

# Orange You Glad I Didn't Say Banana?: Borrowed Color and Flora/Fauna

## Terminology in W. Papuan Languages

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### 1. Introduction

The area of the Bird's Head and Cenderawasih Bay in Indonesia's West Papua and Papua provinces has been the site of intense contact between a hugely diverse set of languages. Languages from at least nine Papuan families (plus several isolates) are spoken alongside Austronesian languages from the South Halmahera-West New Guinea (SHWNG) branch, which arrived in the region roughly 3000 years ago. Rich coastal trade networks, alongside other social interactions, have resulted in long-term contact, which has left a visible mark on the languages in question (see i.e Klamer 2002 for some discussion of 'Papuan' grammatical features in eastern Indonesian languages, including Biak). This paper looks particularly at terms for colors, animals, insects, and mostly edible plants in both Austronesian and Papuan languages spoken in the westernmost third of the island of New Guinea, and gives a descriptive overview of patterns of cross-family borrowings within this lexical domain.

Previous work has discussed lexical connections between Papuan<sup>1</sup> and Austronesian languages in the region, though none have looked specifically on this semantic field. [McElhanon & Voorhoeve \(1970\)](#) discuss nine possible AN loans into Papuan lexicons from a list of 53 possible cognates shared across Trans-New Guinea languages, including the words for 'leaf', 'star', and 'dog'. [Lynch \(1981\)](#) looks at the same 53 items and expands the number of possible AN loans to 22. Lynch identifies an additional 21 items based on wordlists from [Franklin's \(1975\)](#) work on

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<sup>1</sup> I use the terms 'Papuan' and 'non-Austronesian' interchangeably in this paper, though of course all of the languages discussed here are spoken in Papua and are therefore 'Papuan' in one sense of the word.

Proto-Engan, and reproduces an additional four potential loans pointed out by [Wurm, Voorhoeve & McElhanon \(1975\)](#) in Trans-New Guinea. These items span a number of semantic fields. They also vary in plausibility. On one end of the spectrum are fairly solid cases like Awyu *rō, ō, ron* ‘leaf’ from PMP *\*dahun*<sup>2</sup>, reflected in many Cenderawasih Bay languages as *raun* (Wooi), *ram* ‘ (Biak), *rānu* (Moor), or similar forms. This contrasts for example with the word for ‘pandanus’, which surfaces in Franklin’s (Papuan) E3 group as *aga, ank, ankæ, anga* and is linked by Lynch to Proto-Oceanic *\*kiekie*<sup>3</sup>, which seems rather more of a long shot. More recently, [Reesink \(1999a\)](#) describes both lexical and morpho-syntactic features apparently shared between the Papuan and Austronesian languages of the Bird’s Head to make an argument for characterizing this area as a Sprachbund of mixed languages. His examples are generally on stronger footing than Lynch’s, but his focus is on the grammatical features. In this paper, I try to be relatively strict in requiring strong lexical resemblance between forms to increase the chances of an actual loan relationship, though of course chance similarity is always a possibility for any given form. Still, even if some of these should prove to be independent innovations, their quantity is such that the trends discussed here still hold.

## 2. Languages & Lexemes

The main languages cited here and the sources consulted for each are as follows. The label number for each language on the map in [Figure 1](#) is also given here; languages are labeled roughly geographically by family on the map.

- Within Austronesian:

Proto-Malayo-Polynesian (PMP) and Proto-Central-Eastern Malayo-Polynesian (PCEMP) ([Blust 1993, 1999; Blust & Trussel 2010](#)); Ambai ([Grace 1955-56; Silzer 1983](#)), map #24; Ambel ([Remijsen 2001; Laura Arnold p.c.](#)), map #1; Ansus ([Donohue, Price, Selfus & Nico n.d.](#); author’s fieldwork 2016), map #20; Biak ([van Hasselt & van Hasselt 1947; van den Heuvel](#)

<sup>2</sup> cited by Lynch as PAN *da[un]*; this form does not appear in the Austronesian Comparative Dictionary (?).

<sup>3</sup> likely equivalent to ?’s (?) *\*kiRe-kiRe* ‘pandanus sp.’.

2006; Than et al. 2011; Xavier Bach p.c.; author's fieldwork 2016), map #2; Dusner (Dalrymple & Mofu n.d., 2012; Nenepat 2012), map #11; Irarutu (IRU) (Matsumura 1991; Jackson 2014)<sup>4</sup>, map #6; Kuri (author's fieldwork 2011), map #7; Kurudu (Xavier Bach p.c.), map #18; Matbat (Remijsen 2001, 2015), map #4; Ma'ya (Remijsen 2001; van der Leeden 1996), map #3; Meoswar (Anceaux 1992), map #8; Moor Kamholz n.d., map #17; Pom (author's fieldwork 2016), map #22; Roon (author's fieldwork 2016; David Gil p.c.), map #10; Roswar (Xavier Bach p.c.), map #9; Serui Laut (Slump 1924-38), map #23; Tandia (Anceaux 1992), map #12; Umar (Kamholz n.d.), map #13; Wamesa (Henning et al. 1991; author's fieldwork 2011-2016), map #5; Warembori (Donohue 1999), map #19; Waropen (Held 1942), map #16; Wooi (Anceaux 1992; Sawaki forthcoming; Emma Remy p.c.; author's fieldwork 2011), map #21; Yaur (Kamholz n.d.), map #14; Yerisiam (Kamholz n.d.), map #15.

- Non-Austronesian:

Abun (Reesink 1999a; Berry & Berry 1999, 2000), map #28; Arandai (Voorhoeve 1975, 1985; Reesink 1999a; The Rosetta Project n.d.), map #39; Awera (Clouse 1997), map #48; Bauzi (Briley 1976a,b), map #47; Duriankere (Voorhoeve 1975), map #37; Ekari (Voorhoeve 1975; The Rosetta Project n.d.), map #43; Hatam (Donohue 1997; Reesink 1999a, 2000a, 2002a), map #35; Inanwatan (de Vries 1996, 2000, 2004, 2002), map #38; Kalamang (Visser 2016), map #42; Kamoro (McElhanon & Voorhoeve 1970; Voorhoeve 1975; The Rosetta Project n.d.), map #44; Kemberano (Voorhoeve 1975; The Rosetta Project n.d.), map #40; Manikion (Voorhoeve 1975; The Rosetta Project n.d.), map #33; Mansim (Reesink 2002c), map #36; Mairasi (Voorhoeve 1975; The Rosetta Project n.d.), map #45; Maybrat (Reesink 1999a; Dol 2007), map #30; Meyah (Voorhoeve 1975; Reesink 2002a; Gravelle 2000, 2002; The Rosetta Project n.d.), map #32; Moi (Voorhoeve 1975; Stokhof & Flassy 1985; Reesink 1999a; Menick 1996, 2000; The Rosetta Project n.d.), map #25; Mor (Voorhoeve 1975; The

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<sup>4</sup> Jackson' and Matsumura's lists differ chiefly in the number and quality of vowels, with Jackson allowing complex clusters that Matsumura often breaks up with a schwa or other vowel. Jackson reports that consecutive identical consonants, such as the initial *ks* in *kkor* 'chicken', are individually released, and that voiced stops are prenasalized, which is not reflected in the orthography.

Rosetta Project n.d.), map #41; Moskona (Voorhoeve 1975; The Rosetta Project n.d.), map #31; Mpur (Miedema & Welling 1985; Reesink 2002a; Odé 2002, 2004; author's fieldwork 2017), map #29; Rasawa (Clouse 1997), map #49; Seget (Voorhoeve 1975), map #26; Sougb (Reesink 1999a, 2000b, 2002a,b), map #34; Tause (Clouse & Clouse 1993; Clouse 1997), map #52; Tause Deirate (Clouse 1997), map #50; Tause Weirate (Clouse & Clouse 1993; Clouse 1997), map #51; Tehit (Stokhof & Flassy 1985; Reesink 1999a; Hesse 2000), map #27; Tung-gare (Voorhoeve 1975; The Rosetta Project n.d.), map #46; Yawa (Jones 1986b; Jones, Paai & Paai 1989; Voorhoeve 1975; The Rosetta Project n.d.; author's fieldwork 2016), map #53.

The sample includes 29 Papuan varieties and 24 Austronesian ones, plus two reconstructed AN proto-languages for comparison. 'Varieties' here constitutes something between a doculect and a language – where the same language name was used by multiple authors I conflated their data, but where different names were used they are considered separately. This sidesteps the issue of whether two varieties are dialects of the same language or different languages, as with Hatam and Mansim, Manikion and Sougb, or Meoswar and Roswar. In the latter two cases both varieties are marked on the same geographical span in the map in figure 1, as no source could be found from which to construct a boundary. The languages used in this sample are nowhere near an exhaustive accounting of all those spoken in the area, particularly for non-Austronesian varieties. They have been chosen for geographic and genetic span and availability of data. Occasional data points outside this set will be cited as they arise; no attempt has been made to compile full wordlists for these additional languages and they are not noted on the map.

