1 Introduction: The language and its speakers

The language and culture of Rossel Island are quite unlike any of those on surrounding islands, and they may offer important clues to the prehistory of this part of the Pacific (see Figures 1.1 and 1.2 for location). There is every reason to think that the inhabitants are a relict population of the peoples who seem to have inhabited many of the eastern off-shore islands of New Guinea ten millennia or more before the Austronesian peoples sailed through. They were peoples who were probably connected to the peoples of mainland New Guinea, and just possibly may have had some connection to earlier Australian peoples, for example the 'negrito' populations of the Queensland coast, no further away than the Highlands of New Guinea. It is not impossible however that, as indicated in Rossel myths, they back-migrated from the Solomons at a time when Pocklington Reef was a full-scale island prior to the rising waters of the Holocene, and would thus have provided a natural half way stepping stone (see Dunn et al. 2005). For that reason alone, the language deserves intensive study. In addition, isolated from its neighbours, the language offers a Galapagos-style experiment in isolated evolution over deep time. Loans from the surrounding Oceanic languages are absolutely minimal, restricted to technology and counting. What we find is an enormously complex system, suggesting that in the absence of the levelling effects of communication with neighbours, languages may just accumulate complexity and idiosyncrasy. Finally, the language has many unusual typological properties, from phonetics to the lexicon, which challenge the easy generalizations of modern linguistic theory.

1.1 Geography, ecology, prehistory and population

The central peak of Rossel Island (838 m) is located at longitude 154.14' E, latitude 11.22' S. It has been variously known as Yela (from the native name Yélî), Rua or Rova (as the Sudest people call it) and Duba. (A number of linguistic surveys confuse it with Russell Islands in the Solomons where another Papuan language, Lavukaleve, is spoken.) It is an island of about 265 square kilometres, being 34 kilometres long in an east-west direction and 14 kilometres across from north to south, with a shoreline of c. 120 km and a population density of c. 15.3 persons per square kilometre (cf. 2.3 on neighbouring Sudest island). It is the most easterly island in the Louisiades, lying just 20 nautical miles (or 33 km) off Sudest (otherwise known as Tagula or Vanatinai), but separated by a difficult sea, and bounded by almost uninterrupted reefs (extending 40 kilometres out to the west),

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Figure 1.1: Location of Louisiade Archipelago in relation to New Guinea, Solomons and Australia (Map reproduced with the permission of CartoGIS Services, ANU College of Asia and the Pacific, The Australian National University).

with the small openings subject to tidal rips of 3 or more knots. From main population centre on Rossel to main centre on Sudest is about 60 nautical miles, about 100 to Misima, and about 250 to the mainland of Papua New Guinea. As the easternmost landfall, it gets three to five metres of rainfall unpredictably distributed throughout the year, and suffers strong winds from the east from approximately May to October, with winds from the northwest during January to March. A major cyclone breeding ground lies about 60 nautical miles to the east, and the island gets enough severe cyclones to have cultural adaptations specific to cyclone survival.[4] With a high central range (c. 800 metres) attracting cloud cover, it has a high humidity with temperatures in the range 25–33 Centigrade throughout the year. Although the geology is not thoroughly researched, it consists largely of metamorphic schists with intrusive gabro.[5] Recent gold prospecting suggests it is apparently a continuation of the Misima range and not of the closest island, Sudest.[6] The central mountain range provides steep slopes and loose clay soils on which a thick rainforest clings, cut by many rivers, restricting access to a few

4 See Levinson (2006a) on cyclone adaptations. I am grateful to Father Sims for providing weather measurements made over 25 years.

