CHAPTER 11

LANGUAGE ISOLATES IN THE NEW GUINEA REGION

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1 INTRODUCTION

The Greater New Guinea area holds a large number of language isolates, belonging to the most diverse and isolate regions of the world (Table 11.1, using figures from Hammarström et al. 2015). In the present understanding, as many as 55 languages in this region are not demonstrably related to any other language. A much lower number of isolates for New Guinea emerges from the overviews of Foley (2000), Ross (2006), Wurm (1982) since these authors tend to give the benefit of the doubt in the opposite direction, or, in the case of Wurm (1982), have far more generous criteria for considering languages to be genealogically related (cf. Shafer 1965). Taking such, more 'lumping', views on the grouping of the languages of the New Guinea area is not without reason. New Guinea is the least studied region both in terms of documentation and genealogical relations (Hammarström and Nordhoff 2012), and there is therefore the expectation that languages which are not obviously related to their neighbours will prove to be so, once they are better documented and their potential relations are studied more intensively. However, empirical evidence from the Americas (Hammarström 2014) suggest that increased documentation and study does not necessarily lead to a drastically different understanding of genealogical relations than that of an initial assessment based on the comparison of basic vocabulary. For this reason we have chosen to adopt a rather strict criterion in the present survey, whereby a language has to have a bone-fide demonstration of relatedness (cf. Campbell and Poser 2008) with other language(s) for it not to be considered an isolate. Every entry, however, does have an individual explanation of why is it considered an isolate as well as a commentary on the possible genealogical links.

All the languages listed in the present survey have an attestation that exceeds at least a wordlist of basic vocabulary (Tadmor et al. 2010).[1] Usually a sociolinguistic survey or a vocabulary comparison underlies the language/dialect divisions adopted here (cf. Hammarström 2015) which determines whether a set of varieties count as an isolate or as a small family of more than one language and hence not included in the present paper.[2]

The number of isolates, and the linguistic diversity more generally, has bewildered every generation of Papuan language researchers. The classic view is that the diversity is due to some combination of ancient settlement (49,000 years ago) see Summerhayes et al. 2010 and geography (mountains, forests, swamps, etc.). This view is rarely articulated (but see Axelsen and Manrubia 2014, Gavin and Stepp 2014, Nettle 1999), and explanatory models have yet to be worked out. A different view, argued for the New Guinea area foremost by Laycock (1969, 1982a, b), who had considerable fieldwork and surveying experience from the Sepik region, is that the key to the diversity lies in a conscious ideology on the part of the speakers to keep and accentuate linguistic

TABLE 11.1 NUMBERS ON ISOLATES AND FAMILIES IN THE NEW GUINEA REGION COMPARED TO OTHER CONTINENTS

	# languages	*# isolates*	*% families*	*% isolates*	*entropy*	*% lgs/lineage*
New Guinea Area	2140	55	72	43%	2.89	16.85
Australia	343	9	23	28%	2.21	10.72
Eurasia	1654	12	23	34%	2.84	47.26
Africa	2207	17	33	34%	2.08	44.14
North America	619	31	40	44%	4.29	8.72
South America	574	64	43	60%	5.01	5.36

Source: All figures are computed from Hammarström et al. (2015).

Note: Entropy is a systematic measure of the diversity of a distribution (here, the division of languages into lineages), whereby a high entropy means high diversity, and vice versa.

identity. Impressionistically there is a concentration of isolates in different lowland areas, both south and north of the cordillera. This result, if it holds up under a more stringent formulation, would speak in favour of geographic determinism, rather than social factors.

For the sake of presentation, isolates are grouped into five geographic areas, moving roughly from West to East: East Nusantara, North Indonesian Papua (Mamberamo), Southern Fringe and Lowlands, Sepik, and, finally, East Papuan Islands. We provide the ISO 639–3[3] code, some sociolinguistic information, grammatical information when available, and a selection of references for each isolate. Fuller lists of bibliographical references can be found in Glottolog 2.6 (Hammarström et al. 2015). Unless otherwise noted, speaker numbers are from Lewis et al. (2015), the most comprehensive source available.

2 EAST NUSANTARA

2.1 Tambora [xxt] (extinct)

The speakers of the Tambora language of Central Sumbawa fell victim to a gigantic volcanic eruption in 1815, and the language must have gone extinct after the subsequent death of a few survivors. Of the language, only a wordlist of some 50 items remains, which is analyzed as far as possible in Donohue (2007). Save for a small number of loans, the lexical items are completely different from the surrounding Austronesian languages and non-Austronesian languages further east.

2.2 Maybrat

Maybrat is spoken by a sizeable population (~ 20,000) in the central area of the Bird's Head of Indonesian Papua. The language has a divergent dialect known as Karon Dori (Dol 2007:8), which is sometimes counted as a separate language. Maybrat is described in a modern grammar (Dol 2007). The language has long been hypothesized as belonging to a larger grouping in some constellation with other Bird's Head languages, but the lexical and grammatical evidence is insufficient for concluding a genealogical relation (see Klamer and Holton in press and references therein). Like many other Bird's Head languages, Maybrat is a very isolating SVO language, and is famous for lacking grammaticalized tense or aspect (Dahl 2001).

2.3 Abun [kgr]

Abun is spoken by some 3,000 speakers in the north-central area of the Bird's Head of Indonesian Papua, to the west of Mpur. Abun is described in a modern grammar (Berry and Berry 1999). The language has long been hypothesized as belonging to a larger grouping in some constellation with other Bird's Head languages, but the lexical and grammatical evidence is insufficient for concluding a genealogical relation (see Klamer and Holton in press and references therein). Like many other Bird's Head languages, Abun is a very isolating SVO language. Abun has a three-way tonal contrast (Berry and Berry 1999:20–22) but with low functional load, except for distinguishing the third person singular versus plural. Abun has adopted both maritime technology and terminology from Biak (Berry and Berry 1999:5–6), an Austronesian language in the vicinity.

2.4 Mpur [akc]

Mpur is spoken by some 7,000 speakers in the north-central area of the Bird's Head of Indonesian Papua, to east of Abun. Mpur is documented in a series of publications by Odé (2002a,b, 2004). The language has long been hypothesized as belonging to a larger grouping in some constellation with other Bird's Head languages, but the lexical and grammatical evidence is insufficient for concluding a genealogical relation (see Klamer and Holton in press and references therein). Like many other Bird's Head languages, Abun is a fairly isolating SVO language. Mpur uses tone for lexical contrast distinguishing four tonemes per syllable: high, midrising, mid/midfalling, and low (Odé 2002a).

2.5 Mor [moq]

Mor[4] is spoken by some 30 speakers (out of an ethnic group of 100 individuals) in the swampy lowlands along the Bomberai and Budidi Rivers on the Bomberai Peninsula. The only published data on Mor is the wordlists in Smits and Voorhoeve (1998), but on-going documentation is being conducted by Harald Hammarström. The language was swept into the Trans New Guinea family in spite of the lack of positive evidence in favour of this hypothesis (Voorhoeve 1975a:431), and subsequent examinations, *pace* obvious loans, find little evidence for this or any other relation with neighbouring languages. Mor is a SOV language with postpositions, alienability/inalienability distinction, reduplicated adjectives, and serial verbs (own field data).

2.6 Tanahmerah [tcm]

Tanahmerah,[5] also known as Sumeri, is the language of the area with the same name along the Gondu and Bapai Rivers of the northeast of the Bomberai Peninsula. The language was grouped together with the Mairasi languages to the southeast into the Trans New Guinea family on the basis of resemblant pronoun forms (Voorhoeve 1975a:424–431, Ross 2005:32), but this remains the only argument for this classification and, as such, insufficient. The language is typically listed as having around 500 speakers, but no researcher is recorded to have surveyed the speech community in situ. Essentially nothing is known of the grammar (Anceaux 1958), and documentation of the language is a high priority (Hammarström 2010b).

3 NORTH INDONESIAN PAPUA (MAMBERAMO)

3.1 Kehu [khh]

Kehu is spoken by some 200 people in the swampy lowland plain along the Poronai River to the east of the city of Nabire in Papua, Indonesia. Until recently, Kehu was one of Papua's most enigmatic languages with only two unpublished wordlists, but a longer published wordlist is now available thanks to the work of Kamholz (2012) with two ex-situ speakers. Kamholz (2012) shows that Kehu has tonal contrasts and is SOV, but not much more can be deduced about its grammar. The lexicon shows little resemblance to any of the surrounding languages (Kamholz 2012:252–254), but the unusually small sound inventory is reminiscent of the Lakes Plain languages.

