Ndj. <i>kularlarl</i> , Kun. <i>wurlarla</i> , Rem. <i>wurlarla</i>	cEW: Bur-Gup, Kbl-Bur; icYOL: Dal-Ngl-Ngn > Rit; icMAR: Dal-Ngl-Ngn > Wan-Mar; cNS: Mar > Yan; icMAN: Ndj > Kun- Rem
189	Wallaby, Spectacled Hare	Ngl. ? <i>djidjuk</i> , Ngn. <i>djiddjuk</i> , Mar. <i>djidjuk</i>	icMAR: Ngl-Ngn-Mar
190	Wallaroo, Black	Kun. <i>barrk</i> , Rem. <i>barrk</i> , Dal. <i>barrk</i> , Jaw. <i>barrk</i> , Ngn. <i>barrk</i> , Maw. <i>barrk</i> , Ndj. <i>barrk</i> ; Kun. <i>djukerre</i> , Rem. <i>djukerre</i> , Dal. <i>djukerre</i> , Jaw. <i>djuwerre</i> , Kbl. <i>djukerri</i> . Ndj. <i>djukerri</i>	icMaw: GUN > Maw; icMAN: GUN > Ndj cEW: (GUN)Kbl > Ndj
191	Water Rat	Kun. <i>yirrkbadj</i> , Rem. <i>yirrkub</i> , Dal. <i>yirrkbadj</i> , <i>yirrkub</i> , Ngl. <i>yirrkub</i> , Ngn. <i>yirrkuh</i> , Kbl. <i>yirrkub</i> , Maw. <i>wirrkub</i> ; Mar. <i>nhamurr</i> , Yan. <i>namurr</i>	cEW: (GUN)Kbl > Maw; cNS: Mar-Yan