5 See Shaw (2016:Ch.3) and http://www.ga.gov.au/corporate_data/12352/Rec1969_093.pdf

6 Exploration licenses have been obtained by the Malaysian RHG and the Australian Siburan mining companies.

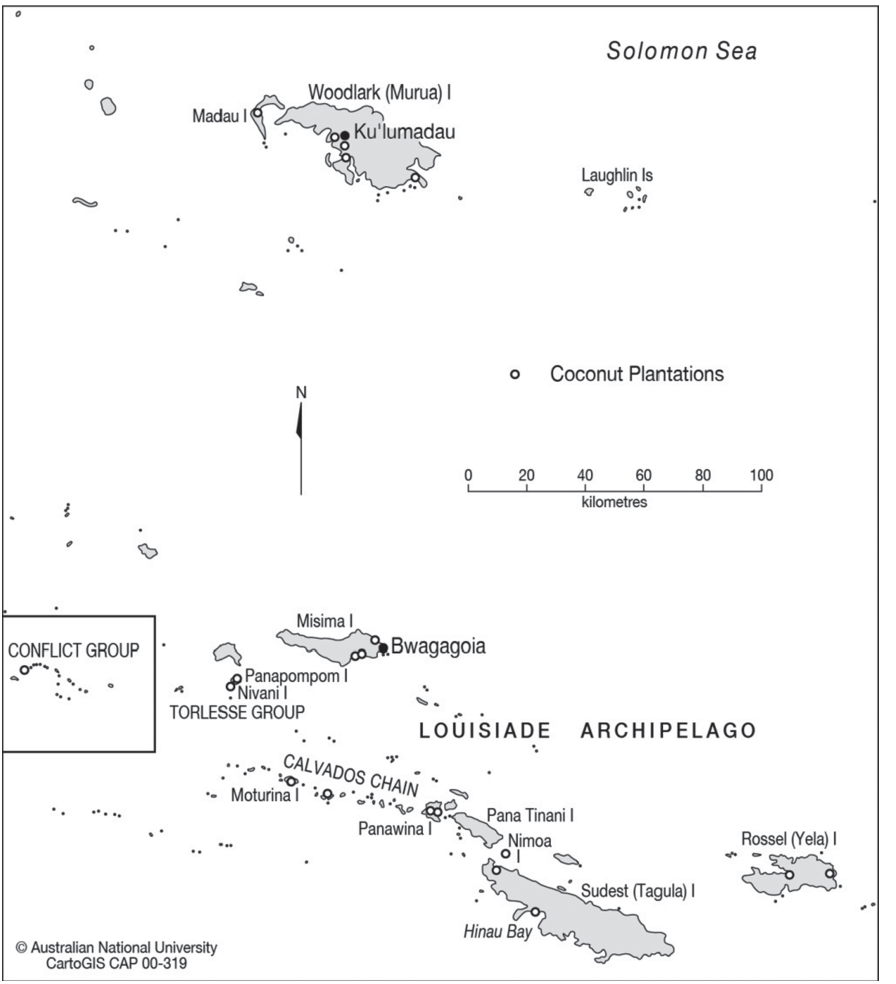

Figure 1.2: Location of Rossel Island to the East of Louisiade Archipelago (Map reproduced with the permission of CartoGIS Services, ANU College of Asia and the Pacific, The Australian National University).

narrow paths. Little systematic geological, zoological or botanical surveying has been done, although a brief visit from the Brass expedition in 1956 yielded at least one new tree species, not recognized in the botanical collections at Kew till the 1990s, and new species of frog, snake and birds were found in the 2000s (Kraus 2005, 2013). The habitats range from cloud forest at the peaks, to low rain forest with a canopy of say 20 m. around 600 metres elevation, to lowland rain forest with a much higher, denser canopy, through to the coastal forests, freshwater

swamps and mangrove swamps of the littoral. Exploitation for food occurs at all these levels, with taro gardens high in the mountains, general gardens lower, and coconut and sago plantations on the coast – and wild nuts collected at all levels. In general, Melanesia has an Indo-Malayan flora and an Australian fauna, and the further out an island is, the more impoverished both fauna and flora are, to some extent compensated for by subsequent speciation (Mayr & Diamond 2001). Non-marine mammals on Rossel include perhaps 20 species of bats, one marsupial, a few species of rats, and wild pigs brought by human intervention, while the amphibians include frogs, and the reptiles include a dozen snakes, and many lizards (including a giant varanid endemic to the island). Birds number some 50 or more species excluding sea-birds, and include some endemic races. The sea supports a rich marine life common to the Coral Sea, with over a thousand species of fish, myriads of shellfish species, and many marine mammals including dugong, and reptiles such as the giant loggerhead turtle and the salt-water crocodile. All these ecological details are highly relevant for understanding the background to Rossel language and culture – for example, hundreds of fish have monolexemic species and sub-species level names indicating their centrality as a food source. Rossel people exploit all the niches of their habitat, hunting cuscus (*Phalanger orientalis*) and wild pigs in the forests, and foraging for crabs and shells in the mangroves, shellfish on exposed reefs, crayfish in the rivers, wild nuts and roots at every altitude, spearing fish in the deep sea, and they have developed elaborate technology for food collection and processing, e.g. for leaching poisons from wild nuts, preserving foods by baking, sun-drying, or for stunning fish with a number of plant poisons. Naturally, all these preoccupations are reflected in the language.

The study of the prehistory of the island has now begun with PhD work by Ben Shaw from the Australian National University, who has recovered one occupation date of around 2500 years ago, much earlier than the Austronesian migration reached surrounding islands (the pottery that is the hallmark of Austronesian contact doesn't appear regularly on Rossel until 500 years ago; Shaw 2015, 2016). Some surface finds of waisted axes of a type associated with late Pleistocene dates elsewhere hint at much earlier occupation. Although the absence of substantial caves has made it hard to probe the deep past on Rossel, on Paneati Island about 100 nautical miles away, Shaw has recently obtained dates as old as 17,000 years ago (Shaw et al. 2020). Given that the Bismarck archipelago was colonized by 40,000 years ago, it seems likely that there have been human populations on Rossel for at least the last 10,000 years.

At the glacial maximum, sea-levels were over 100 metres below the present, and at that point Rossel would have been an island twice the current size (as indicated by the extensive reef system); but it would not in human times have

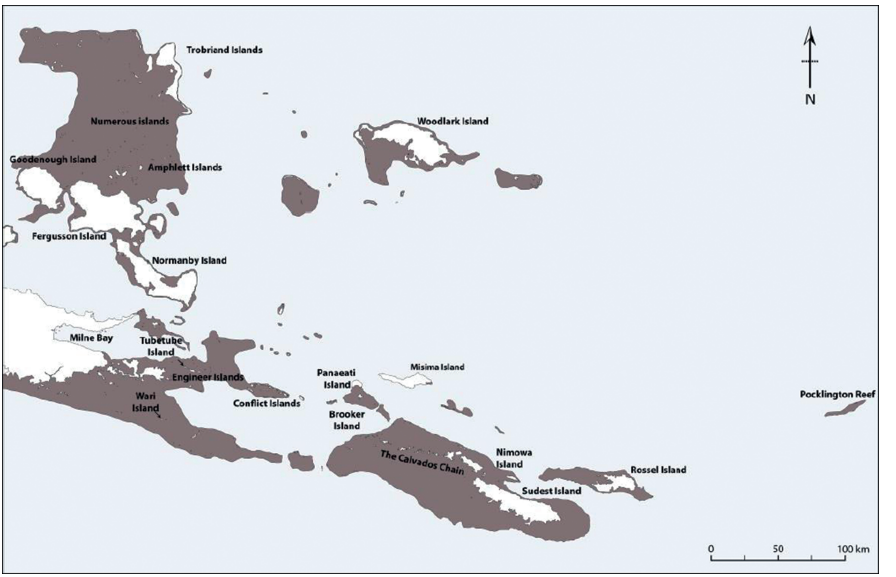

Figure 1.3: Rossel Island and surrounding Massim islands during the last glacial maximum about 20,000 years ago (Dark shading indicates sea level at that date, white infill the current islands, formed in the last 10,000 years) (Reprinted from Shaw 2015:35).