3.2 Masep [mvs]

Masep is spoken in a single village just east of the mouth of the Mamberamo River on the north coast of Papua, Indonesia. Masep was first surveyed by van der Leeden (1954); next by the Summer Institute of Linguistics (SIL) in 1976 (Silzer and Heikkinen-Clouse 1991:63, 94); and by Clouse, Donohue, and Ma in 1998 (Clouse et al. 2002). All three surveys found only 30–40 speakers but also found that the language was used by all ages and included spouses from the neighbouring village of Subu (Airoran speaking) who learned the language as adults (Clouse et al. 2002:4,11). Even though all Masep speakers are (at least) bilingual, this data makes Masep the smallest language on the planet attested in stable transmission across three generations. The only published information on the structure of Masep are the notes in Clouse et al. (2002:5–7) which show it to be a case-marking SOV language. The lexicon is completely different from neighbouring languages, and Masep is therefore considered an isolate (Clouse et al. 2002:9).

3.3 Burmeso [bzu]

Burmeso is spoken by some 250 people in and around the village of the same name along the eastern banks of middle and lower Mamberamo River in Indonesian Papua. Voorhoeve (1975b) classified Burmeso as a language isolate based on early wordlists available to him. Much more extensive materials collected by Donohue (2001) reinforce this position, as Burmeso, apart from being SOV, is typologically anomalous in the region. The only published data on Burmeso grammar is the description of the nominal class system by Donohue (2001). Six classes of nouns need to be distinguished to account for singular and plural agreement behaviour which also interacts with animacy marking.

3.4 Abinomn [bsa]

Abinomn is spoken by some 300 people in around the Baso tributary of the Idenburg branch of the Mamberamo River, not far from the Foya Mountains. Since it was first discovered by researchers to be a separate language, it has been listed as an isolate (Silzer and Heikkinen 1984:24) given the lack of similarity in vocabulary to all surrounding languages. The only published information regarding the linguistic features

of Abinomn are the notes on the segmental inventory (Donohue 2007:529) and overt dual marking on nouns (Donohue and Musgrave 2007:365–366) extracted from Mark Donohue's field notes.

3.5 Dem [dem]

Spoken by some 1,000 individuals of Indonesian Papua near the headwaters of the Rouffaer branch of the Mamberamo River. The first publication with data on Dem was by Le Roux (1950) together with a careful analysis of the data. Le Roux (1950b:806–807) concluded that although Dem had words in common with the Dani and other highlands languages, it had so many unique words that "it merits being represented as separate on the map" (by which he may have meant language isolate in the sense of this paper). A lexicostatistical study involving the same highlands languages concluded Dem to be distantly related at least to the Dani languages (Larson 1977:14). But the cognation judgments involving Dem (Larson 1977:9–12, 39–40) look overly optimistic in that a match is judged if at least one segment matches, even as this procedure yields inconsistent sound correspondences. Remaining genuine matches are, however, better interpreted as borrowings into Dem than common inheritance (Larson 1977:16–17). Dem has a body-tally counting system (Le Roux 1950a:II:531) which seems to point to an areal connection with the Mek languages further east (Heeschen 1978). No new data on Dem grammar has surfaced since the phraselist in Le Roux (1950). This data allows Dem to be analyzed as an SOV language. Fieldwork on Dem is a high priority.

3.6 Damal [uhn]

Damal is spoken by some 14,000 people in the highlands of Indonesian Papua southeast of the source of the Kemandoga River. The language is featured in the careful analysis of Le Roux (1950b) who considered the language to have "its own vocabulary" and suspected that many Moni loans had crept into the list through a bilingual informant (Le Roux 1950b:806). A lexicostatistical study concluded Damal to be distantly related to surrounding highlands languages (Larson 1977:14). But the cognation judgments involving Damal (Larson 1977:9–12, 39–40) look overly optimistic in that a match is judged if at least one segment matches, even as this procedure yields inconsistent sound correspondences. Little exists in the way of published grammatical description of Damal. Voorhoeve (1975a:410–411) contains some notes compiled from missionary data available to him at the time[6] and various notes emanating from the fieldwork of Mark Donohue (Musgrave and Donohue 2007:5). From these, some basic typological features can be gleaned, such as the SOV word order of Damal.

3.7 Elseng [mrf]

Elseng is spoken by some 300 people in the swampy lowlands southwest of the Lake Sentani area. The language was first reported by Voorhoeve (1971:70–72) who saw a small amount of lexical overlap with the Border family of languages but preferred to interpret these as loans. The affiliation with the Border family still remains the most promising hypothesis for the genealogical affiliation of Elseng. Very little original data is available on Elseng, and that which exists emanates from ex-situ speakers (Voorhoeve

1971:70–72, Burung 2000, Laycock 1977). All these researchers had difficulties eliciting a full pronoun system for Elseng, leading Laycock (1977) to infer the lack of pronominal distinctions beyond 'me' versus 'the rest', and this made its way into some secondary literature as the smallest known pronoun inventory (e.g., Mühlhäusler 1990). However, Mark Donohue (personal communication, 2008) was able to elicit a minimal-augmented pronoun system for Elseng (cf. Harbour 2014:133–134). Only a modicum of data on Elseng grammar is available, but this is enough to gauge that Elseng is an SOV language (Voorhoeve 1971:72, Burung 2000).

3.8 Kapauri [khp]

Kapauri is spoken by some 200 people on the Idenburg (Taritatu) branch of the upper Mamberamo River. The first mention of Kapauri as a separate language along with language data (40 words) is Voorhoeve (1975b:45) based on a wordlist furnished by Myron Bromley. Voorhoeve (1975b) grouped Kapauri with the Kaure languages based on some lexical correspondences. However, a newer evaluation of the lexical relationships sheds considerable doubt on a genetic relation between the Kaure languages and Kapauri (Rumaropen 2006:13), since newer lexicostatistical figures are only in the range 5–6% (cf. Foley in press-a). A short wordlist (40 words) appears in Voorhoeve (1975b). There are 250 words and 15 sentences that will appear in an SIL Indonesia survey report (Rumaropen 2006), which also mentions translated Bible portions. The unpublished survey reports referred to in Silzer and Heikkinen (1984:31) may contain further wordlists. At present, Kapauri is being transmitted to the younger generation and is thus not an endangered language (Rumaropen 2006).

3.9 Kimki [sbt]

Kimki is spoken by some 500 people east of the Sobger tributary of the upper Mamberamo close to the Indonesia-PNG border. A tiny 11-word list of what is probably Kimki (Hammarström 2008b) was taken down as early as 1914 (Langeler 1915), but this wordlist has lingered in the unknown. Otherwise, references to Kimki go back no earlier than to 1978 in unpublished SIL Indonesia survey manuscripts (Silzer and Heikkinen 1984, Silzer and Heikkinen-Clouse 1991). The language is listed as "unclassified" (Silzer and Heikkinen 1984, Silzer and Heikkinen-Clouse 1991) until between 1996 and 2000 when Grimes (2000) groups it with neighbouring Yetfa-Biksi. However, the lexical evidence is not sufficient for concluding a genetic relation between the two (Hammarström 2008a). The only substantial data is an unpublished 250-word list and 15 sentences in an SIL survey report to appear (Rumaropen 2004).[7] The few sentences display SOV word order. At this time, Kimki is being transmitted to children and thus is not an endangered language (Rumaropen 2004).

3.10 Mawes [mgk]

Mawes is spoken by some 850 people in two villages Mawes Dai (West Mawes) and Mawes Wares[8] (East Mawes) in the north coast of Indonesian Papua, west of Jayapura. The language was first reported as a separate language as early as Robidé van der Aa (1879:112) but without accompanying data. Likewise, van der Leeden (1954) noted the separate identity of the language, but no actual language data surfaced until the 20 words of Galis (1955:118). Voorhoeve (1975b:40, 60) classified Mawes as a family-level

isolate within his Tor-Lakes-Plain stock using unpublished lexical data (of which 40 words were later published). This classification has been retained in all later listings (e.g. Lewis et al. 2015) except that the Lakes Plain languages were later excised (Clouse 1997), leaving Mawes remaining in a subfamily with Tor and Orya. To be a family-level isolate (Voorhoeve 1975b:16) within the Tor-Lakes-Plain stock means that the language "shares 12%-27% cognates on a 100-word list" with at least one other Tor-Lakes-Plain language. However, the cognate identifications supporting this classification were never published and fail to reproduce using modern lexical data (Foley in press-a). Indeed, another independent count (Wambaliau 2006b) has Mawes cognate percentages never exceeding 6% with any Tor language (nor with any other language in the immediate region). Therefore, it seems best to consider Mawes an isolate until proven otherwise (Hammarström 2010a).