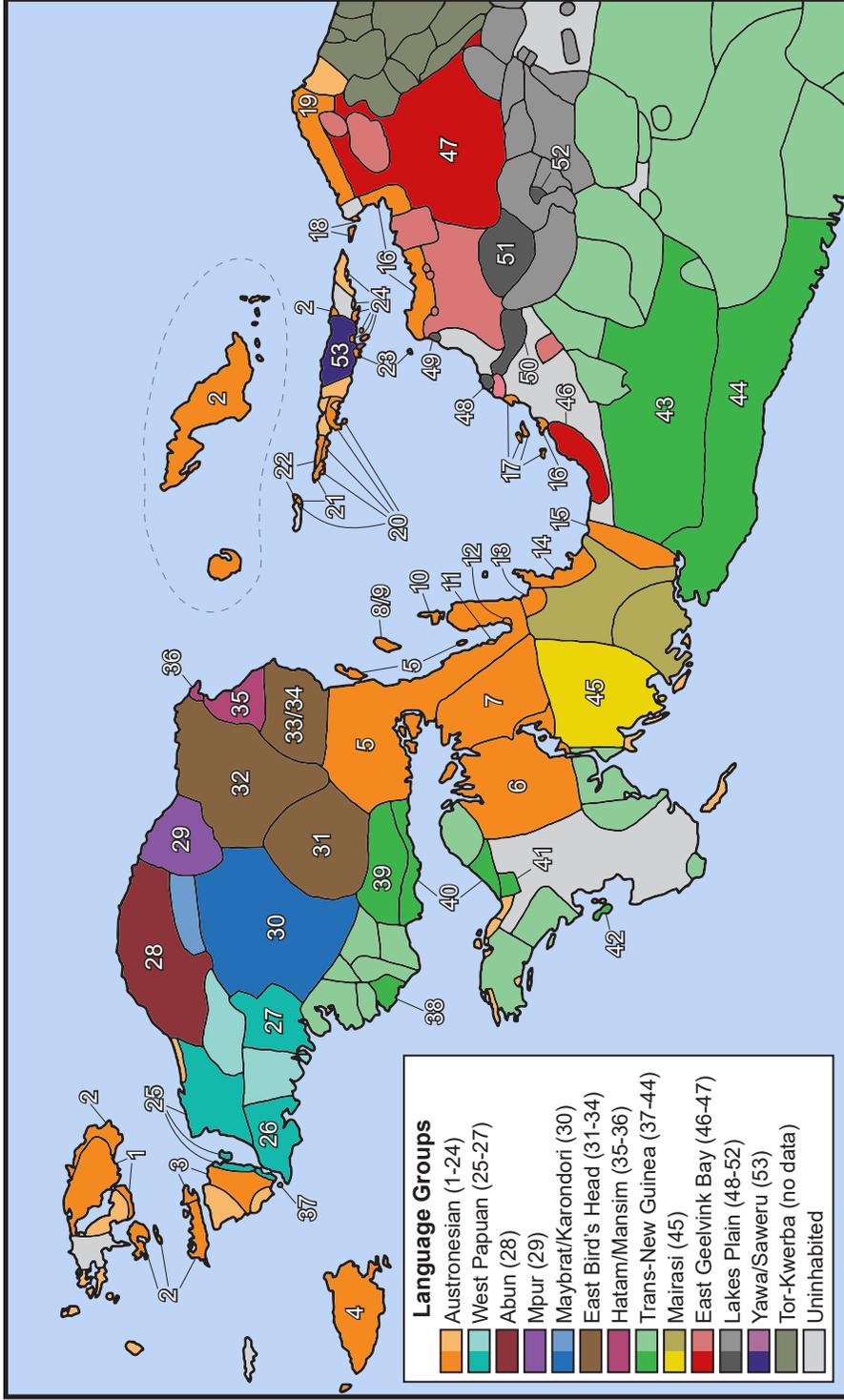


Figure 1: Map of the languages used here. Language areas and geographic borders are based on an unpublished SIL map, with additional data from David Kamholz (p.c.) and Reesink (2002c). Where two colors are given in the legend for a given family, the color on the left indicates languages included in this sample; that on the right indicates languages with no data. See the language list in the preceding text for the variety corresponding to each label number; languages not included in this sample are unlabeled.

All of the Austronesian languages considered here belong to the South Halmahera-West New Guinea (SHWNG) branch of Austronesian, with the likely exceptions of Irarutu and Kuri, probable Central Malayo-Polynesian languages spoken on and around the Bomberai peninsula ([Jackson 2014](#)). This paper focuses on the West New Guinea (WNG) portion of SHWNG: those languages spoken on the Bird's Head Peninsula, along the north coast of New Guinea as far east as the Mamberamo River, and on Biak, Yapen, and other minor islands in Cenderawasih Bay – what I will call the Cenderawasih Bay (CB) languages, a geographical rather than genetic designation – as well as the Raja Ampat islands<sup>5</sup>, to the exclusion of the South Halmahera languages to the west. While the internal structure of SHWNG has yet to be worked out in detail, some geographic and lower-level genetic groupings can be sketched here; for subgrouping evidence see [Kamholz \(2014\)](#) and the references therein. The Yapen languages, represented here by Ambai, Ansus, Pom, Kurudu, Serui-Laut, Wamesa and Wooi, are spoken on Yapen Island. The one exception is Wamesa<sup>6</sup>, with three main dialects on the south-western coast of Cenderawasih Bay from the Wondama Peninsula north to Rumberpon Island and west just past Bintuni. The Biakic languages, likely Yapen's closest relatives, are Biak, Meoswar, Roswar, Roon, and Dusner, spoken on Biak and Numfor Islands in Cenderawasih Bay and on smaller islands along the coast adjacent to Wamesa territory; Biak has additional communities in Raja Ampat. [Kamholz \(2014\)](#) groups Yaur, Umar, and Yerisiam, spoken along the coast just south of Wamesa, together into a cluster which is sister to Biakic and Yapen. No further groupings can be established. Kuri is located just inland of Wamesa to the south of Bintuni Bay. Wamesa speakers consider Kuri to be part of Wamesa, though it is very clearly a different language despite significant lexical overlap – based on lexical and morphological observations, it is either a dialect of Irarutu or else a close relative. The remaining languages are scattered up the coastline as far as Warembori near the mouth of the Mamberamo River, interspersed with Papuan languages along the way.

The Papuan languages included in this sample are far more genetically diverse, though genetic

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<sup>5</sup> though the Raja Ampat languages are likely more closely related to their South Halmahera cousins than those varieties spoken on mainland New Guinea.

<sup>6</sup> [WAD], often referred to as Wandamen in the literature; see [Gasser \(2014\)](#) for discussion.

relationships are far from settled here as well. Where not otherwise cited, genetic affiliations given here come from the Ethnologue (Lewis, Simons & Fennig 2016) and the TransNewGuinea.org database (Greenhill n.d.). Sources disagree on whether Yawa, one of the two non-Austronesian languages spoken on Yapen Island, is an isolate (Jones 1986a) or a member of the West Bird's Head branch of the West Papuan family alongside Moi, Tehit, and Seget (Lewis et al. 2016; Greenhill n.d.; Hesse 2000). Conversely, Abun is classified by Lewis et al. (2016) as an isolate, but by Berry & Berry (1999) as another member of the West Papuan phylum. Mpur is also an isolate (Odé 2002), while Hatam and closely related Mansim (aka Borai) form their own small group (Reesink 2002c), though Reesink (1999b, 2002a) proposes a distant genetic relationship between these three varieties and the East Bird's Head languages – Meyah, Moskona, Manikion, and its dialect Sougb (Voorhoeve 1975; Reesink 1996; Gravelle & Gravelle 1999) – on the basis of shared morphological and syntactic features. The expansive Trans-New Guinea family, if we accept its coherence, is represented here by Ekari, Kamoro, Arandai, Duriankere, Inanwatan (a.k.a. Suabo), Kemberano, Kalamang (a.k.a. Karas), and Mor, covering (potentially) five of its branches. Tunggare and Bauzi belong to the East Geelvink Bay phylum, and Mairasi is the sole representative of the Mairasi family included here. The Lakes Plain family is represented by Awera and Rasawa on the Cenderawasih Bay coast and, progressively farther inland, by Tause Weirate, Tause Deirate, and Tause. Finally, Maybrat is an isolate on the Bird's Head (Reesink 1996), with perhaps one extant relative.

The lexical sample used for this study includes 70 lexical meanings indicating colors ('black', 'red', 'dark', 'light', etc.), animals ('cassowary', 'pig', 'fish'), insects ('wasp/bee', 'cockroach', 'beetle'), and plants, focusing particularly but not exclusively on edible varieties and plant parts ('sago', 'coconut', 'betel/areca nut', 'root'). This is a sample of convenience, based largely on wordlists used in a lexical survey of Cenderawasih Bay languages I conducted in the summer of 2016, and certainly not exhaustive of all possible or even all salient members of these classes. For the full wordlist, see the appendix.