been joined by a land bridge to other islands (see Figure 1.3, reprinted, from Shaw 2016). However, at these lower sea-levels there would have been narrower sea passages between islands in the archipelago towards New Guinea, and indeed stepping-stone islands between Rossel and the Solomons, and even Rossel and Cape York. Various oral traditions have an autochthonous origin for the people, or claim that they came from Pocklington Reef (now a mere sandbank half way to the Solomons), but with domesticates (dog, taro, pig) and cultural practices (like cannibalism) being imported from Sudest to the west by the culture hero Mbaati. Sudest myth has it that the god Mbasiri (Rossel Mbaati) also took the Yélî language to Rossel from Sudest, which in turn took the prior Rossel language (Lepowsky 1993:310; the current Sudest language is Oceanic – Anderson & Ross 2002). Stone axes of no great antiquity can be found at village sites, and were made of local stone; ceremonial axes of the banded rhyolitic stone mined on Woodlark were imported (Bickler & Turner 2002), while the very occasional obsidian blade points to early trade, presumably with New Britain.

Although Rossel Island stands out as the last major shipping hazard to the east of the New Guinea mainland, its still uncharted reefs have proved a formidable obstacle to intensive contact and commerce (for the history of contact see Armstrong 1928: Appendix 1; Shaw 2016: Ch.3). Trade with Sudest was ethno-

graphically very limited – Armstrong (1928:28) notes there were only two indigenous sailing canoes capable of the trip in 1921; and Shaw (2016) finds sparse imported pottery in the archaeological record, beginning only 500 years ago. Bougainville sailed past in about 1767, as did D'Entrecasteux in 1793 – unable to find a way through the reef, he named the island after his first officer. HMS Rattlesnake passed by in 1849, again without being able to land a party. It was not until 1858 that the island burst into history when the French ship the *St Paul* was wrecked on the northern reef, the gallant officers taking to the boats, leaving 327 Chinese coolies bound for Sydney marooned on the small Heron Island just offshore. When the French returned three months later, they found that all but one had been eaten by the inhabitants of Rossel (Armstrong 1928: Appendix 1), and the French destroyed a village in retaliation.[7] The next landings took place in the 1880s, involving the blackbirding or capturing of indentured labourers for the Queensland plantations – but contact was rarely made with the inhabitants, who scattered when disturbed. In 1892 the murder of a French prospector motivated another expedition, and more vessels followed further reported murders, until the settlement of a white plantation owner, Frank Osborne, in 1903 on the south coast finally brought the island into regular communication with the wider world. The Osbornes ran a copra plantation with their own boats till the 1950s, and the Catholic Mission had one Australian MSC priest continuously in residence at the east end of the island from 1953 till 2003 (the Western end had a United Church mission established in the 1930s, but with non-European, indeed originally Samoan, pastors). The ethnographer Armstrong visited the island in 1921, empowered as a magistrate with armed policemen, and his brief sojourn is recorded in oral history as marking the end of cannibalism. To this day, shipping is irregular (sometimes non-existent), there are no landing strips,[8] and effective government representation on the island is largely through a system of locally appointed councillors who have contact with the government station on Sudest island.

The population of the island stood at 3,884 according to the 2000 census, although probably another 600 Rossels live on the mainland, Misima or other islands (the 2011 census apparently tallied some 5000 individuals). The population in 2000 had doubled since the 1960s with the introduction of primary health care, the population through much of prehistory probably having been stable at around 1000–1500. The table below gives census statistics, which do not take

7 See https://www.nla.gov.au/pub/nlanews/2012/sep12/the-rossel-island-massacre.pdf

8 There was a landing strip in the 1970s at Pambwa, where a government station was built – but this is far from population centres and no government official likes to stay there. The strip has since returned to jungle and been irreversibly degazetted, and the wharf has collapsed.

into account migrant labourers away from home (hence, probably, the imbalance of the sexes). The current population (2018) is probably well over 5000. Malaria and TB continue to contribute to short life expectancy, which is probably under 50 years. Recent DNA evidence shows the current population is of mixed origin, with substantial Asian genes in both male and female lines (van Oven et al. 2014), possibly due to slow gene trickle over millenia (Hunley et al. 2007).

Table 1.1: Census figures from various sources.[9]

Year	Total Population	male	female
1920	1415	718	697
1957	1568		
1960	1695		
1969	2285		
1980	2685		
1990	3133	1499	1634
2000	3884	1899	1985
2010	5000 (estimate)		

Only a handful of outsiders reside on the island, mostly married-in women from other islands, a few teachers from other places in the province, and between 1953–2000 an Australian Catholic missionary (none of these learn much of the language unless they came as children, for reasons that will become clear). There are no roads and no general electrical supply on the island (although the Mission at Jinjo sometimes runs a local generator for two or three hours a day when fuel allows), and it remains badly serviced by boats, except during the occasional bêche-de-mer open season.

1.2 Some basic properties of Yélî Dnye

The language of Rossel Island, properly *Yélî Dnye* or 'Rossel-Island words/sounds', is otherwise known as Yele, Yela, Yeletnye, or simply Rossel. I will occasionally use the term *Yélî* for short. It is not definitely known to be related to any other language, but possible affiliations will be discussed below. The language has a huge phoneme inventory – 90 distinctive segments – almost certainly the largest

9 The first comes from Armstrong (1928), the rest from records of local census returns kept by Father English and Father Sims, except the last from Shaw (2015:77).