A substantial wordlist was finally published in Smits and Voorhoeve (1994) of which 20 words (Galis 1955) and 40 words (Voorhoeve 1975b) had appeared before. An SIL Indonesia survey report will include 250 words and 15 sentences (Wambaliau 2006b). The sentences show SOV word order.

Though the speaker number is not low (ca. 850), Mawes is under pressure from Indonesian and can be considered an endangered language (Wambaliau 2006b).

3.11 Kosare [kiq]

Kosare is spoken by some 250 people on the Idenburg (Taritatu) branch of the upper Mamberamo River. The Kosare may have been the same people that Oppermann met at Krau (Feuilleteau de Bruyn et al. 1915:664–666), but otherwise the first attestation is the wordlist in Heeschen (1978:41–44). This, along with the survey wordlist of Wambaliau (2006a) remains the only information about the language. Kosare was grouped with Kaure in Wurm (1982:197), presumably based on lexical matches. However, a newer look at the same languages reveal that there are relatively few resemblances to Kaure. Foley (in press-a) lists the matches and accepts the relationship, but in this chapter, we adopt a more cautious stance.

The 15 sentences of Kosare in Wambaliau (2006a) show SOV constituent order.

3.12 Afra [ulf]

Afra is spoken by 115 people in the remote area just east of Mount 6234 in Indonesian Papua. The colonial administration were aware of the Afra people as early as Hoogland (1940), but it is reported as a separate language (called Oeskoe), along with a wordlist, only in Galis (1956).

Voorhoeve (1971) has Afra (under the name Usku) as "unclassified", by which he means that no significant lexical relations are found with its neighbours, or, in other words, a language isolate. In Voorhoeve (1975a), however, it is classified as Trans New Guinea, but no evidence or arguments were ever adduced. Foley (in press-a) finds no significant resemblances to Trans New Guinea.

Published wordlists are collected in Smits and Voorhoeve (1994). There is also an SIL Indonesia survey report to appear which contains 250 words and 15 sentences (Im and Lebold 2006). There is also a brief anthropological report (Dumatubun and Wanane 1989).

At present, there are about 115 speakers, but the language is not immediately in danger. However, the younger generation is just as strong in Indonesian as in Afra (Im and Lebold 2006) which points to a weakening position of the vernacular.

3.13 Powle-Ma [msl]

Powle-Ma is spoken by 250 people principally in the village of Molof, located in the remote area northeast of Mount 6234 in Indonesian Papua. The Molof village was known to the colonial administration as early as Hoogland (1940) and a wordlist appears in Galis (1956).

Voorhoeve (1971) has Powle-Ma (under the name Molof) as "unclassified", by which he means that no significant lexical relations are found with its neighbours or, in other words, a language isolate. In Voorhoeve (1975a), however, it is classified as Trans New Guinea, but no evidence or arguments were ever adduced. Foley (in press-a) finds only flimsy resemblances to Trans New Guinea.

The only data on Powle-Ma available to the present author is the wordlists of Rumaropen (2005) and Smits and Voorhoeve (1994), but Foley (in press-a) gives a phoneme inventory for Powle-Ma emanating from the unpublished fieldwork of Mark Donohue. The phoneme inventory exhibits a nine-vowel system which is unusual for this region.

3.14 Sause [sao]

Sause is spoken by some 250 people in the area north of the Idenburg (Taritatu) River east of the Foau language (Lakes Plain family) and south of the Orya (Tor-Orya family) language. Sause is first mentioned as an ethnic group in early patrol reports, based on second-hand information (Hoogland 1939:7). Probably the first mention of Sause as a separate language along with language data (40 words) is Voorhoeve (1975b:45) based on Anceaux's collection of wordlists. Voorhoeve (1975b) grouped Sause with the Kapauri and Kaure languages based on some lexical correspondences. At some point, presumably on geographical grounds, the language started to be listed in the Tor-Lakes Plain stock (Silzer and Heikkinen-Clouse 1991:28–29), and when the Lakes Plain languages were excised (Clouse 1997), it remained as a Tor-related language (Lewis et al. 2015), but the lexical data available fails to support this (Foley in-press-a). The only published data is a wordlist in Smits and Voorhoeve (1994) of which 40 words appear in Voorhoeve (1975b). Mark Donohue has collected a short unpublished wordlist from a transient speaker (personal communication, August 2008). Unpublished survey reports referenced in (Silzer and Heikkinen-Clouse 1991:74) presumably contain wordlists too. Nothing further is known to the present author about the endangerment status of Sause.

4 SOUTHERN FRINGE AND LOWLANDS

4.1 Marori [mok]

Marori (Moraori) is spoken in a single village, located inland near the mouth of the Maro River, some 15 kilometres east of Merauke in Indonesian Papua. For as long as there have been figures available, the Marori has been a small nation: 50 speakers in 1917, 58 in 1925, 68 in 1927, 71 in 1934 (Nevermann 1939:34–37) and only 40 speakers were counted in Boelaars (1950:44). The latter figure led Foley (1986:24) to predict the demise of the language:

> In a shifting situation like this, small language groups may be gradually assimilated and disappear entirely. In the early 1950s Moraori (Boelaars 1950) of southern Irian Jaya was spoken by only about forty people, and the tribe was surrounded by the

> numerically much larger and culturally aggressive Marind tribe. All Moraori were bilingual in Marind, and Marind influence on the language was extensive (Drabbe 1954). It is now likely that Moraori is extinct, or nearly so.

On the contrary, the language was not that quick to disappear. When Donohue (no date:10) visited a decade later, he reported that 150 out of the 200 inhabitants of the village knew the language and conjectured,

> It might be that the very history of being surrounded by numerically superior outsiders has made the Moraori more resistant to the sorts of cultural and linguistic decay that now face all the ethnolinguistic groups in the Wasur national park region: a long history of being in contact with a larger group has built in safeguards against rapid assimilation, and has given them a strong sense of local identity that was less essential in a large and culturally aggressive group with ties to many different areas.

Nevertheless, the language could ultimately not withstand the pressure, and by the time of Arka's (2012:151) fieldwork in 2008, the onset of broken transmission had finally come. Presently, the village has 119 inhabitants, and while there are older fully fluent speakers, young Maroris no longer actively speak their language, showing varying degrees of passive competence and shift to Indonesian/Malay and Marind (Arka 2012:151).

Wurm (1975a:327–335) classified Marori as part of his Trans-Fly stock, a subsection of Trans New Guinea including the neighbouring Kanum and Yei languages, on the basis of lexicostatistical figures. The underlying data and cognate judgements were never published, however, and newer independent assessments show much lower lexicostatistical figures with Kanum and Yei (Donohue no date:8). There is in fact a higher number of (near-identical) matches with Marind, which are presumably loans, given the sociolinguistic situation. There remains the possibility that Marori is remotely related to the Trans New Guinea languages (Evans et al. in press), at least that is suggested in its pronoun forms.

Fieldwork by I Wayan Arka has so far resulted in three publications with nuggets of Marori grammar. Arka (2013) shows that nominals in Marori can take a completive aspect clitic *=on/=en* to express a past property or relation. Marori shows a three-way number system (singular, dual, and plural) where dual is expressed by a combination of non-singular and non-plural morphology rather than by dedicated dual morphology (Arka 2011). The argument marking system of Marori has an unusual combination in that there is a clitic *=i* which marks patients, recipients as well as affected participants Arka (2012:153–154).

(1) Efi purfam na=i kaswa=ri-ma-m.
that person 1SG=U hit=l-AUX-2/3NonPL.PST
'The person hit me.'

(2) Robertus/Maria na=i bosik i=mo-fi.
Robert/Maria 1SG-U pig 1SG.give AUX-2/3.RPST
'Robert or Maria gave me a pig.'

(3) Na=i patar yu-nggo-f
1SG=U cold 1SG-AUX.1/2-PST
'I suffered from cold.'