Despite the ad hoc nature of the list, this is a productive semantic area in which to survey loan patterns. While Bovern et al. (2011) find that 5% of basic vocabulary terms in their sample of 122

hunter-gatherer and small-scale cultivator languages of Australia, North America, and Amazonia are borrowed, [Bowern et al. \(2014\)](#), expanding that sample to 130 languages, find that flora/fauna terms are borrowed at nearly twice that rate (9.8% of items). [Haynie et al. \(2014\)](#), drawing from an expanded sample of 135 languages from the same areas, find that within their Australian case study, only 3.4% of basic vocabulary items fall within their ‘highly loaned’ category, while 7.7% of flora/fauna terms and 13.7% of material culture terms do so, though the pattern is less striking when all three geographic areas are considered. More broadly, they find that acculturation terms (those denoting items rapidly introduced by colonial contact, ‘rice’ being perhaps the best example in the present study) and those with ritual or other cultural significance are likely to be highly loaned, and that those *Wanderwörter* which do not fall into these categories are often flora/fauna terms. Therefore this semantic field should be a fruitful one for loan items; a prediction which is well borne out by the data.

Ideally, a survey of this type would look at much more specific, perhaps species-level terms, rather than the more generic forms used here – ‘nipa palm’ and ‘ironwood’ for ‘tree’, specific varieties of cuscus and sea turtles, etc.. This is simply a function of the data available. Where some fieldworkers are extremely precise in defining the referents of each term – [Stokhof & Flassy \(1985\)](#) come to mind as a particularly good example – much more common are shorter and less detailed wordlists, where a single word is given for, say, ‘lizard’, and it is impossible to know whether this refers to a small house lizard (Indonesian *cicak*), a larger goanna or monitor lizard, something in between, or the generic term. Flying foxes and bats are generally not distinguished, nor are the various types of arboreal marsupials, where any subset of ‘tree kangaroo’, ‘kangaroo’, ‘wallaby’, ‘cuscus’, ‘phalenger’, or even simply ‘tree-dwelling marsupial’ may appear, with unclear referent. A great deal more biologically savvy fieldwork is necessary before anything more than the sort of preliminary survey presented here is possible.

Even when these sorts of distinctions can be teased apart, not all words on this list were attested in all languages, so statements to the effect of ‘languages X and Y have form Z’ should not be taken to mean that other languages do not have form Z unless explicitly stated as such, since

many forms are unknown. Voorhoeve (1975), for example, covers a great number of individual languages, but only presents 40 lexical items for each, leaving significant gaps. Orthographic representations from the sources have generally been maintained<sup>7</sup>; these may hew more or less closely to a phonemic representation, and the phonetic value of a given symbol may vary language to language. I follow Haynie et al. (2014) in occasionally using a % sign to denote forms which are a generalization across the realization of a given borrowed form in a number of languages and stand in for that set as a whole, for example %kokor to refer to the set of words meaning ‘chicken’, including Woi mangkokei, Wamesa kokori, Moor kokó, Arandai kokoro, etc. (see §3.1).

### 3. Findings & Observations

#### 3.1. *Chicken, crocodile, and other widespread words*

The two most widely distributed Wanderwörter<sup>8</sup> in the sample are the words for *crocodile* and *chicken*. Reesink (1999a) notes both of these, and in his 1999 Hatam grammar he posits a Biakic origin for ‘crocodile’ (as well as ‘rice’, discussed further below). While it is true that Biak has been widely used as a language of trade throughout the area, the wide distribution of these words across the Bird’s Head and Cenderawasih Bay makes their ultimate origins difficult to pinpoint. I would classify Biak as a plausible source but far from a certain one, especially given the presence of these two forms in most of the Austronesian CB languages. Neither the ‘crocodile’ nor the ‘chicken’ lexeme seems to be inherited in Austronesian from a node higher up the tree than Proto-SHWNG, if that. Links to any Raja Ampat languages, as will be discussed, are tentative at best, and none are present in South Halmahera. Kamholz (2014) does not find evidence for a genetic group of Cenderawasih Bay languages exclusive of Raja Ampat and South Halmahera in whose common ancestor these words could have been innovated either by borrowing or invention; more likely their widespread distribution is indicative of areal contact rather than inheritance.

(1) ‘crocodile’:

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<sup>7</sup> one exception is the <oe> in Stokhof & Flassy’s (1985) Moi data, which here has been changed to <u>.

<sup>8</sup> I use Haynie et al.’s (2014) definition of Wanderwörter as forms borrowed repeatedly and widely across a given area, whether or not the source language is identifiable (pace Campbell & Mixco 2007.)

- a. AN: Ambai *wankori*; Ansus *wongkori*; Pom *wongkori*; Serui-Laut *wangkori*; Biak *wonkor*<sup>9</sup>; Meoswar *wònggòr*; Waropen *anggoro*; Moor *gwànggo*; Kuri *diangkara*; also Arguni *gor* ‘snake’ ((Grace 1955-56).
- b. PAP: Tunggare *wama*; Hatam *gor*; Mpur *wankor*; Moi *wonggor*; Yawa *wangkori*.

The %*wangkori* set for ‘crocodile’ is present in most of the Austronesian CB languages. Some of the exceptions are transparent; Wamesa, for example, has innovated the forms *dianggariria*<sup>10</sup> and *diasinia* meaning ‘nasty fish’ and ‘fish mother’ and Roon has *in bebua* ‘big fish’ in its place. Given the sound correspondences, *wangkori* appears to be an inherited form in SHWNG, or an early borrowing, perhaps after Tandia and Warembori with their divergent forms *ivaivi:a* and *anero* split off from the rest of the family. On the non-Austronesian side, the related forms span five separate genetic groupings (assuming, as I will here, that Yawa, Hatam, and Mpur are isolates) and stretching geographically from Moi at the westernmost tip of the Bird’s Head peninsula to the south-eastern coast of Cenderawasih Bay, where Tunggare is spoken. All of these languages are coastal, and therefore well-situated for encounters with both crocodiles and Austronesians; though Mpur and Hatam are not located directly adjacent to any AN language, their position on the northern coast of the Bird’s Head places them along the well-trafficked maritime route between the bay islands and Raja Ampat. Crocodiles were certainly not a novel species for any of the involved parties in the last 4,000 years, making the spread of this form most likely due to taboo avoidance, a practice which is still extant with regards to crocodiles in, for example, Irarutu, which has one literal and one euphemistic word for the animal (Jason Jackson p.c.), and is likely also the source of the Wamesa and Roon names cited above.

It is possible that a form found in Ambel (Remijnsen 2001), *langkawai*, may also be related, though this is a less clear-cut connection. The same is true of Kalamang *padamuang*, whose second half resembles the *wang-* portion of the widespread forms.

‘Chicken’ presents a more complex picture. Kamholz (2014, n.d.) separates the Austronesian

<sup>9</sup> I retain van den Heuvel’s (2006) spellings here; but *nk* in Biak is pronounced [ŋg].

<sup>10</sup> The Kuri word may be related to this, rather than the areal form.

forms into two cognate sets, what might be termed the *u*-forms in Ansum and Ambai versus the *o*-forms in Biak, Moor, Umar, Yaur, Yerisiam, and Wamesa, with Serui-Laut off on its own. I merge all of those here into a single set, with the addition of newly-collected data from other CB languages.

(2) ‘chicken’:

- a. AN: Ambai *mankukei*; Ansum *manjuei*; Serui-Laut *mankúe*; Wamesa *kokori*; Pom & Wooi *mangkokei*; Kurudu *kokor*; Biak *mankoko*; Roswar *kokori*; Meoswar *kòkò:ri*; Roon *kokori*; Umar *kokor*; Yaur *ò’òré*; Yerisiam *kókórve*; Moor *kokó*; Warembori *kue*; Kuri *kokori*; Irarutu *kkor, kókrə*.
- b. PAP: Maybrat *kok(ok)*; Meyah *mongkukar*; Hatam *kwry, guri*; Mansim *mungkoko*; Mpur *kokor*; Arandai *kokoro*; Yawa *mangkuer*; Kalamang *kokok*; Abun *ndam kukur*; Tehit *kokók*; Inanwatan *qóqora(u)*; Bauzi *kuku*.