in the Pacific. Some of these sounds are very exotic double articulations, some of them unique in the languages of the world. Yélî Dnye has predominantly SOV phrase order, although all orders of major phrases are possible, word order within phrases, however, being strict. Adjectives and relative clauses follow the noun, but demonstratives precede it. The language is ergative–absolutive in type, but with partially nominative cross-referencing. (Many Papuan languages have optional or loose ergative marking, but Yélî Dnye has obligatory marking of overt NP agents of transitive verbs, and a number of syntactic constructions like *vyîlo*-clefts select Absolutive arguments, whether subjects of intransitive verbs or objects of transitive ones – the language could thus be said to be 'deeply' ergative; see Chapter 9.) Cross-referencing on the verb is done by clitics to both left and right of the verb root, which constitute a huge inventory of portmanteau morphemes subsuming tense, aspect, mood, and person/number of subject and object in largely unanalysable, or at least unpredictable, particles. While subject clitics precede the verb, the postverbal clitics mark both subject and object information. Information is distributed across the verb and its clitics, so that for example verb root suppletion combined with particles will indicate a specific tense and aspect. The language thus resists an analysis in terms of morphemes and their combinatorial meanings – it is the gestalt assemblage that carries the message. There are many irregular paradigms, and the general style of the language is not rule but rote. Basic words, especially verbs, usually have suppletive roots, but the suppletions are not predictable, in the sense that they may be triggered by a number of different grammatical categories. Thus even the simplest sentence has considerable unpredictability. The language also has a rich set of complex constructions, with nominalizations, conditionals, elaborate counterfactual conditional paradigms, temporal subordinations, and extraction phenomena. Constructional elements are however hard to spot, as they frequently involve homophonous particles. New texts constantly throw up new idiosyncrasies. It is the full range of complexities – from huge phoneme inventory, rich grammatical categories to irregularity in paradigms – which makes this language notoriously hard to acquire after childhood. I have noticed that even children of five raised on Rossel, but in families where one spouse is an outsider and thus the working language is English (or a local Austronesian language), do not always have full speaking competence in the language despite playing with their native speaker playmates.

As mentioned in the Preface, apart from unpublished notes on the language by the Reverend Baldwin and Capell, the only prior materials on Yélî Dnye have been gathered by Jim and Anne Henderson during a stay of twenty years devoted to translating the Bible. From this work, a couple of early papers appeared (which first excited my interest in the language), together with a word list (Henderson & Henderson 1987), and Jim Henderson's monograph on the phonology

and grammar of 1995 (this appeared just after the present work was begun). This last is a highly compressed account that concentrates on the phoneme inventory and the verbal complex, two of the most complex areas of the language. It has proved a very reliable foundation for the present work, and I have taken over many aspects of Henderson's analysis, including the practical orthography (now entrenched in the Bible translation) and the grammatical categories expressed in the verb and its clitics. The Hendersons later published a revised dictionary, incorporating many words provided from my text collections (Henderson & Henderson 1999). They continued to translate portions of the Old Testament, with a new edition in 2002 and a complete Testament in 2016, and have produced materials to aid the acquisition of literacy. The sheer number of phonemes and the resulting orthographic complexities have however hindered widespread literacy in Yélî Dnye.

1.3 Sociolinguistic situation and cultural background

Despite the small size of both the island and the population, there are substantial dialectal varieties of the language. Geography has much to do with the dialectal situation, for the island has a central ridge over 800 metres high with thick rain forest, and prevailing winds from the east make a trip to the west by canoe easy but the return hard work. The language has two main dialects, an Eastern and Western one, with many lexical differences (about 40% of the conservative vocabulary in a Swadesh 100-word list has a distinct form) and some substantial morphosyntactic ones. In a preliminary survey, a set of common concrete nouns and action verbs showed a 18% identity of form, 67% different forms but same cognate class, and 20% different cognate classes. There is also significant simplification of the morphology in the Western dialect, especially in the transitive enclitics. There are about 100 named villages (hamlets) on the island; each village and area has its own lexical and pronunciation idiosyncrasies, and there is a cline between the dialects, and a secondary division between North Eastern and South Eastern varieties. This grammar is based on the variety spoken in the north eastern quadrant of the island, broadly from Yélî'nuwo in the east to P:uum in the west (see map in Appendix I) – the variety has come to have a centrality through the influence of the Catholic Mission based there and the translation of the Bible and other literary materials produced in that dialect by the Hendersons. It is also almost certainly the most conservative variety of the language. As with all the islands of Milne Bay Province, English is the official language, the main lingua franca, and the main language of schooling, although a recent effort has been made to start the first three years of education in the native tongue (Tok

Pisin has little currency in the province, and almost none on the island). This initiative has been surprisingly successful, thanks to the Hendersons' work on literacy and the dedication of a number of talented young men and women to the task – unfortunately it has been recently undercut by a change in government policy. Nearly all younger people, and most men, speak at least some English, and all secondary education is in that language on the mainland or elsewhere. In addition, many men go to the mainland in search of jobs and adventure, where they will mainly use English as a lingua franca. The western end of the island has always had more contact with Sudest, and the (Oceanic) Sudest language is spoken by quite a few Rossel people at that end. Traditional trade by sailing canoe is still practiced in seasons with calm seas. In addition, while the Catholic Mission was established in 1953 at the eastern end, the Methodist or United Church Mission was established before that at the western end with indigenous pastors – they have in the past used Dobu and Misima language in religious services, but today increasingly use a mix of English and Yélî Dnye and have established links to Misima for secondary education. The missions have clearly had profound effects on the language and culture, with changes in religious belief, education, health and connection to the wider world. My first fieldwork coincided with old people still conversant with traditional religion, myth and technology, but few of them now survive. With their loss has gone many of the specialist linguistic genres, song styles, poetry and taboo vocabularies (see Chapter 12) and many traditional practices. People with new roles sanctioned by government or church, like teachers, village magistrates and councillors, often code-switch between English and Yélî Dnye in public speaking to emphasize their special status. Nevertheless, Rossel Island still boasts a vibrant local culture, with scores of still respected sacred places with associated myths, and the abundant linguistic riches laid out in this grammar.