4.2 Tabo [knv]

Tabo (also known as Waia) is spoken by some 3,000 speakers near the mouths of the Fly, Aramia, and Bamu Rivers in Western Province of Papua New Guinea. The first data on Tabo are patrol report wordlists of dubious quality (Austen 1921a,b,c). Later wordlists (Franklin 1973a, Reesink 1976) were also taken down in challenging circumstances. Wurm (1975a:325) classified Tabo as related to the Pahoturi languages but adduced no evidence for this claim, and there is certainly nothing obvious that links the two. Pronouns were not explicitly examined (and perhaps not implicitly either) by Ross (2005), but in any case, they do not match those of the Pahoturi languages. Lexical matches with the Kiwaian languages have been noted since (Reesink 1976:23–25, cf. Wichmann 2012:335–336) but are generally interpreted as loans. If this is correct, then Tabo is a language isolate. However, it is fair to say that there has been very little study of the genealogical relation(s) of Tabo, so the there is room for improvement in the search and comparison. An unpublished grammar of 354 pages was produced for Tabo in 2004 in combination with Bible translation (Schlatter 2003) but is only available in the archives of the Summer Institute of Linguistics at Ukarumpa, Papua New Guinea. This leaves the New Testament translations for the Aramia (No Author Stated 2006a) and Fly River dialects (No Author Stated 2006b) the only published materials available beyond wordlists. Tabo is an SOV language with adjective-noun order and requires a night/day distinction for all non-future tenses (Schlatter 2003).

4.3 Fasu [faa]

Fasu is spoken by a total of 1,200 people in three dialects to the west of Lake Kutubu near the border between the Southern Highlands and Western Provinces of Papua New Guinea. The first data to appear on Fasu is the sketch by Loeweke and May (1966) who subsequently produced a longer grammatical description (Loeweke and May 1980) and a dictionary of the principal dialect Namo Me (May and Loeweke 1981).

Similarities between Fasu and the East Kutubu language Foi were noted from the beginning (Franklin and Voorhoeve 1973), and Franklin (2001) argues that the languages are genealogically related. We take a more cautious interpretation because the most salient similarities adduced by Franklin (2001:311) are elements such as the counting system and the kinship terms which are easily diffused. The languages may be ultimately related (cf. Wichmann 2012:333–335), but resolving this question is difficult without published data on Fiwaga, the sister language of Foi.

Some highlights of Fasu grammar are a tonal distinction for 1PSG/2PSG independent pronouns (Loeweke and May 1980:24–25), verb stem suppletion for number of the subject (Loeweke and May 1980:44), and a well-developed evidentiality system (Loeweke and May 1980:54–66).

4.4 Dibiyaso [dby]

Dibiyaso is spoken by some 1,950 people in the vicinity of the Upper Bamu River in Western Province of Papua New Guinea. It was first made known through a short patrol report vocabulary (Rentoul 1924) which is superseded by the somewhat longer wordlists of Reesink (1976) and Z'graggen (1975).

Dibiyaso is often associated with its northern neighbour Bosavi through a small number of matching lexical items. Reesink (1976:12) gives a number of lexical lookalikes

between Dibiyaso and Kaluli. These contain a few fairly convincing comparisons where Dibiyasu *p* corresponds to Kaluli *f*. The items in question are common to the entire Bosavi Watershed group (not just Kaluli), but none are found in the Etoro-Bedamini group. This suggests, that we are dealing with loans between Dibiyaso and the Bosavi watershed group. Similarly, Turumsa and Dibiyaso are said to share as much as 19% lexicostatistical similarity (Tupper 2007), but from a look at the items in question and the sociolinguistic situation, we find a loan scenario preferable to a genealogical one.

No information on the grammar of Dibiyaso is available, and documentation is thus imperative.

4.5 Pawaia [pwa]

Pawaia is spoken by some 4,000 people around the Purari and Pio Rivers in Karimui District, Simbu Province, lapping over into Gulf and Southern Highlands Provinces. The first data to appear on Pawaia is the patrol report vocabularies of Brown (1921) and Murray (1920), and the only substantial study of the language is Trefry's (1965) master's thesis, published as Trefry (1969). It was elaborated through 18 months of monolingual fieldwork by Trefry (1969:1).

Despite vocabulary cognacy of only 6%–8% to Kuman, Pawaia was included in Trans New Guinea family because of pronoun resemblances to Kuman and based on typological similarities. The typological similarities involve function only (Trefry 1969) and thus count for little in terms of genealogical relationship. The pronoun resemblances do not generalize to the Chimbu family (Foley 1986:69–71) and match only an *n* anyway, so they are better accounted for as accidental similarities than as deep relationship.

Pawaia has tone (Trefry 1969:13) and lacks medial clauses (Trefry 1969:26–28), i.e., clauses with a morphologically stripped down verb dependent on a final clause, but otherwise has a typical 'Papuan' typological profile.

4.6 Kibiri-Porome [prm]

The Kibiri-Porome language is spoken in two dialects totalling 1,180 people on some tributaries of the Kikori River in Gulf District, Papua New Guinea.

Franklin (1968, 1975b) counted Kibiri-Porome as one of the few isolates of Gulf District. Ross (2005) suggested an affiliation to the Kiwai languages, but this is based on pronoun resemblances only, and as such insufficient.

So far only a wordlist (Franklin 1973a, Z'graggen 1975) and one or two more notes on the language have been published (Franklin 1975b), so little can be said about its grammar.

4.7 Purari [iar]

Purari, formerly known as Namau, is spoken by some 7,000 people around the mouth of the Purari River in Gulf Province, Papua New Guinea. A wordlist of Purari appears as early as Bevan (1890) collected in the village Evorra.

The relative small number of lexical items shared by Purari and the Eleman languages are arguably loans, contra Brown (1973:286–290), leaving no convincing evidence for a genealogical relationship (Franklin 1995:198).

The first steps towards understanding Purari grammar was done by the missionary John Henry Holmes who also translated the New Testament (Holmes 1920). Ray (1907)

is a rational analysis of early Purari scripture materials furnished to him by Holmes, while Holmes himself was struggling to fit Purari grammar into a Latinate frame. For example, Holmes (1913:130) marvels at the lack of comparative and superlative constructions of the kind he was used to seeing from European languages. Further documentation of Purari grammar can be found in Kairi and Kolia (1977) and Dutton (1979), but despite the long history of interaction, many aspects of Purari grammar remain to be described. Purari has a small consonant inventory of only eight stops/liquids and two glides featured in native words (Kairi and Kolia 1977:3, Dutton 1979:7–8). Like so many Papuan languages, Purari is SOV with postpositions and has a richer morphology for verbs than for nouns (Dutton 1979:6–7).

A pidgin language used by the Purari for trading with the seaborn Austronesian-speaking Motu is documented thanks to the efforts of Dutton (1979). The main lexifier for the pidgin is Motu.

4.8 Duna [duc]

Duna is spoken by some 25,000 people (San Roque 2008:1) at Lake Kopiago in the Southern Highlands province and adjacent territories of Papua New Guinea. While Europeans have passed through Duna territory since the mid-1930s, literature referencing the Duna as an ethnic group did not start to appear until the 1960s (e.g., Clancy 1962).

Duna is often grouped with the nearby minority language Bogaya (see Section 4.9) and then further into the Trans New Guinea family. Arguments for the relatedness for Duna and Bogaya are given in Voorhoeve (1975a:395–396), but pronouns do not match sufficiently well for an immediate Trans New Guinea affiliation, and apart from this, there are only capricious lexical similarities to other putative families (Shaw 1973). Voorhoeve (1975a:395–396) and Shaw (1973:53) give lexicostatistical figures above 20% between Duna and Bogaya, but the cognate judgments are never explicitly cited. When we look at the same data, we find such high figures difficult to reproduce, and in any case, loans would be expected from Duna to Bogaya given the sociolinguistic situation. If the proposed genealogical relation is real, it must be quite distant. Until a careful re-evaluation has taken place, also involving the nearby numerically dominant Huli language, we prefer to take a cautious stance and regard the relations of Duna and Bogaya as yet undemonstrated.