In addition to these, [Anceaux \(1992\)](#) gives *mengkuke* for Busami and *kokok* for Onin, Sekar, and Arguni, three additional CMP languages of the Bomberai. Ambel, Matbat, and Ma’ya, our three Raja Ampat languages, have *takek*, the last three segments of which could be related by inheritance or borrowing, if the initial *ta-* can be accounted for. Within The Austronesian CB languages, the only one with an attested unrelated word is Warembori *mani*. The Papuan forms span every genetic lineage in the sample; the only unrelated form attested is (*kalèm*) *tole* in Moi, which may itself be a loan from Raja Ampat, where many languages have highly similar forms meaning ‘egg’ (Ambel *talo*, Matbat and Ma’ya *tol*, etc.); *kalèm* is the Moi word for ‘bird’. This dataset does not include a word for ‘chicken’ in any of the three Tause varieties, but Tause Weirate has *kokoəpli* for ‘egg’ where Tause Deirate has only *abi*, suggesting that the initial *koko-* portion is part of the %kokor set.

[Reesink \(1999a\)](#) says that *kokor* is an onomatopoeic form. This is almost certainly true – compare for example *kukvri* and similar forms which appear in various Gujarati dialects and Kashmiri<sup>11</sup> ([Rensch, Hallberg & O’Leary 1992](#)), Sinhala *kukul mas*, Chichewa *nkhuku* and the first two

<sup>11</sup> though related languages to the east, such as Nepali and Bengali, use a nearly-identical form to mean ‘dog’.

syllables of English *cock-a-doodle-doo*. Still, onomatopoeia is unlikely to fully account for the range of forms here, with each non-inherited instance as an independent innovation; it is more likely that the iconicity of the word simply contributed to its widespread adoption and persistence in languages known to be in contact with one another.

The *man-* portion found in some varieties is clearly of Austronesian origin, a reflex of PMP \**manuk*, reflexes of which mean ‘bird’ in a number of SHWNG languages. A further clear connection is apparent between the Yawa form, its likely source in Serui-Laut, spoken in an adjacent area, and the Ansus and Warembori forms, all lacking the second [k]. The remaining shared forms likely flowed from a different source, with perhaps one origin for the *mVng-* initial forms in Mansim and Meyah – likely Biak – and another for the forms without the prefix – possibly mainland Wamesa.

A third comparably common set is %*pasa* for ‘rice’, which appears across the region. Reesink (1999a: 611), referring to two of his Papuan groupings, says that this form is “found throughout the Bird’s Head, including Hatam, E[ast] B[ird’s] H[ead], and even S[outh] B[ird’s] H[ead]”, but declines to name the individual languages or exact word shapes involved. Similarly, other sources (Voorhoeve 1975; Reesink 2002c; Voorhoeve 1975) tend to leave it out of their wordlists, perhaps in because of its transparent status as a loan. Therefore, despite its claimed ubiquity, is it somewhat sparsely attested in my sample data.

(3) ‘rice’:

- a. AN: Wamesa *pas*; Ambai, Ansus, Pom, Wooi *pa*; Serui-Laut *fa*; Biak, Roon *fas*; Dusner *pas*; Waropen *pako*; Umar *pah*; Yaur *pàahré*; Yerisiam *páhrévè*; Moor *pása*; Warembori *pasa-ro*; Iraputu *fas(ə)*; Uruangnirin *fasa* (Eline Visser p.c.); Ma’ya *fa<sup>12</sup>s*; Matbat *fa<sup>3</sup>s*; Ambel *há*.
- b. PAP: Hatam *pas*; Mansim *pasupra*; Arandai *p’ata*; Moi *fas*; Yawa *pa*; Kalamang *pasa*; Inanwatan *pásao*; Tehit *pasa*.

Rice is a relatively recent introduction into Papua from the west, so it is unsurprising that

the word for it should have come in via Austronesian. Reesink (1999a: 611) puts its origin in unspecified “Western languages”; Kamholz traces it back to PMP *\*pajey* ‘rice plant’ (Blust 1999), but attributes its appearance in some of the AN languages to North Moluccan loans. Along with %afuna ‘dog’, discussed below, the widespread nature of the ‘chicken’ and ‘rice’ sets fits well with Haynie et al.’s (2014) observation that in Africa and Eurasia, domesticated species are commonly cited as examples of Wanderwörter.

While no other forms in this sample are quite as widespread as these three, several others do appear in multiple language groups. One notable example is the word which surfaces in Roon and Biak as *waw*, meaning ‘(sea) turtle’<sup>12</sup>. This form is not attested elsewhere in my sample in any Austronesian languages outside of Biakic, though data for this item is patchy. In Yawa, it appears as *wao* glossed as ‘turtle’. Hatam and Mansim, however, have *waw* and *mwaw*, respectively, both with the meaning ‘fish’. Apparently the word shifted from denoting one type of sea creature to another in the course of its adoption, whether the direction of borrowing was from Hatam/Mansim into Biakic or vice versa. Additionally, unrelated Tunggaré, on the southern coast of Cenderawasih Bay, has *wau* ~ *uau* for ‘water, swim’, another plausible shift in semantics.

Meanwhile, the AN word for ‘fish’ appears in two Papuan languages: *in* in Hatam (alongside *waw*), and *jian*, pronounced [dʒian], in Yawa. Based on this additional data, the most likely scenario is that *waw* originated in Hatam/Mansim as ‘fish’, moved from there into Biakic with a shift in meaning to ‘sea turtle’, and was then borrowed back across AN/Papuan lines into Yawa and Tunggaré. Meanwhile, Hatam borrowed *in* ‘fish’ from one of the Biakic languages – it appears almost identically in Biak, Roswar, Meoswar, Roon, and Dusner – and Yawa imported *jian* from one of the neighboring Yapen languages, which have *diaN* or similar<sup>13</sup>. A separate ‘fish’ set appears in the Bomberai languages Kalamang (Papuan) as *sor* and Sekar & Arguni (Austronesian) as *sair*.

The word for ‘louse’ gives another clear case of AN to Papuan movement. ‘Louse’ is known to

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<sup>12</sup> van den Heuvel (2006) does not specify whether this can refer to sea turtles or land-based ones, though his example sentences have the turtle moving around on land. Our Roon consultant, Jim Betay, distinguished *waw* for ‘sea turtle’ (Malay *penyu laut*), and *baiteruti* for turtles on land (Malay *kura-kura darat*).

<sup>13</sup> cognate with the Biakic form, both reflexes of PMP *\*hikan*.

be one of the lexemes most resistant to lexical replacement over time in that family (Dyren, James & Cole 1967). Reconstructed to PMP as *\*kutu*, the initial *\*k* drops across the AN languages and some change the medial *\*t* to *k*, yielding modern *utu* (Yapen, Umar), *uk* (Biakic), and similar forms. The appearance of these forms in Papuan languages is best explained by multiple independent transfer events. In Ekari, southwest of Cenderawasih Bay, the word appears *uka*; neighboring (AN) Yerisiam has *úukú*. Tunggare is spoken just north of Ekari and borders on Yerisiam in the west and Moor and Serui Laut in the east; it has *?ua* to Moor's *kú'a*. On the far western tip of the Bird's Head, *wut* in Seget almost certainly derives from one of the Raja Ampat languages, where *ut* (Ambel, Ma'ya) and *wut* (Matbat) are widespread. Manikion *kuta* and Inanwatan *qóto* more likely come from Indonesian or Papuan Malay, where the form is *kutu* with the initial *k* retained.

'Hornbill' breaks down into two phonologically similar sets in the data, which may reflect two borrowing events. The Yapen Island AN languages (Ambai, Ansus, Serui-Laut) have *wama*, as does Moi *kalèm*<sup>14</sup> *wama*. Mainland Wamesa adds a final *r* for *wamar*, which is directly reflected in neighboring Arandai as *wam'ore* and in Tehit as *qlen*<sup>15</sup> *wamár*. Yawa *uman* may also be part of this complex, but it's a further phonological stretch; Kalamang *mamor*, with *m* for initial *w*, is a more sturdy link, though lack of attestations in other nearby languages makes its source unclear. This form has also traveled to the eastern end of Cenderawasih Bay as *waman-do* in Warembori; given Warembori's phonotactics a syllable-final *n* is expected in place of the *r*. On the other hand are forms with medial *nd* where Yapen has *m*: Biak *wando*, Ambel *mandawán* (with the *man*- 'bird' prefix), Hatam *undow*, Mansim *undow*, and Mpur *wandor*.

### 3.2. Dogs

The final and perhaps most complex Wanderwort here is 'dog'. In the West Papuan languages Moi and Seget, the forms are *ofun* and *awfu*, respectively. These most closely resemble forms found in the Austronesian languages of the Bomberai peninsula - Arguni *afun* (Greenhill, Blust & Gray 2008,

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<sup>14</sup> 'bird'.