Most children are raised essentially monolingual in Yélî Dnye, and due to work by colleagues using day-long recordings we know a lot about the nature of language socialization (Casillas et al. 2020), which is remarkable for the relatively low amount of child directed speech and the relatively high amount of surrounding talk from multiple carers. But those children raised in mixed marriages with outsiders tend to be raised in English as the lingua franca, and may never master Yélî Dnye fully. Married-in spouses (mostly teachers or nurses) scarcely ever learn to speak the language, given the phonological and inflectional barriers. These mixed marriages are the main source of endangerment to the language, with the prestige of English a secondary factor – but the elementary school system may help to redress this balance. At present, one could not call the language immediately endangered, although any language with such a small number of speakers is fragile in the modern world. One possible disaster looms, however: recent

gold prospecting suggests there may be workable seams, and the rights have been acquired by RHG and Siburan Resources Ltd. If a gold mine came to pass, the fragile reef and ecosystem would likely collapse, and the language would probably be rapidly eroded by an influx of outsiders.

There are few economic opportunities on the island, which does not have a regular reliable cash economy. When the price of copra is high this is the main source of cash, and boats will come to collect the copra; when its price is down, the main items of commerce are preservable marine products like bêche-de-mer, shark fin and trochus shell. In 2002 prices for bêche-de-mer soared, with consequent depletion of the stocks; in 2018 the fisheries were opened up again for a short season, with a massive influx of cash. Rossel has always been a major producer of the kula valuable, the *bagi* necklace, made of ground down spondylus shell, but the island has never participated in the kula trade itself: in the past, *bagi* was bartered for pigs, pottery, canoes and the like in an organized trade with Sudest once or twice a year, but is now occasionally sold for cash. The cash is used to pay school fees and buy second-hand clothes, fishing gear, and tinned food or rice when available. Store owners may accumulate enough to buy a dinghy and outboard motor, although the irregular supply of petrol makes these of limited utility. The island is rich in agricultural potential and wild resources, with many nutritious bush foods, and rich fisheries, and correspondingly a wealth of ethnobiological terminology. The preferred crop is taro, an ancient cultivar here, once cultivated by specialist villages in the mountains in exchange for marine products, with sago and yams also much valued, and sweet potato, bananas and manioc available at other times – apart from sago, a swamp tree, all these are cultivated on a slash and burn basis. Colonial policy enforced during the war brought all villages down to the coastal belt, but some taro gardens are maintained high up on the mountains.

The kinship system is based on matrilineal clans, but unlike on the surrounding islands, patrilineal reckoning is also practiced, and land, religious and political office are handed down in the male line. Villages are thus essentially groups of agnatic kin, with established usufruct of surrounding lands and reefs.

The kin term system is described in §11.5 (see also Levinson 2006c). The status of women is lower than in the surrounding Massim societies, but still relatively high, with elderly women recognized as important exchange experts in their own right. Elaborate exchanges of valuables are involved in most rites of passage: the building of houses, the launching of canoes, and the eating of pigs, when the famous Rossel Island money comes into its own – the *ndap* type alone having more than 20 named denominations, and being exchanged in the thousands. It is no surprise then that Rossel has a base-10 number system, showing clear Austronesian roots. Death is followed by a sorcery inquisition or *kpaakpaa*, where

the highest forms of Rossel oratory are exhibited by both the public and by divinatory specialists, using elaborate parables and veiled allusions. Oratory plays an important part in social life, although oral performance is largely confined to males – villages and village clusters hold frequent meetings and informal legal hearings, where arguments are fiercely contested.

There are three main song types, (i) *tpile we*, associated with pig feasts, a secular musical form sung in falsetto by males, combining prescribed melodies and verses (associated with specific village areas) with contemporary improvisation, (ii) *nt:amênt:amê*, sacred chants, composed by the gods and unalterable, sung by males and associated with the launching and sailing of canoes and with trespass into sacred areas, (iii) *ya*, or laments, in which women specialize. At least two other genres, *ch:aa* (involving sequential solo song performance all night long) and *ny:ê* (the only genre involving vigorous dance) have more or less died out. The language of these songs is complex, and in the case of *nt:amênt:amê* sometimes quite opaque to modern Rossels, who listen attentively trying to catch the hidden meanings. In addition to many other genres, a form of poetry called *wii* is used amongst other things to ridicule social offenders (e.g. those ignoring clan exogamy), involving the recitation of lines at breathless speed. Legends and myths, *w:êê danêmbum*, are a recognized genre in which the stories of the gods – who behave much like the ancient Greek pantheon – are told without interruption.

There is thus a rich ethnography of speaking. In addition, there are a number of taboo vocabularies, involving lexical replacements; see Chapter 12. Close affines may not use the ordinary body part terms and terms for clothing, which are replaced with special words. And visitors to the sacred islet of Lów:a (restricted to males) should replace many ordinary words which are associated with the half dozen sacred denizens of that isle. The religious system is closely linked to sacred places, each god or force being instantiated in a rock or other natural feature, surrounded by an area of restricted access (Levinson 2008) – only the priests or guardians of that sacred place may enter, using the replacement vocabulary appropriate to that place. A few places, like Lów:a and the slopes of Mt Mgî allow general access by males providing the taboo vocabulary is used.

1.4 Possible affiliations to other languages

On all available information, Yélî Dnye must be judged an isolate. As noted above, Yélî Dnye is clearly unrelated to the surrounding Austronesian languages – Henderson (1975), on the basis of short vocabulary lists, reports only 6% cognates with the neighbouring Austronesian language on Sudest, and only 3% with Misima, 100 nautical miles away. Using an extended Swadesh list of 330 items, I have

found at most 6% cognates between Sudest and Rossel, many of these doubtful; these figures hover at the level of background noise. Nevertheless, now that we have the first published report on Sudest language (Anderson & Ross 2002), we can see some elements of convergence, almost certainly reflecting assimilation of Sudest to its Papuan neighbour, or more likely to a related language substrate once spoken on Sudest. Sudest boasts 36 consonantal phonemes, very unusual for an Oceanic language, including prenasalized and labialized series as on Rossel.[10] The languages share verbal inflection by pre- and post-verbal clitics. There are many other detailed similarities (e.g. classifiers, tense/aspect, deictic discriminations, and a number of obvious cognates); nevertheless at base the languages are radically different: Sudest is SVO with fixed word order, non-ergative, has inclusive/exclusive pronouns, complex possession, and many other typical features of Oceanic languages. Still, the amount of borrowed structure into Sudest suggests that a language like Yélî Dnye was once spoken on Sudest, as the myth mentioned above suggests.