Duna is described in an extensive linguistically informed grammar (San Roque 2008). A conspicuous feature of Duna grammar is its elaborate evidentiality system with areal connections to adjacent highland languages. The following examples are from San Roque and Loughnane (2012:397):

(4)	Ita=na=ka	no	mbou	ali=tia.
	pig=SPEC=ERG	1SG	garden	dig.up=VISUAL
	‘The pig dug up my garden.’ (I saw it)			
(5)	It=na=ka	no	mbou	ali=yaritia.
	pig=SPEC=ERG	1SG	garden	dig.up=SENSORY
	‘The pig dug up my garden.’ (I heard the sounds.)			
(6)	It=na=ka	no	mbou	ali=rei
	Pig=SPEC=ERG	1SG	garden	dig.up=RESULT
	‘The pig dug up my garden.’ (I saw some dug-up earth and pig droppings.)			

(7) It=na=ka no mbou ali=noi.
pig=SPEC= ERG 1SG garden dig.up=REASONING
'The pig dug up my garden' (I saw some dug-up earth, and someone told me their pig had escaped.)

(8) It=na=ka no mbou ali=norua.
Pig=SPEC=ERG 1SG garden dig.up=REPORTED
'The pig dug up my garden.' (I saw some dug-up earth and pig droppings.)

4.9 Bogaya [boq]

Bogaya is spoken by some 300 people living in the Strickland River valley and Muller Ranges of the Southern Highlands of Papua New Guinea. It is not known exactly when after 1930 the first contact between Europeans and the Bogaya occurred, but they are mentioned in publication as 'Koi'iangi' or 'bush-Duna' from the early 1960s (Sillitoe 1993:3). The Bogaya share many cultural traits with their closest, larger neighbour Duna (Sillitoe 1993:28).

Bogaya is often grouped with its larger neighbour Duna (see Section 4.8) and then further into the Trans New Guinea family. Arguments for the relatedness for Duna and Bogaya are given in Voorhoeve (1975a:395–396), but pronouns do not match sufficiently well for an immediate Trans New Guinea affiliation, and apart from this, there are only capricious lexical similarities to other putative families (Shaw 1973). Voorhoeve (1975a:395–396) and Shaw (1973:53) give lexicostatistical figures above 20% between Duna and Bogaya, but the cognate judgments are never explicitly cited. When we look at the same data, we find such high figures difficult to reproduce, and in any case, loans would be expected from Duna to Bogaya given the sociolinguistic situation. If the proposed genealogical relation is real, it must be quite distant. Until a careful re-evaluation has taken place, also involving the nearby numerically dominant Huli language, we prefer to take a cautious stance and regard the relations of Duna and Bogaya as yet undemonstrated.

Published information on the Bogaya language is limited to wordlists (Franklin 1973a, Shaw 1973) so little can be said of Bogaya grammar.

4.10 Kaki Ae [tbd]

Kaki Ae is spoken in some six villages southeast of Kerema in Gulf Province, Papua New Guinea. At the time of Clifton's (1994) fieldwork in 1993, the language was spoken by essentially all members of the ethnic group of about 310 members and was still being transmitted to children. Despite being squeezed in between larger Eleman and Angan languages and the presence of three linguae francae, the Kaki Ae were highly multilingual but not shifting (Clifton 1994). However, the citation of 630 speakers out of an ethnic population of 1,280 credited to SIL in 2004 in Lewis et al. (2015) suggests that this may no longer be the case.

The first data to appear is the wordlist of Strong (1911). Franklin (1975b:892–893) initially considered the language an isolate but changed his mind after comparing Kaki Ae and data from Eleman furnished to him. Franklin (1975b:892–893) found up to 21% lexicostatistical similarity between Kaki Ae and Eleman and lists the proposed cognates. However, as observed by Clifton (1995:33–34) the proportions of lexicon shared with Kaki Ae, the semantic fields, metalinguistic awareness, and relevant sociolinguistic facts

strongly favour a borrowing scenario. The so-called sound shifts alluded to by Franklin (1995) are, in fact, perfectly predictable loan renderings given the phonemic systems of Eleman (which has no n/l/r-phonemic distinction) and Kaki Ae (which has no t/k distinction).

Clifton (1997) provides a sketch of Kaki Ae grammar. The verb agrees with the subject and object in person and number (for third person singular objects agreement is optional), and the subject may take ergative marking. The verb does not have dedicated tense marking, but a marker (labelled irrealis by Clifton 1997) is used under negation as well as for future reference. The relative clause precedes the noun.

4.11 Kamula [xla]

Kamula is spoken by some 800 people in the area around Wawoi Falls in Western Province, Papua New Guinea, south of the Bosavi family languages. The first data to appear on Kamula is the survey wordlist and notes by Reesink (1976).

Kamula is often grouped with the neighbouring Bosavi languages following Shaw (1973:53) who cites high lexicostatistical similarity (38% to 55%) with languages in the Bosavi Watershed group. However, the cognate judgments are not given explicitly, and we have failed to reproduce anything like these figures, nor have other comparisons such as Reesink (1976:15) who finds 5% similarity with Kaluli where Shaw (1973:53) has 44% and Routamaa (1994:7) with much improved knowledge of Kamula finds "very few similarities". In fact, Kamula, apart from a few obvious cultural *Wanderwörter*, appears to have a basic lexicon totally different from the Bosavi languages.

Routamaa (1994) furnishes a wealth of data on Kamula. In many ways, Kamula is a typical Papuan language with SOV order and postpositions. There is a morphologically marked switch-reference system for simultaneous clauses. Kamula has a causative construction where the verb *dema* 'do' appears sentence finally while the verb in the complement clause is in the imperative.

(9)	Ye-ta	na:-ye	dlapa	ha-ne	de-wa
	3SG-SRCE	1SG-FOC	firewood	take-SG.IMPER	do-FPST
	'She told me to/made me fetch firewood.'				

(10)	Na:-ta	masemala-ye	solo	uha-ne	de
	1SG-SRCE	boy-FOC	salt	steal-SG.IMPER	do
	'I made the boy steal some salt.'				

4.12 Karami [xar]

Karami is an extinct language encountered by Flint (1918) on the left branch of the Turama River, northeast of the Mubami language area in Western Province, Papua New Guinea. The language has not been found in later surveys and is thus presumed extinct. Franklin (1973b:270–271) included Karami in his Inland Gulf family on the basis of a lexicostatistical comparison using the 94-item vocabulary of Flint (1918). The figure for Karami-Minanibai/Foia Foia is especially high (45%). However, the more careful scrutiny of the composition of the Inland Gulf (sub-)family by Usher and Suter (2015:125) attributes the Karami matches (which they revise to a 'modest' number) with the Inland Gulf to loans since the forms in question are nearly identical to Minanibai/Foia Foia. Nothing beyond the wordlist is known about the Karami people or language.

4.13 Wiru [wiu]

Wiru is spoken by some 15,300 people just south of Mount Ialibu in Ialibu District, Southern Highlands Province, at the southwestern edge of the central highlands of Papua New Guinea, between Kewa (Enga-Huli) to the west and Folopa (Teberan) to the south.

Wiru is often included in the Trans New Guinea family in some constellation including the languages of the putative East New Guinea highlands subfamily (Wurm 1982:120–128) with evidence that includes pronoun forms. The careful comparison by Kerr (1975) indeed shows that Wiru shares some cultural vocabulary and some typological features with the adjacent Engan languages, but is otherwise very different (Franklin 1975a).[9] We regard the genealogical relations of Wiru to (any) Trans New Guinea language(s) as yet undemonstrated.

Kerr (1967) is the only available study of the grammar of Wiru which provides a detailed description of medial clauses. The pronoun system of Wiru (corrected from Kerr 1967) is as follows (Harland Kerr, personal communication, 2011):

1P.SG	*no*	’I’
2P.SG	*ne*	’thou’
3P.SG	*one*	’he/she/him’
1P.DU	*tota*	’we two’
1P.PL	*toto*	’we all’
2/3P.DU	*kita*	’you two/they two’
2/3P.PL	*kiwi*	’you all/they all’

5 SEPIK

5.1 Pyu [pby]

Pyu is spoken by some 100 people in two villages, Biake 2 with its hamlets (north of the Sepik River and just east of the PNG-Indonesian border) and an unlocated village on the bend of the Sepik within Indonesian territory. According to a 1992 report by Arjen Lock, “people who are over 30 years and older are bilingual in Abau and [Pyu]. The children are claimed to lack fluency in both Abau and [Pyu]. They prefer to communicate in Tok Pisin”. Although Lock’s data did not come from observations in the language area, it seems very plausible that the language is highly endangered (Ian Tupper, personal communication, SIL-PNG September 2008).