<sup>15</sup> 'bird'.

from Grace), Kowiai *afúna* (Greenhill et al. 2008 from Roland Walker), Irarutu *fun*, and Kuri *avun* – and, farther afield in North Halmahera, Buli *fun* (Maan 1940). Also on the Bomberai Peninsula, Papuan Mor has *afuna* Voorhoeve (1975). However, neither Bomberai nor Halmahera are particularly close to Moi and Seget, whose nearest AN neighbors are in Raja Ampat, where forms along the lines of *yes* (Biga, some Ma’ya dialects, a reflex of PMP \**asu*; Kamholz 2014) and *kabli* (other Ma’ya dialects, Gebe, Fiawat) are the norm. This distribution is likely the result of political and trade connections between Bomberai, Raja Ampat, and Ternate, which could have carried the form between the three areas. The Bomberai and N. Halmahera forms have cognates in Cenderawasih Bay – Yapen *wona*, Waropen *una*, Moor *áuna* – but these are different enough in pronunciation an far enough geographically that it’s unlikely for them to be directly connected to the W. Papuan words. This points to an innovation in early SHWNG inherited down to the modern languages, with borrowing of the form into these Papuan languages in the last few hundred years. Whether the Irarutu form is due to an inheritance or later loan via the same channels as Mor depends on its exact place in the family tree, whether as a post-CMP sister to SHWNG potentially present for the innovation, as suggested by Jason Jackson (p.c.), or integrated into CMP, in which case the borrowing scenario must hold, as its split would have predated the SHWNG innovation. No extensive historical work has been published, but a quick comparison of sound correspondences in this sample suggests the latter. In either case, innovation of the form in (pre-)Proto-SHWNG must have coexisted for a time with the inherited PMP form, which survives in some Raja Ampat languages, and appears to have been borrowed into Mairasi as *asi*, perhaps via an Austronesian Bomberai language – c.f. Sekar *yasi*, Uruangnirin *la:si* (Anceaux 1992) – or trade connections with Raja Ampat.

The picture is complicated by further data from outside the Bird’s Head. There are a number of examples from Trans-New Guinea (TNG) languages in eastern Papua New Guinea, far from Cenderawasih Bay and the Bird’s Head, which also have near-identical forms: *ofun* in Bepour, *i:bun* in Miani, *kawun* in Maia, *auna* in Maria and Doromu-Koki, \**sofun* reconstructed in Proto-Kumil, and \**kawund* in Proto-North Adelbert, among others (see Greenhill n.d. and the references

therein). These are geographically far removed from Mor and unrelated to Moi and Seget. Mor is itself a primary branch of TNG [Lewis et al. \(2016\)](#); [Greenhill \(n.d.\)](#), none of the other Bird's Head TNG languages represented in my sample have similar forms, and neither [Pawley \(2005\)](#) nor Malcolm Ross ([Greenhill n.d.](#)) reconstructs a Proto-Trans New Guinea word for 'dog'.

Mark [Donohue \(1995\)](#) catalogues what he considers cognate forms in Austronesian languages as far afield as *kapuna* in the Western Malayo-Polynesian languages Bantik, Ratahan, and South Sangir in northern Sulawesi; CMP Geser *kafuna*, Bati *kafunai*, and Watubela *ahuna* on Seram in Maluku; Notsi *kapuna* in New Ireland to the east; Kaiwa *ovun* in South Huon, *akana* in Pati in New Caledonia; and a long list of others from eastern Indonesia to western Oceania less phonologically similar but still, according to him, plausibly stemming from the same lexical source. He cites [Ross's \(1992\)](#) reconstruction of Proto-Oceanic *\*kapun(a)* 'dog', which Ross suggested originated from a non-Austronesian language of the North Adelbert Ranges family. Donohue likewise supplies a similarly lengthy list of non-Austronesian languages, both in and out of the TNG family, with a geographic span from North Halmahera to the Huon Peninsula. Donohue points out that most languages with related words are located near the coast, and comes to the conclusion that the form originated in Ternate and Tidore, spread from there through repeated borrowing via the sultanates' existing political and trade networks, and extended even beyond those boundaries south and east to island Melanesia via local contact. Neither Ternate nor Tidore currently has this form; if it was indeed present in the past, it has since been replaced by *kasu*, probably a loan from AN cognate with the Raja Ampat *yes* forms from PMP *\*asu*. The apparent inherited nature of the CB forms suggests that the beginning of *kapuna*'s spread predates the founding of the sultanates, and that it was perhaps borrowed from an earlier variety into Proto-SHWNG, or at least Proto-WNG. Though Moi and Seget are related to Ternate and Tidore in the West Papuan phylum, the time depth of that relationship makes it less likely that their nearly-identical forms are due to descent rather than contact.

### 3.3. More Restricted Loans

A number of additional loans appear shared between a smaller number of lineages, the majority of which originate in Austronesian. No single one of these is particularly significant on its own, but taken together they reinforce a picture of long-term, complex patterns of contact between the various languages of the area. They are enumerated below. Representative Austronesian forms are listed first, followed by the corresponding Papuan forms; notes on the direction of borrowing (if known) and any other salient information follow.

(4)

(5) ‘ant/termite’: Matbat *ili*<sup>121</sup> ‘k.o. ant’ :: Moi *gili* ‘termite’.

(6) ‘banana’: Yerisiam *píiti*; Umar *idi*; Warembori *uti-ro*; Irarutu *fud(ə)*<sup>16</sup> :: Maybrat *apit*; Arandai *undi*.

From PMP *punti*. Likely two different loan events, one into Maybrat and another from Irarutu into Arandai.

(7) ‘bean’: Wamesa *kavaru*; Roon *kavorur*; Umar *kvaru* :: Mpur *kaprur*; Yawa *karavur*.

Widespread in coastal CB and Biakic, but no known Austronesian etymology.

(8) ‘betel (areca) nut’:

a. Irarutu *mbwek* :: Kalamang *buok teun*.

b. Ambel *jey*; Biga *gey* (Remijsen 2001) :: Moi *dee*.

(9) ‘betel leaf/pepper (*sirih*)’: Biga *utum*; Fiawat *wotum* (Remijsen 2001) :: Moi *kutum*.

Betel leaf/pepper and nut are areal trade items, and therefore prime targets for borrowing.

(10) ‘bird’:

a. Warembori *mani-ro*; Ambai & Biakic *man*; Waropen *mani*; Moor *mànu*; Irarutu *man(ə)*; Kuri *mani*; Ambel *mani*; Gane *manik*; Sekar *manik*; etc. :: Arandai *maniko*; Kalamang *maniktapun* ‘crowned pigeon’; Yawa *manok* ‘bird of paradise’.

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<sup>16</sup> [fund(ə)].

Clearly a loan originating in Austronesian, from PMP *\*manuk*. The immediate source into Arandai and Kalamang is most likely a Bomberai language such as Sekar.

b. Kurudu *diu* :: Tause Weirate *du*; Tause *ndu*.

If this is indeed a borrowed form, it likely originated in a Lakes Plain language.

(11) ‘black’: Matbat *kabi*<sup>12t</sup> :: Arandai *ibiti, kibetia*.

Origin unknown, possibly Arandai since it is not a known AN etymon.

(12) ‘blue/green’: Ma’ya *mala*<sup>3</sup>; Biga *bala* (Remijsen 2001) :: Moi *bala* ‘green’.

(13) ‘(bread)fruit’:

a. Wamesa *buo*; Ambai; Kurudu; Waropen; & Warembori *bo*; Moor *vó*; Kuri *avo* ‘fruit’ :: Abun *bo* (classifier); Inanwatan *buqo*; Moi *wun*, Tehit *fwon* ‘fruit’; Ekari *po*; Mansim *wow*; Kalamang *poi*; Hatam *mbo*; Mansim *mwow* ‘breadfruit’.

The AN forms are reflexes of PMP *\*buaq*. The Ekari word may be related to *boku* ~ *evuko* ~ *ewuko* found in the other Trans-New Guinea languages Arandai and Kemberano. There may be a meaning swap involved, as Kalamang *nak* ‘fruit’ resembles the words for ‘breadfruit’ in several other languages.

b. Wamesa *akanak* ‘breadfruit, cempedak’; Wooi *naknak* ‘breadfruit’; Serui-Laut *naki-naki* ‘jackfruit’; Umar *aknak* ‘cempedak’; Yerisiam *náknáàka* ‘cempedak’; Matbat *na<sup>3</sup>k* ‘cempedak’:: Kalamang *nak* ‘fruit’; Tehit *nak* ‘breadfruit’.

c. Wamesa & Ambai *andau* ‘(wild) breadfruit’; Wamesa (Wandamen) & Serui-Laut *anda* ‘mango’; Wooi *andang* ‘mango’ :: Tehit *ánda* ‘k.o. seedless breadfruit’; Yawa *andau* ‘breadfruit’.

d. Biak, Meoswar, Roon *ur*; Yaur *úuré*; Yerisiam *niakáúurú*; Umar *mur* :: Tause *uru* ‘breadfruit’.

This form skips the Yapen languages within Kamholz’s (2014) Cenderawasih Bay branch of SHWNG; those languages have the more widespread %nak and %andau forms, suggesting two borrowing events of %uru into Biakic and Yaur/Yerisiam/Umar from a

Lakes Plains language (likely not landlocked Tause). The Moor form *urina* may also be part of this complex.