Wurm (1982), following in part earlier groupings by Greenberg (1971), identifies the language of Rossel as part of the East Papuan phylum, with close relatives in the Solomons (and possibly Santa Cruz islands; but see Ross & Naess 2007). The tree in Figure 1.4 (after Dunn et al. 2002, 2008) outlines the proposal.

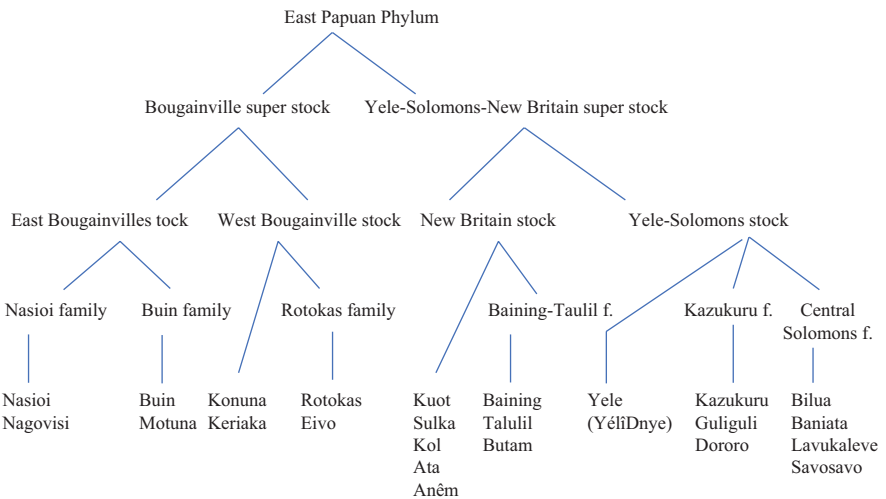

Figure 1.4: Wurm's (1982) East Papuan Phylum (after Dunn et al. 2008).

10 Lynch et al. (2002:63–65) suggest that Proto-Oceanic had both a prenasalized series of stops and labio-velars borrowed from surrounding Papuan languages.

These groupings really represent nothing more than a hunch at an earlier stage of our understanding of these languages; Kazukuru is now known for example to be largely Austronesian in heritage (Dunn & Ross 2007), and further updates will be found in Stebbins et al. 2018. There is now a grammar of Lavukaleve (Terrill 2003), which concludes that connections even within the Solomons group are not yet well established (see also Stebbins et al. 2018). Lavukaleve shows little resemblance to Yélî Dnye – it has many features Yélî lacks, e.g. noun classes and gender, serial verbs, and strict word order. Yélî has a much larger phoneme inventory, with over four times as many phonemes, it has free phrase order, systematic ergativity, and a host of complex features missing from Lavukaleve. It will be very hard to establish any correspondences between these languages. Further afield, although there are some parallels to the Santa Cruz languages 1000 miles to the east, comparison of over a thousand words has failed to throw up any likely cognates, and these languages too are now known to be Austronesian in origin. In short, Wurm's suggestions are now outdated.

Meanwhile, in combination with colleagues, we have conducted a survey of all Papuan languages to the east of the mainland. Using the methods of bioinformatics, applied not to cognate sets but to grammatical features, we have been able to extract a likely ancient phylogenetic signal linking most of the Eastern offshore Papuan languages – but once again Yélî Dnye is an outlier (Dunn et al. 2005, 2007). The figure below, Figure 1.5, (from Dunn et al. 2008) gives a Bayesian consensus tree based on structural features, in which groupings partly match island chains. Yélî Dnye groups with Southern Bougainville on this analysis.

One further opinion of Wurm's is worth recording. Wurm (1979, 1983) suggests that similarities to the Papuan New Guinea highland languages are due to contact, not phylogenetic linkage. His proposed scenario is that "at least some East Papuan Phylum languages were driven out of the New Guinea Mainland by speakers of Trans-New Guinea Phylum languages" (see also Wurm et al. 1975, Ruhlen 1987:181). There are traces of contact between Yélî speakers and early Austronesian languages which are hard to explain (and further discussed below). The cardinal numbers are clearly borrowings from an Austronesian language or languages; for example, the number 8 is *waali* from proto-Oceanic < **walu*, and this becomes of interest when one notes that the Papuan Tip Cluster of Oceanic languages which surround Rossel mostly share a different number system over 5, expressing eight as a compound '5 + 3'. Clearly the Yélî borrowing precedes the formation of the Papuan Tip Cluster, or indicates a displacement of Rossel speakers. Can this be taken as evidence for such a migration as Wurm envisages, or merely evidence of early contact with proto-Oceanic speakers *in situ*?

More recently, Ross (2001, 2005) argued that pronominal paradigms carry a great deal of genealogical information, and on that basis proposed the following