Pyu was first reported in the literature by Laycock (1972) and was subsequently grouped in the Kwomtari-Baibai-Pyu phylum, but no actual evidence was actually presented (Laycock 1975b). There are no significant lexical links with neighbouring languages (Conrad and Dye 1975).

There are two short wordlists (Conrad and Dye 1975, Laycock 1972) and a sentence or two on grammar in Laycock (1975b:854). Further, there is an unpublished 200-word list collected by Arjen Lock compiled in 1992. Documentation of Pyu is of the highest priority.

5.2 Taiap [gpn]

Taiap is spoken by some 75 people in the village of Gapun, located on the north coast of Papua New Guinea (some 10 miles inland) near the border of East Sepik and Madang provinces. It was first reported with a wordlist by Höltker (1938) who made the arduous

journey to the Gapun village. When Höltker (1938) visited, he counted only 33 village inhabitants. Laycock and Z'Graggen (1975:739) report 74 speakers. The detailed sociolinguistic fieldwork by Kulick and Stroud (1990) counted exactly 89 fluent Taiap speakers, all multilingual to various degrees, but already by then, no child under 10 had an active command of Taiap.

Laycock and Z'Graggen (1975:757) classified Taiap into Laycock's wide-ranging Sepik-Ramu family. The evidence adduced was essentially typological, clearly insufficient for concluding a genealogical relation.

The sketch by Kulick and Stroud (1992) is an excellent summary of Taiap grammatical features. Taiap is an ergative SOV language with postpositions. Relative clauses follow the head noun. Only animate nouns take obligatory morphological number marking (singular/dual/plural). Taiap nouns have a male/female gender distinction as revealed by agreement.

Taiap distinguishes male/female speech in some aspects of its lexicon and verb morphology (Kulick 1987:130).

5.3 Busa [bhf]

Busa or Odiai is spoken by some 240 people in the remote area north of the Upper Sepik River in Sandaun Province, Papua New Guinea. Busa was first reported by Loving and Bass (1964) in their survey of the Amanab sub-district of Sandaun Province. In 1980, Busa was spoken by 238 people, and though Tok Pisin usage was growing, Busa was not endangered (Graham 1981).

The Busa lexicon bears no significant relations to any other language in the region (Conrad and Dye 1975, Laycock 1975a).

There is a wordlist in Conrad and Dye (1975) and some very brief notes on grammar in Laycock (1975a). Documentation of the language would be of high value for our knowledge of Busa and the typology of the region more generally.

5.4 Asaba [seo]

Asaba is spoken by about 180 speakers (Little 2008:2) in the Kenu and Om Rivers in the Upper Sepik area of Sandaun Province, Papua New Guinea. Asaba was probably first reported (under the name Suarmin) by Healey (1964:108).

Laycock and Z'Graggen (1975) adduced typological arguments for a Leonard Schultze family together with Walio, but are insufficient as proof of a genealogical relationship. The lexical evidence does not show any conclusive genetic relationship either, be it inside or outside Leonard Schultze (Conrad and Dye 1975); with Sepik-Hill (as suggested in Lewis et al. 2015); or with Baiyamo (as Papi) (Conrad and Lewis 1988). However, a higher figure (29%) of Baiyamo-Asabo (as Papi-Duranmin) lexicostatistical relations was quoted by Laycock and Z'Graggen (1975:753), before the later superseding lower figure (10%) of Conrad and Lewis (1988:259), and some lexical data collected recently by anthropologists does contain matches between the two.

It remains to be worked out whether these are loans or indicative of a genetic relationship.

There are some very brief notes on grammar in Laycock and Z'Graggen (1975). There are extensive anthropological studies on the people (Little 2008, Lohmann 2000).

The Asaba language is still being transmitted to children (Roger Lohmann, personal communication, 2009).

5.5 Baiyamo [ppe]

Baiyamo is spoken by some 70 people on the Frieda River in Sandaun Province, Papua New Guinea. Baiyamo was first reported by Laycock (1973) as Papi (a village name).

Laycock and Z'Graggen (1975) adduced typological arguments for a Leonard Schultze family together with Walio, but these are insufficient as proof of a genealogical relationship. The lexical evidence does not show any conclusive genetic relationship either, be it inside or outside Leonard Schultze (Conrad and Dye 1975), with Sepik-Hill (as suggested in Lewis et al. 2015), or with Asaba (as Duranmin) (Conrad and Lewis 1988). However, a higher figure (29%) of Baiyamo-Asabo (as Papi-Duranmin) lexicostatistical relations was quoted by Laycock and Z'Graggen (1975:753), before the later superseding lower figure (10%) of Conrad and Lewis (1988:259), and some lexical data collected recently by anthropologists does contain matches between the two.

It remains to be worked out whether these are loans or indicative of a genetic relationship.

There is a wordlist in Conrad and Dye (1975) and some very brief notes in Laycock and Z'Graggen (1975:752–753).

The Baiyamo language is still being transmitted to children (Jack Kennedy, personal communication, 2009).

5.6 Guriaso [grx]

Guriaso is spoken by some 160 people in a few small villages east of the Kwomtari area east of Amanab in Sandaun Province, Papua New Guinea. Guriaso was reported as Menóu in the ethnography of Kwieftim and Abrau east of the Guriaso area (Kelm and Kelm 1980). There are scattered words of Menóu in Kelm and Kelm (1980) enough to confirm that it is the same language as that independently encountered on survey of the area previously assumed to be Kwomtari (Baron 1983:27). The latter survey named the language Guriaso after a central village of that name.

Guriaso was subsequently grouped with Kwomtari on very low cognate counts (3%–13%) and shared typological features (Baron 1983:27–29). In our judgment of the same data, these resemblances can just as well be explained by chance.

The only data (basic lexical and grammatical data) appears to be the 1983 unpublished SIL Survey (Baron 1983) and five numerals in Lean (1986). The notes on grammar in Baron (1983) show Guriaso to be an SOV language with postpositions, suffixal verb morphology, and adjective-noun order.

5.7 Yerakai [yra]

Yerakai is spoken by some 380 people in two villages west of Lake Chambri in East Sepik Province, Papua New Guinea. Yerakai was first reported in the literature by Dye et al. (1968:14) without any accompanying data.

According to the lexicostatistical figures in Conrad and Dye (1975:14), Yerakai shares no significant lexical relations with any Sepik language, except Ndu (Laycock 1973:23), but these could easily reflect loans from the adjacent Iatmul (from intermarriage)

(Conrad and Dye 1975:14, Aikhenvald 2008). No other argument for a Sepik affiliation in offered (Laycock and Z'Graggen 1975:738), and Yerakai is not mentioned in Foley's re-consideration of the Sepik family (Foley 2005).

There must be an (unpublished) SIL wordlist of Yerakai underlying Conrad and Dye (1975:14), and there are unpublished field notes by Laycock (no date). No data on Yerakai is published.

5.8 Yale [nee]

Yale is spoken by some 600 people in 6 villages south of the Kwomtari in the Upper Sepik area of Sandaun Province, Papua New Guinea. Yale was first reported by Loving and Bass (1964) in their survey of the Amanab sub-district of Sandaun Province. In 1980, Yale was spoken by 573 people and children were raised as monolingual in Yale (Graham 1981).

Yale has no significant lexical overlap with any of the languages in the vicinity (Loving and Bass 1964) and was one of the few languages Laycock (1975a) classified as an isolate.

There is an unpublished grammar sketch by SIL missionaries (Campbell and Campbell 1987) posted on the internet. Yale is an SOV language with postpositions and fairly rich (suffixal and prefixal) verb morphology. Adjectives can come before or after the modified noun. Reduplication of the verb stem signals plurality of the object (Campbell and Campbell 1987:35).

5.9 Banaro [byz]

Banaro is spoken by some 2,480 people on the Keram River in East Sepik Province, Papua New Guinea. The Banaro people were studied relatively early by the German ethnographer Thurnwald (1921).

Banaro [byz] shows some typological similarities to the neighbouring Grass, Ap Ma, and Ramu languages, but there is little lexical evidence for a possible genetic relationship (Z'graggen 1969:163–165, Foley in press-b). For this reason, contra Foley (in press-b), we find insufficient grounds to classify Banaro as genealogically related to any or all of the mentioned languages.