- (14) ‘cassowary’: Pom & Kurudu *maswar*; Biakic *man(u)swar* :: Mansim *muswar*; Abun *ndam syor*.

The initial syllable *ma(n)-* comes from the AN word meaning ‘bird’; *ndam* in Abun means ‘bird’.

- (15) ‘cat’:

- a. Wamesa (Wondama dialect), Pom, Ansus, Meoswar, Roon *nau*; Umar *nao*; Yerisiam *náò*; Matbat *ima<sup>3w</sup>* :: Mpur & Moi *mau*.

Onomatopoeic.

- b. Sawai *boki* (South Halmahera; Whisler & Whisler 1995) :: Moi *boki*.

This must have come geographically via Raja Ampat, though no similar forms exist there now.

- (16) ‘chili pepper’: Pom *marisan*; Biak *marisàn*; Matbat *mare<sup>21se<sup>3n</sup></sup>*; Ma’ya *mare<sup>21se<sup>3N</sup></sup>* ‘peppercorn’ :: Yawa *marisan* Tehit *marésan*; Moi *baisàn*.

This form is present across Yapen and Biakic. It was likely borrowed into Moi and Tehit (or their ancestor) from Raja Ampat, and into Yawa from Yapen or Biakic.

- (17) ‘cockroach’: Wamesa (Wondama dialect) *monggasi* :: Moi *gasi*; Tehit *ngseT*.

- (18) ‘cuscus’: Umar *mae*; Warembori *maya-ro* :: Yawa *maier*; Hatam *miei*.

- (19) ‘egg’:

- a. Ambai *neibo*; Pom *nebuong*; Wooi *nebuo* :: Ekari *nipo*.

- b. Ma’ya; Biga & Kawe *tolo* (Remijnsen 2001); Ambel *tálo* :: Moi *tolok*.

From PMP \**qatelur*.

- (20) ‘fly’: Wamesa *amumar*; Ansus *amoma*; Pom *amuma*; Serui-Laut *amandori marea*; Kurudu *ramat*; Warembori *namamba-ro* :: Yawa *amani*; Tause Weirate *ama*.

(21) ‘leaf’: Woi raun; Ansum weraung; Waropen rana; Moor rānu :: Kemberano rano; Arandai rono.

From PMP \*dahun.

(22) ‘owl’: Irarutu ube<sup>17</sup> :: Kalamang kumbai.

(23) ‘pig’:

a. Biak bén; Meoswar, Roon, Dusner ven; Irarutu f(ə)ne; Kuri vene :: Maybrat fane; Seget mon (?).

b. Ma’ya bo<sup>3</sup>; Warembori pue-ro; Umar bue; Waropen fo; Ansum tapui :: Yawa bugwe; Mpur bua.

c. Biga nyok (Remijnsen 2001) :: Abun nok ‘wild pig’.

Set (a) probably from PMP \*beRay with an added nasal; set (b) certainly so. These resemble the bilabial-heavy TNG forms: Kalamang pep; Mor bia; Arandai & Kemberano poxi; as well as non-TNG Mairasi bembe; Moi baik; Duriankere bi; and other Austronesian examples such as Wamesa pimuna and Pom vowa. It would be difficult to claim any causal relationship accounting for all of these forms (c.f. also English pig), but contact is likely involved in some instances. Set (c) is unrelated.

(24) ‘rat/mouse’: Ambai & Serui-Laut karu; Roswar karau :: Maybrat kau.

These may descend from PCEMP \*kazupay, but the correspondence sets are not as well-supported as one might hope.

(25) ‘red’: Kuri wams; Irarutu wams ~ waməse :: Moi weem.

Geographically somewhat of a stretch, though not totally implausible given historical Raja Ampat/Bomberai connections. The Kuri/Irarutu word, which also means ‘blood’, is considered by some speakers to be the source of the language name Wamesa.

(26) ‘root’: Ma’ya kawat(o) :: Arandai, Kemberano kuato.

(27) ‘sago (tree)’:

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<sup>17</sup> [umbe].

- a. Wamesa & Serui-Lauttau; Ambai *taun*; Irarutu *taun* :: Arandai *towo*; Inanwatan *otau* (k.o. sago); possibly Inanwatan *dau* and Tehit *ndaho* ‘papeda’.
- b. Ma’ya *bi*<sup>3</sup>; Ambel *bey*; Umar *abi*; Waropen *fi*; Yerisiam *pi* :: Mpur *bi*; Abun *bei*.  
From PMP \**Rambia* (Kamholz 2014; ?), greatly (and somewhat irregularly) reduced.
- c. Irarutu *səgəsùgrə*<sup>18</sup> :: Kalamang *sanggeran*.
- (28) ‘sea turtle’: Ambel *fen*; Ma’ya & Matbat *fe<sup>3</sup>n* :: Mpur *ven* (small variety; likely Hawksbill); Abun *fen*; Moi *mafen*.  
From PMP \**penu*.
- (29) ‘snake’: Wamesa *koro*; Umar *kro*; Yerisiam *gwóorú* :: Awera *karuwæ*.  
Most likely a loan into Awera, as other Lakes Plain languages in this sample have cognates of *phi*.
- (30) ‘spider’: Irarutu *baru*<sup>19</sup>; Umar *bravun*(?) :: Mpur *mamburaw*, *wambraw*.  
Irarutu, Umar, and Mpur are fairly widely separated geographically, so this may well be due to chance. However, related forms such as Buli *kopolaw* and Gebe *plaw* (Kamholz 2014) appear in S. Halmahera and Raja Ampat, and may have brought the form to Mpur.
- (31) ‘taro’: Irarutu *wagt*<sup>20</sup> :: Hatam *weng*.  
One of several Hatam words for different varieties of taro.
- (32) ‘tree’: Yapen *ai*; Biak *a(i)*; Waropen *a*; Umar *ae*; Ambel *ay*; Arguni *a*; As *a* ‘wood; stick’ (Greenhill et al. 2008; from Grace) :: Duriankare *a*; Inanwatan *áo*; Mansim *ow*.  
The AN forms are from PMP *kahiw*. The fact that this form consists of only one to two phonemes greatly increases the probability of chance resemblance. Duriankere and Inanwatan almost certainly show shared inherited forms with no connection to the AN series. Mansim may be a borrowing from Inanwatan or a third independent innovation; Mansim’s only extant relative, Hatam, has *pyey*.

18 [səŋgəsùgrə].

19 [mbaru].

20 [wəŋgt].

- (33) ‘white’: Sekar *iris* :: Kalamang *iriskap*.
- (34) ‘worm’: Wamesa *kasibui*; Ambai *kauboi*; Roon *kasevoi* :: Rasawa *boi*.
- (35) Ambel *kalabet* ‘goanna’ :: Kalamang *kalabet* ‘earthworm’.

The semantic distance here is not negligible – though perhaps unitable as ‘thing that crawls on the ground’ – but the segmental correspondence is striking. This transfer may have been facilitated by the presence of a *gala* sequence in the word for ‘worm’ in other RA languages (Kawe *galatol*; Ma’ya *agla*<sup>12t</sup>; Gebe *galawai*; etc.) from PMP *\*kalati*. This may indicate the application a ‘ground creature’ classifier to a ‘lizard’ root in Ambel, with transfer of only the classifier meaning into Kalamang under influence from Kawe etc. (c.f. Matbat *sabε<sup>3t</sup>* ‘goanna’).

- (36) Irarutu *akiko* ‘parrot’ :: Arandai *ek’ake*; Yawa *wakikui*, Inanwatan *qekáqe* ‘cockatoo’.
- (37) Wamesa, Ansus, Woi, Serui-Laut *aya* ‘bird’ :: Yawa *ayak* ‘cockatoo’ :: Hatam *hayok*; Mansim *uyaki* ‘cockatoo’.

Kamholz (2014) claims that the Yapen form is a reflex of PMP *\*qayam*, though cognates fail to appear anywhere else SHWNG; reflexes of *\*manuk* are far more widespread. Donohue (1997) claims that the Hatam form is decomposable into /hap-yok/ ‘bird-put’; this could possibly be extended to Mansim, where the word for bird is *waw*. If both of these claims are true, then they are unrelated and the Yawa form must be borrowed in from one or the other. In the not-unlikely scenario that either or both claims are false, a Hatam to Yawa to Yapen path might be suggested.

- (38) Wamesa *musi*; Moor *vùsi*; Waropen *wusi* ‘tree kangaroo’ :: Mansim *usi* ‘cuscus’.
- (39) Ansus *amo* ‘wallaby, tree kangaroo’, *amu* ‘cuscus’ :: Sougb *uma* ‘cuscus’.