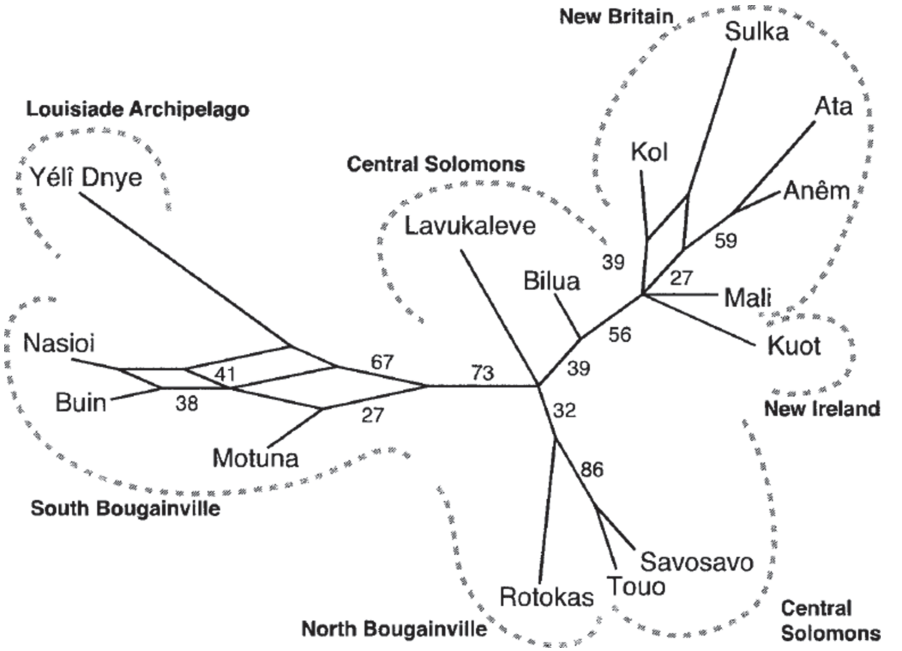

Figure 1.5: Groupings of Papuan languages of Island Melanesia (after Dunn et al. 2008).

major groupings of the East Papuan languages (only partially accepted by Stebbins et al. (2018:779) as the current state of the art):

1. Yélî Dnye-West New Britain (Anêm, Ata)
2. East New Britain (Baining, Taulil, Butam)
3. North Bougainville (Konua, Rotokas)
4. South Bougainville (Nagovisi, Nasioi, Motuna, Buin)
5. Central Solomons (Bilua, Touo (= Baniata), Lavukaleve, Savosavo)
   Isolates: Kol, Sulka (East New Britain); Kuot (New Ireland)

Ross suggests that, although the larger groupings suggested by Wurm are unsupported, still Yélî Dnye can be connected to the western New Britain languages Anêm and Ata (see Table 1.2). This relies entirely on parallels in the pronominals, and in fact there are also parallels between Yélî and some Eastern Highland languages in the pronouns. Still, the parallels are quite compelling (Yélî N is a nasalizing prefix).

In addition, these languages have a number of typological similarities (e.g. S–V–O marking on the verb in that order; see Reesink et al. 2009). These parallels certainly suggest that a closer look at the off-shore Papuan languages to the east of Papua New Guinea may allow us to establish at least possible prehistoric contacts.

Table 1.2: Possible correspondences between Anêm, Ata and Yélî Dnye.

	Anêm		**Ata**		**possible Yélî Dnye cognates**		
	subject prefixes		subject prefixes		possessive pronouns		
	sing	plural	sing	plural	sing	dual	plural
1	*a-*	*mî/mi*	*a*	*ta*	*a*	*nyi*	*nmî*
2	*nî/ni*	*ngi*	*na*	*nga*	*N*	*dpî*	*nmyi*
3	*u/i*	*i*	*u/i*	*i*	*u*	*yi*	*yi*

Two other possible connections are worth pointing out. The first is to the Trans New Guinea family of Papuan languages, e.g. some of the languages of the Eastern Highlands, especially the Gorokan sub-family of the large Trans New Guinea family (TNG). Amongst the ties which are sufficiently interesting to be worth further exploration are:

1.4.1 Monofocal/Polyfocal person/number conflations

This pattern conflates 1st person singular/dual/plural with 2nd and 3rd singular (Monofocal) vs. 2nd and 3rd dual and plural (Polyfocal). It is reported from the Eastern Highland (Gorokan) languages like Benabena (as Henderson 1995 noted), and is found in the post-verbal clitics of Yélî Dnye on a partial basis. Some of the forms even look parallel (Table 1.3):

Table 1.3: Monofocal/Polyfocal distinction: Benabena compared to Yélî Dnye.

	e.g. Bena-Bena (same-subject marker)			**Yélî (S+3sO Cross-reference)**		
	Young 1971:32, Haiman 1980:xxxvi					
	SG	**DL**	**PL**	**SG**	**DL**	**PL**
1	*-to*	*-to*	*-to*	*té*	*té*	*té*
2	*-to*	*-te*	*-te*	*té*	*t:oo*	*t:oo*
3	*-to*	*-te*	*-te*	*té*	*t:oo*	*t:oo*

The pattern is a sufficiently *ad hoc*, unmotivated conflation that it is possible that this match is not entirely by chance. The Highlands connection, incidentally, is perhaps supported by the relatively high proportion in Rossels of Y-chromosome Haploype S-M254 characteristic of Highland genomes (van Oven et al. 2014; and incidentally shared with indigenous Australians).

1.4.2 Pronouns

Ross (2005) reconstructs the Proto-Trans-New-Guinea pronouns as follows, with the matching current Yélî Dnye pronouns for comparison (Table 1.4; see also Pawley & Hammarström 2018:144):

Table 1.4: Pronouns in Proto-TNG and Yélî Dnye.

	Proto-TNG		Yélî Dnye			
	SG	**PL**	**SG**	**DL**	**PL**	
1	*na	*ni/*nu	*nə*	*nyi*	*nmɯ*	
2	*ŋg	*ŋgi	*nyi*	*dpũ*	*nmyo*	
3	*ya	*i	*(u)*	*(yi)*	*(yi)*	(this row Yélî possessives)

Note too that 2s **ni* is the proto-Highlands reconstruction in Foley (1986).

1.4.3 Lexical cognates

Pawley & Hammarström (2018:141ff) offer some proto-TNG reconstructions which again offer a few possible correspondences (Table 1.5):

Table 1.5: proto-TNG reconstructions and possible Yélî Dnye cognates.

	proto-TNG	**Yélî Dnye**
'head'	*mVtVna	*mbədə*
'eye'	*ŋg(a,u)mu	*ngwolo*
'man'	*ambi	*pi*
'woman'	*panV	*py:a*
'bird'	*n[e]i	*nmə*
'fire'	*inda	*ndə*
'penis'	*mo	*mdo*
'axe'	*tu	*tuu*
'mind'	*n(o,u)man	*nuwɔ̃*

On the basis of the Monofocal/Polyfocal distinction mentioned above, one might also look more specifically at reconstructed East Highland language vocabular-

ies. Foley (1986) provides a short list of Proto-Gorokan words that are just possibly suggestive (Table 1.6):

Table 1.6: Possible cognates shared between Proto-Gorokan and Yélî Dnye.