Published wordlists of Banaro are available in Davies and Comrie (1985), Z'graggen (1972) and Juillerat (1993:220) cites unpublished phonology, dictionary, and grammar manuscripts by William Butler of the Pioneer Bible Translators.

5.10 Yetfa-Biksi [yet]

Yetfa-Biksi is a language spoken by two ethnic groups totalling some 1,000 first language speakers in the border area east and north of the Sobger River. Despite only having some 1,000 native speakers, the language is spoken as an L2 by even smaller neighbouring ethnic groups.

Biksi was first reported in the literature by Laycock (1972), who had met with transients from Papua, Indonesia (then West Irian) while doing fieldwork on the Papuan (then Australian) side in 1970. Yetfa is mentioned for the first time in the 2nd edition of the *Index of Irian Jaya languages* (Silzer and Heikkinen-Clouse 1991) as an unclassified language – without any references to data – but the information presumably derives from

Doriot (1991) who trekked in parts of the Yetfa-speaking area in April-May 1991. Sometime between the 14th edition of the *Ethnologue* (Grimes 2000) and the 15th (Gordon 2005), it was realised that Yetfa and Biksi are so close as to be regarded as one language.

Biksi (by implication Biksi-Yetfa) was placed in the putative Sepik language family languages by Laycock and Z'Graggen (1975:740–741), and this has often been repeated since (Lewis 2009). Biksi-Yetfa was not considered by Foley in his re-assessment of the Sepik family for lack of data (Foley 2005:126–127). The lexical matches adduced by Laycock to various Sepik languages are sporadic and look more like loans or chance resemblances than the outcome of genetic inheritance (Hammarström 2008a). The lexical relations were also investigated independently by Conrad and Dye (1975:19) who found that Biksi shared no more than 4% probable cognates with any of the languages in the vicinity to the east, including Abelam.[10] (This lexical comparison includes numerals but no demonstratives or pronouns.) Yetfa-Biksi also shows similarly low figures with languages neighbouring to the west such as Kimki (Kim 2006).

Scanty notes on grammar can be found in Laycock and Z'Graggen (1975:740–741), and short wordlists are published in Conrad and Dye (1975), Laycock (1972). An unpublished SIL Indonesia survey contains 250 Yefta words from 5 locations along with 15 sentences (Kim 2006). There are further unpublished wordlists from several locations collected by Doriot (1991). The sentences of Kim (2006) show that Yetfa-Biksi is an SOV language.

At this time, Yetfa is still being transmitted to children and so is not an endangered language (Kim 2006).

5.11 Ap Ma [kbx]

Ap Ma, also known as Botin, Kambot, or Kambrambo, is spoken by some 10,000 people in 15 villages scattered in the area south of the Sepik River between the Keram and Yuat Rivers in East Sepik Province, Papua New Guinea. The Ap Ma people have long been known to German missionaries operating in the Keram area (e.g., Speiser 1944).

Ap Ma shows some typological similarities to the Grass, Banaro, and Ramu languages, but there is little lexical evidence for any possible genealogical relationship (Z'graggen 1969:168–169, Foley in press-b). For this reason, contra Foley (in press-b), we find insufficient grounds to classify Ap Ma as genealogically related to any or all of the mentioned languages.

Published data on the Ap Ma language consists of a wordlist (Z'graggen 1972); two articles on specific grammatical topics (Pryor and Farr 1989, Pryor 1990); and a fairly long master's thesis grammatical description (Wade 1984). Like many Papuan languages, Ap Ma is an SOV language with medial verbs. The system of medial verbs is particularly extensive in Ap Ma, realizing nine different tense/aspect relationships with either same or different subject markers. Furthermore, different subject medial verbs in combination with various particles realize negation.

6 EAST PAPUAN

6.1 Kuot [kto]

Kuot is spoken by some 2,400 people in mid-northwest New Ireland, Papua New Guinea. Kuot was known by German colonial ethnographers early on to be a separate language (Walden 1911).

Though there are some typological parallels with other non-Austronesian languages of the East Papuan islands, there are insufficient grounds for concluding a genealogical relationship for Kuot with any or all of them (Dunn et al. 2002).

The grammar of Kuot is relatively well known thanks to the work of Chung and Chung (1996) and Lindström (2002). Kuot is famous for being the only non-Austronesian VSO language of the entire New Guinea Area. Kuot also has other word order feature typically associated with VSO languages such as prepositions, adjectives following the noun and postposed relative clauses. Kuot nouns have a covert male/female gender distinction and overt number marking distinguishing singular, dual, and plural.

6.2 Anem [anz]

Anem is spoken by approximately 843 people in 4 villages on the north coast approximately 45 kilometres east of Cape Gloucester in West New Britain, Papua New Guinea (Carter et al. 2012). A recent survey found the language "vital despite the highly multilingual nature of the Anem people and the addition of Tok Pisin to domains that used to be the sole territory of Anem" (Carter et al. 2012:3). The Anem language become known to linguists in 1969 (Thurston 1982:6).

Some hypotheses relate Anem to other languages of New Britain, especially with Pele-Ata, and the East Papuan islands based on typology or pronounes (see Dunn et al. 2005a,b, Ross 2001, Thurston 1992), but the resemblances are much too minor to conclude that they are genealogically related.

Anem is described in a comparative sketch by Thurston (1982). Anem has SVO word order and shares numerous grammatical features with the nearby Austronesian language Lusi.[11] Anem has a covert male/female gender distinction. A curiosity of Anem grammar is its verb stems. There are numerous stems which are suppletive, sometimes determined by the number of the subject and sometimes determined by the number of the object. One verb in Anem, to 'eat', must be analyzed as having a Ø-stem as it appears simply as the concatenation of subject prefix and object suffix (Thurston 1982:47–49).

6.3 Pele-Ata [ata]

Pele-Ata is spoken by some 2,000 people in 13 villages in the border area of West New Britain and East New Britain in Papua New Guinea. Pele-Ata is still being learned by children, but all speakers are (at least) bilingual in Tok Pisin, and younger speakers' Pele-Ate shows reduced morphology and lexical influences (Yanagida 2004:87–88).

Some hypotheses relate Pele-Ata to other languages of New Britain, especially with Anem, and the East Papuan islands based on typology or pronouns (see (Dunn et al. 2005a, 2002, 2005b, Ross 2001), but the resemblances are much too minor to conclude a genealogical relation.

As far as I have been able to tell, the first wordlist of Pele-Ata was collected by Grace (1956). Pele-Ata is documented in a dictionary (Hashimoto 1996, 2008), and an overview of typological features can be found in Dunn et al. (2002) drawing on an unpublished grammar manuscript. Pele-Ata is an SVO language with prepositions.

6.4 Bilua [blb]

Bilua is spoken by some 8,740 people on Vella Lavella Island in the Solomon Islands. A wordlist of Bilua appears as early as Schellong (1890), and Ray (1919) recognized its non-Austronesian isolate character.

Bilua is sometimes grouped with the other Central Solomons languages and beyond (Wurm 1975b), but closer inspection shows that a genealogical relation is not demonstrable (Dunn and Terrill 2012, Terrill 2011).

A grammar is available for Bilua (Obata 2003). Bilua is an SVO language with postpositions and adjective-noun order.

6.5 Kol [kol]

Kol is spoken by some 4,000 speakers in East New Britain, Papua New Guinea. As far as I have been able to tell, the first wordlist of Kol was collected by Grace (1956).

At present Kol has not been demonstrated to form a bona-fide family with any of the other languages of New Britain (Dunn et al. 2005a, 2002, 2005b, Stebbins 2009), but there are promising similarities between the noun class systems of Kol and the Baining languages that must be examined as soon as a more extensive description of Kol is published (cf. Stebbins 2009:229, 238).

Very little data on Kol has been published, and at present, the most extensive source of information is the article by Reesink (2005) which is mainly about Sulka, cf. also further tidbits in Stebbins (2009) and typological features in Dunn et al. (2002). Kol has SVO word order, prepositions, and noun-adjective word order (Dunn et al. 2002:39). Kol has a noun class system with three semantically based classes (masculine, feminine, neuter) and another six classes distinguishable on formal grounds (Stebbins 2009:238).

6.6 Sulka [sua]

Sulka is spoken by some 2,500 speakers along the Wide Bay coast of East New Britain, Papua New Guinea. The Sulka people and language were known early on to the German ethnographers (e.g., Rascher 1904), and Schmidt (1904) aptly recognized the non-Austronesian isolate character of the language.