Of the 70 meaning categories in this sample, 39 appear to be associated with at least one local borrowing event which crosses the AN-Papuan divide. This is in addition to the eight more widespread words listed in §3.1 and §3.2, the Yawa-only connections in §3.4, and those forms apparently borrowed among only Austronesian or only Papuan varieties. Furthermore, because of

the level of similarity involved and the fact that this study compares only modern languages and not proto-forms (where these even exist), most of these loans are likely to be relatively recent, as too extreme of a time depth would allow accumulating sound changes to erode the similarity between borrowing and source beyond easy recognition. This magnitude of apparent borrowing reflects the known situation of ongoing, long-term contact between densely-packed languages. Some aspects of this distribution should not be surprising. Lexemes denoting trade and non-indigenous items (betel, rice) are known to be more prone to borrowing. Conversely, we might expect more loans into Austronesian languages of flora/fauna not present in the areas where speakers of Proto-SHWNG were settled before arriving in Papua – ‘cassowary’ for example being a prime candidate – but none are identifiable here, perhaps due to the time depth problem. The majority of loans occurred between geographically proximate languages or along known trade routes, though source vs. recipient often cannot be identified. Loan rates appear to be slightly higher among the languages of Cenderawasih Bay as compared to the western Bird’s Head, Raja Ampat, or Bomberai, and more borrowing in coastal languages than landlocked ones like Maybrat, Moskona, and Tause. In a situation where water functions as a highway rather than an impediment to travel, this is to be expected. The preponderance of Austronesian-to-Papuan loans in cases where the source can be identified may indicate higher prestige of AN varieties, or reflect the primacy of Biak in trade along the north coast. [Haynie et al. \(2014\)](#) find that even words for culturally significant items, normally resistant to lexical replacement, become highly susceptible when novel uses for them are introduced, suggesting that Austronesian settlers may have introduced cultural practices and accompanying terminology for items already present in Papuan societies. Alternatively, this disparity may simply reflect our greater knowledge of Austronesian proto-forms, making their descendants easier to identify than originally Papuan etyma.

One surprise is the apparent contact between Maybrat, a landlocked language in the center of the Bird’s Head, and the Biakic, Yapen, and coastal CB varieties, as well as possibly Irirutu. This appears to have been the case for ‘banana’, ‘pig’, and ‘rat/mouse’, examples (6), (23a), and (24) above. In none of these cases is there an intervening coastal language with the relevant form

attested, which could have served as a conduit between Maybrat and CB. Unless those intervening languages at one point also had the shared forms and in all three cases have since lost them, this supports a hypothesis of direct contact between the Maybrat and seagoing traders, either because the Maybrat would trek to the coast for trade or because of inland incursions by the seafarers.

Another surprisingly connected language is Irarutu, which appears to share forms with the Biakic languages ('pig'), Moi ('red'), Yawa ('cockatoo/parrot'), Mpur ('spider'), Hatam ('spider'), and possibly Umar ('spider'), without any attested plausible vector languages. Moi, despite its distance, is the least problematic of these, given the known Raja Ampat/Bomberai networks. The other languages, however, are located on the north coast of New Guinea and in Cenderawasih Bay. This may point to a wider previous distribution of Irarutu than is currently attested, or to more direct trade links through Kuri and Wamesa territory to the Bay.

#### 3.4. Yawa

Yawa, one of two Papuan languages on otherwise Austronesian-dominated Yapen Island, deserves an honorable mention for the sheer number of loans it has managed to absorb from the neighboring languages. Of the 70 lexical meanings considered, Yawa has plausibly borrowed (or loaned) at least 40 of them, one, 'white', twice. Examples not discussed in §3 or §3.5 are listed below, with the Yawa form compared to a few representative AN words.

- (40) Yawa *mangkawae* :: Meoswar *manggaye* 'bat'; Kuri *magaye* 'owl'.

Not attested elsewhere.

- (41) Yawa *weran* :: Roon *veren*; Kurudu *wen*; Biak *beren* 'betel nut'.

Biakic only, probably a loan from Biak. Limited distribution within Yapen only, possible Yawa source.

- (42) Yawa *kavambun* :: Ambai & Serui-Laut *kamambo* 'butterfly'.

Likely to have originated in Yawa, as a different cognate set is reflected in surrounding Yapen languages and all other branches of SHWNG (Wamesa *apopi*, Buli *aibobang* (Blust

1978), Ma'ya *kala'byobo<sup>3n</sup>*, etc.

- (43) Yawa *timburu* :: Ansus & Umar *timburi*; Meoswar & Roon *timur*; Moor *timùri*; Warembori *timori* 'cassava'.

Widespread in CB. It has been suggested that this is a loan from the Indonesian word *timur* 'east', though cassava is called *singkong* or *kasbi* in the Malay of the area.

- (44) Yawa *kangkunam* :: Wamesa *kakuna* 'caterpillar'.

Not attested elsewhere.

- (45) Yawa *katatim* :: Ambai *kantanini*; Ansus *kantating* 'cockroach'.

Not present elsewhere, likely origin in Yawa.

- (46) Yawa *angkaijije* :: Wooi *angkati*; Ansus *angkadi*; Wamesa & Ansus *anggadi*; Kuri *akadi* 'coconut'.

Yapen only.

- (47) Yawa *kaumu(r)* :: Wamesa *kumuar* 'dark'.

Not attested elsewhere.

- (48) Yawa *ajo pinam* :: Wooi *pina maria* 'eel'

This may be coincidental. If it is not, the correspondence is interesting as the Wooi form literally means 'thing in the water', and the *pina* portion potentially borrowed into Yawa is glossed 'thing-LOC'. This same semantic structure is used in the Wondama dialect of Wamesa (*venamaria* 'REL-LOC-water'), Biak (*rowar* 'thing-water'), and Roon (*in vero war* 'fish REL-LOC water').

- (49) Yawa *maru* :: Moor *manù* 'forest'.

[Kamholz \(2014\)](#) traces this form to PMP *\*banua* 'inhabited land', though this entails irregular nasalization of the initial *\*b*.

- (50) Yawa *insumai* :: Wamesa *samue*; Irarutu *samwin* 'grass'.

Also present in Umar.

- (51) Yawa *keke* ‘blue’ :: Ambai *keke*; Waropen *kakesio* ‘green; blue’.  
Yapen and Waropen, possibly Umar (see §4).
- (52) Yawa *wao* :: Wamesa *rau*; Serui-Laut *re-rau* ‘leaf’.  
PMP \**dahun*.
- (53) Yawa *andanije* :: Wamesa (Wondama dialect) & Serui-Laut *anda*; Ansus *andani*; Wooi *andang* ‘mango’.  
Yapen only.
- (54) Yawa *pikerari* :: Ambai *fi-karari*; Wooi *pikarari* ‘mosquito’.  
These languages only; likely origin in Yawa.
- (55) Yawa *koo* :: Wooi *kou* ‘owl’
- (56) Yawa *avone* :: Wamesa *abo viurar*; Ansus *awo*; Roon *avor* ‘pandanus fruit’.  
Yapen and Biakic; poorly attested elsewhere.
- (57) Yawa *anan* ‘sago, papeda’ :: Ambai *anan* ‘papeda’.  
Found throughout CB, also Biga (Remijsen 2001) in Raja Ampat. Likely loan into Yawa from AN.
- (58) Yawa *kami* :: Ansus (*ne*)*kami*; Wooi *kami* ‘seed’.  
These languages only; likely origin in Yawa.
- (59) Yawa *tawae* :: Wamesa, Ambai, Pom & Serui-Laut *tawai* ‘snake’.  
Yapen only.
- (60) Yawa *ugarakaki* :: Ansus & Pom *ingkira* ‘spider’.  
These languages only.
- (61) Yawa *aniwan* :: Ansus & Pom *andiwa*; Roon *maniver*; Moor *mananiva* ‘wasp, bee’.  
Found across CB.
- (62) Yawa *bu(gw)a* :: Ambai, Ansus, & Serui-Laut *bua* ‘white’.  
Yapen and Raja Ampat. The Yawa form may also connect to Mpur *fubwe*.

(63) Yawa *poper* :: Biak *pyopr*; Warembori *pepera* ‘white’.

Biakic and Warembori; likely origin in Biak.

Those forms which are attested in Yapen languages only, especially when their distribution even within Yapen is limited, are the strongest candidates for having originated in Yawa and spread from there into Austronesian, either as loans into Proto-Yapen or in a series of borrowing events into the individual languages or intermediate ancestors with distribution through what was almost certainly a dialect chain. The influence of Biak is also evident here.

### 3.5. Loans across Papuan Families

Some loans are identifiable across Papuan familial boundaries without Austronesian involvement. Fewer of these exist than one might expect given the number of PAP/AN connections above, but bear in mind that many of those previously listed also cross Papuan familial boundaries, though this isn’t highlighted in §3.3. Again, these are likely to be more recent loans, and since the duration of contact between Papuan languages is roughly an order of magnitude greater than that between Papuan and Austronesian, a great many more loans are likely to exist here which have been rendered unrecognizable by sound change and semantic drift.

(64) ‘bird of paradise’: Kalamang *sanggien* :: Arandai *tiangge*.

Both languages are TNG so this may be inherited, but they belong to different primary branches of the family and are geographically not so far from each other, so borrowing seems more probable. This lexeme is poorly attested across the sample, so it may be present in other Bomberai-adjacent varieties as well.

(65) ‘butterfly’: Ekari (TNG) *bobaga* :: Moi (W. Papuan) (*kam*)*bawaga*.

Geographically distant.

(66) ‘cat’: Tehit (W. Papuan) *sika* :: Kalamang (TNG) *sikan*.

(67) ‘coconut’: Mpur (isolate) *tu* :: Hatam (Hatam/Mansim) *duig* :: Moi *duu*.

- (68) ‘bat, flying fox’ Abun (isolate) *ndam som* (*ndam* ‘bird’) :: Mpur *som* ‘sm. bat’ :: Moi (West Papuan) *sòm*.
- (69) ‘fly’: Mpur *bobor* :: Mansim *kwoboren* :: Mairasi (Mairasi) *matambura* :: Kemberano *bora*; Arandai *bowra*; Mor *frora* (TNG).
- (70) ‘fruit’: Meyah (E. Bird’s Head) *efek* :: Arandai *ebuki*; Kamoro *eke* (TNG) :: Maybrat (isolate) *ake* :: Tunggare (E. Geelvink Bay) *okia*.
- (71) ‘grass’: Meyah *mesofou* :: Maybrat *po-safom*.
- (72) ‘leaf’: Bauzi (E. Geelvink Bay) *ete* :: Maybrat *ata ~ ita*.
- (73) ‘louse’:
- a. Moi *sayam* :: Mpur (*ey*)*im* :: Yawa (isolate) *eme* :: Mairasi *umai* :: Meyah *mej*; Sougb (*mougt*)*mem* (E. Bird’s Head) :: Hatam *mem* :: Kamoro (TNG) *mamo*.
  - b. Kalamang *mun* :: Hatam *man*.
- More likely chance, given the geographic separation.
- (74) ‘rat’:
- a. Yawa *kaimar* :: Mpur *kumer*.
  - b. Hatam *ncub ~ jop* :: Meyah *muchup*; Sougb *ijouhw*.
- (75) ‘tree’:
- a. Maybrat *ara* :: Mor *wara*.
  - b. Yawa *mote* :: Kamoro *ote*; Arandai *etamei* :: Bauzi *ut* ‘wood’; Tunggare *uto-me* :: Tause Deirate (Lakes Plain) *utakwo*.
- This resembles the Wamesa word *uta* ‘place, forest’ from PMP *\*qutan* – Tunggare *uto* also means ‘forest’ – but is unlikely to be related.
- (76) ‘white’: Tunggare *pau* :: Mansim *pow* :: Maybrat *puh* :: Tause Weirate *φu*.
- This may be related to the Raja Ampat forms *bu<sup>3</sup>(s)* in Matbat, *bu<sup>3</sup>s* in Ma’ya, etc, which are cognate with the words discussed in (62) above.

(77) ‘yellow’: Hatam *pwk*<sup>21</sup> ~ *nipug* :: Moi *pox*.

#### 4. Word Distributions within Austronesian

Finally, a few forms have distributions within Austronesian that suggest that borrowing was involved. In these three cases a non-Austronesian source has not been identified, which may indicate intra-family borrowing rather than an external origin.

There are two main cognate sets within CB meaning ‘green’ and/or ‘blue’. The first descends from PMP *\*mataq* or *\*ma-qetaq* ‘raw, green, unripe’ and is realized in CB as Moor (*ma’a*)*ma’i*, Yaur *né/màa’è*, and Yerisiam (*mák*)*máaká* (Kamholz 2014). The other has no reconstructed antecedent, and appears as Wamesa *kake*, Ambai *keke*, Pom *vekakeha*, Wooi *vekake*, Kurudu *kikes*, Waropen *kakesio*, and possibly also Umar *mkat* (Kamholz 2014), Serui-Laut *kiay*, and Pom *vemakai*, and Ansus *mekae* – i.e. in all of the attested Yapen languages plus Umar and Waropen (and, as noted previously, Yawa). Irarutu has similar *mkrkur* with the meaning ‘fresh, young’, which may be related. This distribution entails that either *kake* entered Proto-SHWNG, coexisted alongside *\*mataq*, and was subsequently dropped in all branches except Umar, Warembori, and Yapen, or, more likely, that it entered Proto-Yapen (or its common ancestor with Umar), perhaps via contact with (Proto-)Yawa, and from there was borrowed into Waropen. It is probably a coincidence that Arandai and Kemberano have *gomukake* and Tause and Tause Weirate have *kaka* for ‘black’, though those two forms may come from a single source. (Two of those four languages, Tause and Kemberano, have attested unrelated words for ‘green’.)

The word for ‘cassowary’ in most of CB as *manswar* or similar, but a second form appears in Wamesa as *wonggei*, Biak as *wònge*<sup>22</sup> and Tandia as *wógev’ia*. Tandia was spoken in an area carved out of Wamesa territory at the base of the Wondama Peninsula, and likely got the term from Wamesa, which may also have passed it to Biak, or vice versa. As Tandia is a primary branch of SHWNG and the term does not appear elsewhere, shared inheritance can be ruled out.

A final observation regards the word for ‘butterfly’. The SHWNG etymon was inherited as

<sup>21</sup> something like [pɸuwk] phonetically, according to Donohue’s (1997) phonological rules.

<sup>22</sup> van den Heuvel (2006) gives *manswar*, *wònge* is from van Hasselt & van Hasselt (1947).

a root resembling *apopa* in most CB varieties: Wamesa (Windesi dialect) *apopi*<sup>23</sup>; Ambai, Ansus, & Pom *apopa*; Biak *âpòp*; and Yerisiam *kápòòpà*, as well as Irarutu *apapr(o)*. Several varieties added the *man-* prefix to this, meaning ‘bird’: Tandia *manipòpivia*; Meoswar *mampi’òp*, and Roon *manipopi*. All of the varieties to add the prefix also have the word *man* (*manavia* in Tandia) for ‘bird’, though the converse is not true. There is one exception to this: the Wondama dialect of Wamesa, which like most other Yapen languages has *aya* for ‘bird’, has *manipopi*, with the prefix, for ‘butterfly’ (Henning et al. 1991). Why Wondama Wamesa is the only Yapen variety to add *man-* (or the only one to retain it) is puzzling. Two of the other three *man-*ful languages, Tandia and Roon, are(/were) spoken directly adjacent to Wondama, but they are comparably small enough that such an influence seems unlikely; the third such language, Meoswar, is spoken farther up the coast adjacent to the Windesi dialect, where the *man-* has been dropped.

## Appendix: Wordlist

- Colors and related:

- |          |          |           |
|----------|----------|-----------|
| 1. black | 4. dark  | 7. sky    |
| 2. blue  | 5. green | 8. white  |
| 3. brown | 6. red   | 9. yellow |

- Plants:

- |                         |                   |                    |
|-------------------------|-------------------|--------------------|
| 1. banana               | 7. cassava        | 13. fruit          |
| 2. bean                 | 8. casuarina tree | 14. grass          |
| 3. betel nut            | 9. chili pepper   | 15. leaf           |
| 4. betel pepper (sirih) | 10. coconut       | 16. mango          |
| 5. branch               | 11. flower        | 17. pandanus fruit |
| 6. breadfruit           | 12. forest        | 18. pumpkin/gourd  |

<sup>23</sup> *apopa* in Wamesa means ‘spider’.

- |                            |            |                      |
|----------------------------|------------|----------------------|
| 19. rice                   | 23. seed   | 27. tree             |
| 20. root                   | 24. snake  | 28. yam/sweet potato |
| 21. sago                   | 25. sprout |                      |
| 22. sago porridge (papeda) | 26. taro   |                      |

• **Animals:**

- |                     |              |                     |
|---------------------|--------------|---------------------|
| 1. bat              | 8. crocodile | 15. hornbill        |
| 2. bird             | 9. cuscus    | 16. lizard/gecko    |
| 3. bird of paradise | 10. dog      | 17. owl             |
| 4. cassowary        | 11. eel      | 18. pig             |
| 5. cat              | 12. egg      | 19. rat/mouse       |
| 6. chicken          | 13. fish     | 20. (sea) turtle    |
| 7. cockatoo         | 14. frog     | 21. (tree) kangaroo |

• **Insects and related:**

- |                |                |               |
|----------------|----------------|---------------|
| 1. ant         | 5. cockroach   | 9. mosquito   |
| 2. beetle      | 6. fly         | 10. spider    |
| 3. butterfly   | 7. grasshopper | 11. wasp, bee |
| 4. caterpillar | 8. louse       | 12. worm      |

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