At present Sulka has not been demonstrated to form a bona-fide family with any of the other languages of New Britain (Reesink 2005:145–146, Stebbins 2009, Dunn et al. 2005a, Dunn et al. 2005b).

Schneider (1962) produced a long description of Sulka. Tharp (1996) and Reesink (2005) are shorter but written in a more modern framework. Sulka has vowel morphophonemic vowel elision processes which result in long consonants/consonant clusters (Reesink 2005). Sulka is an SVO language with prepositions and noun-adjective order.

6.7 Lavukaleve [lvk]

Lavukaleve is spoken by some 1,780 speakers in the Russell Islands in the Solomon Islands. It was recognized by Ray (1927:124) to be a non-Austronesian language after inspecting vocabularies furnished to him.

Bilua is sometimes grouped with the other Central Solomons languages and beyond (Wurm 1975b); but closer inspection shows that a genealogical relation is not demonstrable (Dunn and Terrill 2012, Terrill 2011).

Lavukaleve is described in an extensive reference grammar (Terrill 2003). Lavukaleve is an SOV language with morphologically complex verbs, noun-adjective order, an NP-final definite article, and three covert genders. Number (singular, dual, plural) is overtly marked in a system with many irregularities. Demonstrative pronouns make a

discourse-pragmatic distinction between 'last mentioned' and 'mentioned previously but not last'. Lavukaleve has clause chaining but no switch-reference marking.

6.8 Savosavo [svs]

Savosavo is spoken by some 2,420 speakers on Savo Island in the Solomon Islands. Data on Savosavo appeared as early as Codrington (1885), and Wilhelm Schmidt recognized the non-Austronesian character of the language after careful inspection of Codrington's data (Ray 1927:123).

Savosavo is sometimes grouped with the other Central Solomons languages and beyond (Wurm 1975b), but closer inspection shows that a genealogical relation is not demonstrable (Dunn and Terrill 2012, Terrill 2011).

Savosavo is described in an extensive reference grammar (Wegener 2012). Savosavo is a postpositional SOV language with relative clause and determiners preceding the noun. Enclitics are used for case-marking and number marking (dual and plural). Savosavo has a gender system with two classes, masculine and feminine. Savosavo has a 'marked nominative' case system, i.e. syntactic subject noun phrases are marked as nominative, while object noun phrases are unmarked. Clause chaining is a common phenomenon where, curiously, the unmarked form signals different subjects, and the marked form signals same subject. Tail-head linkage, i.e. the repetition of the last verbal predicate of the preceding clause as the initial predicate of a new clause chain, is also found in Savosavo.

6.9 Touo [tqu]

Touo (formerly known as Baniata) is spoken by 1,870 people on south Rendova Island in the Solomon Islands. Data on Touo first appeared in Waterhouse (1927).

Touo is sometimes grouped with the other Central Solomons languages and beyond (Wurm 1975b), but closer inspection shows that a genealogical relation is not demonstrable (Dunn and Terrill 2012, Terrill 2011).

Terrill and Dunn (2003) contains information on the linguistic background and orthography development for Touo, but the main source for data on Touo grammar remains the MA thesis by Frahm (1998). Touo is an SOV language with serial verb constructions (Frahm 1998).

6.10 Yele [yle]

Yele (locally Yélî Dnye) is spoken by all 6,000 natives of Rossell Island (2011 census) off the southeastern tip of Papua New Guinea. The first data on the Yele language to be published is the wordlist by Winter (1890).

Yele is sometimes grouped with the other languages of the East Papuan islands (Dunn et al. 2005a,b, Ross 2001, Wurm 1975b), but none of these groupings can be demonstrated with orthodox comparative methodology. Rossel Island is relatively isolated, being at a distance of 250 reef-ridden nautical miles from the Papua New Guinea mainland, and it is not clear a priori where one should look for its erstwhile relatives. Quite possibly its nearest relatives were spoken on islands which are now inhabited by Austronesian speakers, such as the nearby Sudest Island.

Published information on Yele grammar can be found thanks to the work of the missionaries Henderson and Henderson (Henderson 1995, 1975) who also produced a

dictionary (Henderson and Henderson 1987, 1999). A longer draft grammar is in preparation by Stephen Levinson, drawing on the earlier work by the Hendersons as well as long-time fieldwork on the island. A number of papers on specialised topics have already appeared (e.g., Levinson 2006).

Like many Papuan languages, Yele is an ergative SOV language with postpositions, noun-adjective order, and postposed relative clauses. Beyond this, Yele has the reputation of being an extraordinarily complex language, on many levels. The phoneme inventory includes doubly articulated consonants and additionally distinguishes palatalized and labialized variants. If analyzed as single segments, the total number of distinctive segments for Yele is over 90 – the largest phonemic inventory of any non-click language in the world. The single-segment analysis is justified durationally, as the coarticulated segments are not different from simplex consonants, but they probably derive recently from consonant clusters, as Yele otherwise has no consonant clusters (Levinson ms). Grammatical categories such as tense, aspect, mood, and person/number of subject and object expressed in a huge inventory of portmanteau morphemes that are largely unsegmentable into constituent morphemes. Verbs come in a multitude of irregular paradigms and many verbs are suppletive across a range of categories (Levinson ms).

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8 ABBREVIATIONS

U	undergoer
AUX	auxiliary
PST	past tense
SPEC	specific
ERG	ergative
VISUAL	visual evidential
SENSORY	sensory evidential
RESULT	resultative evidential
REASONING	inferred evidential
REPORTED	reported evidential
SRCE	source
FOC	focus
IMPER	imperative
FPST	far past

NOTES

1 Three unclear cases are worth noting. Fabritius (1855) encountered a tribe at the mouth of Mamberamo and noted down two words (the numerals ‘one’ and ‘two’) of their language. No language subsequently documented in that (or any other) area has matching forms, but we exclude it from the present listing since it is clearly insufficiently attested. Abom is a moribund language encountered on a survey of Tirio languages at the mouth of the Fly River. A 200-item wordlist was collected but it is

difficult to know if some crucial lexical items (and some tiny details of grammar) are inherited cognates with the Tirio languages or the reflection of language shift (Jore and Alemãn 2002). The language of Kembra near the confluence of the Sobger and Nawa Rivers is attested with only a short wordlist taken down in challenging circumstances (Doriot 1991). From this it may be guessed that the language is related to Lepki and Murkim spoken further south.

2 The status of Kaure [nxu] and Narau [bpp] is worth noting. Indications from the field suggest that the two are in fact intelligible varieties of the same language (Dommel and Dommel 1991:1–3) but the region in question is poorly surveyed so we have refrained from asserting that this is the case for the purposes of the present chapter.

3 From the iso-639-3 code longer lists of alternative names can easily be retrieved.

4 Mor is not to be confused with the Austronesian language with the same name found on the islands northeast of the city of Nabire (Kamholz 2014). The two languages are too far away from each other to have had any direct interaction and the homophony of the names is a coincidence.

5 Not to be confused with several other places and languages in Indonesian Papua also called Tanahmerah (literally ‘brown earth’ in Malay).

6 There is now a full New Testament translation (Damal people and CMA 1988)

7 Doriot (1991) refers to an unpublished wordlist of Kimki from Mot, but Mot is listed in survey maps as Murkim speaking (Wambaliau 2004).

8 Mawes spoken in Mawes Wares is not to be confused with the Wares [wai], once a warlike tribe on the upper Biri River (Oosterwal 1961:26–27) that had to flee to the coast from their original territory in the 1950s (Koentjaraningrat 1965:135–136).

9 I am indebted to Tim Usher for bringing to my attention how different Wiru actually is from Engan.

10 The exact languages in question are Yerakai (0%), Chenapian (0%), Bahinemo (1%), Washkuk (1%), Yessan-Mayo (4%), Abelam (1%), Namie (0%), Abau (0%), May River Iwam (1%), Musan (0%), Amto (1%), Rocky Peak (0%), Ama (0%), Nimo (1%), Bo (0%), Iteri (0%), Owiniga (2%), Woswari (0%), Walio (0%), Paupe (0%), South Mianmin (0%), Nagatman (0%), Busan (1%), and Pyu (1%).

11 Thurston (1982) argues that this is probably the result of an originally Anem-like population adopting an Austronesian language because many of the Austronesian features in Lusi appear in a ‘simplified’ form.

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