	Proto-Gorokan	Yélî Dnye
'tree'	*ya	*yi*
'house'	*nom	*ngomo*
'leg'	*kia	*kêê*
'axe'	*tu	*tuu*
'say'	*si	*vyi*

1.4.4 General typological similarities to other Papuan languages and beyond

According to a recent survey (Palmer 2018), setting aside the mostly coastal Austronesian languages, there are some 862 languages in the 'Papuasphere', the larger New Guinea area including outlying islands, belonging to 80 families (including 37 isolates). Half of these languages are thought to belong to the Trans New Guinea family. Yélî Dnye shares the following typological features with Eastern Highlands languages of Trans New Guinea stock: ergative marking on NPs, SOV word order, existential constructions, elaborate counterfactual paradigms, verb suppletion on person/number/tense/aspect. This is just sufficient evidence to suspect that perhaps one day clear connections will be established between Yélî Dnye and Trans New Guinea languages, perhaps through ancient contact.

In addition, the non-TNG language families of Southern New Guinea offer many closer points of typological similarity with Yélî Dnye (Evans et al. 2018). Widespread across the area are "complex verbal morphology, with both prefixes and suffixes for argument indexing; complex grammaticalised systems of both aspect and tense; complex number values indexed on the verb (with three or more number distinctions); distributed morphology with multiple exponence and unification across multiple sites before inflectional values can be determined; a lack of verb-chaining or switch-reference" (Evans et al. 2018:647). These languages have larger consonantal inventories than most Highland languages; the Yam family language Nen for example has prenasalized stops and co-articulated velar nasals like Yélî Dnye (Riantana, a possible TNG language, has, in addition, a dental/alveolar contrast with a marginal retroflex, and Idi another language of the area has an even more Australian-like inventory). Nen also has

ergative marking on NPs, elaborate cross-referencing (both prefixes and suffixes) on the verb, SOV word order, positional verbs, multiple diurnal tenses, and so on. Other languages of the Yam family have suppletive verb roots like Yélî Dnye. In addition, a peculiar property of Yélî Dnye shared with other languages of Southern New Guinea is what has been called 'distributed exponence' of morphological marking (see §2.2 & §2.3 below). All in all, many of the features collectively peculiar to Yélî Dnye can be found distributed here and there in the languages of Southern New Guinea.

The second, much more speculative, possible connection is to the languages of Australia with similar consonantal inventories and shared tendencies to SOV with ergative–absolutive alignment. Rossel Island lies just 550 nautical miles NE off the coast of Queensland (Cape York is thus considerably closer than the Eastern Highlands of New Guinea), and the sea currents set to the west, often in a NW direction, allowing simple craft to drift in the right direction (see e.g., the nautical chart AUS 429). When sea levels were much lower before 8000 BP, New Guinea as a whole was connected to Australia, and there were stepping stone islands between the Louisiades and Cape York (which then bulged eastwards), although a crossing would still have involved many days out of sight of land. Because of their prefixing character, the non-Pama-Nyungan languages of Australia are a natural point of comparison. Currently confined to the north-west of Australia, and as the source of diversity in the continent it seems natural to suppose they are the older stocks, and Pama-Nyungan innovating (Evans 1995, 2003, 2005). If so, Pama-Nyungan has spread relatively recently and rapidly over the Australian continent, replacing older languages of the type represented by the non-Pama-Nyungan languages of north-east Australia, and the 'negrito' physical type of the Queensland rainforest people – not dissimilar from the inhabitants of Rossel – represents an earlier population which has undergone language replacement (Dixon 1977:15). There are a few, rather weak, reasons to pursue the hypothesis of such a connection in deep prehistory, with Yélî Dnye and other southern Papuan languages representing some kind of clue to ancient connections between Australia and New Guinea. First, there is of course shared population history between the two islands reflected in human genetics, but there is no particularly close relationship with Rossel Island as far as we know (Malaspinas et al. 2016; though see White 1997:66 linking non-Pama-Nyungan speakers with remnant east Papuan populations in e.g. Bougainville to the north of Rossel). Second, there are also general typological similarities between Yélî Dnye and especially the non-Pama-Nyungan languages of Australia, including: (a) head-marking tendencies, (b) prefixing with S and O cross-referencing on the verb, with ergative marking on NPs, (c) much verb suppletion, (d) positional/existential verbs or coverbs. Features shared more broadly with Australian languages

include: (a) free phrase order with SOV tendencies, (b) loose classifier systems, (c) certain nominal polysemies like 'fire'/'wood', (d) terms for kin dyads, (e) some exceptional syntactic ergativity. Many of these features are, though, shared with the Papuan languages of Southern New Guinea, the more probable area to look for a 'missing link' (see Evans et al. 2018). But Yélî Dnye also shows substantial overlap with a typical Australian consonantal inventory. For example Proto-Pama-Nyungan reconstructions posit the following places of articulation (Alpher 2004): bilabial, alveolar, post-alveolar, retroflex and velar, with the post-alveolars being laminal, and alveolars and retroflexes apical. Yélî Dnye likewise has bilabial, alveolar, post-alveolar/retroflex and velar places of articulation, with laminal alveolars and sub-apical retroflexes; moreover a palatalized series effectively adds a place of articulation. And Yélî Dnye, like canonical Australian inventories, lacks a voiced/voiceless contrast. This is quite unlike a typical Papuan language with its usual three places of articulation (bilabial, alveolar, velar; Pawley & Hammarström 2018:83) and voiced/voiceless contrastive series. Some Australian languages like Arrernte also share double-articulations and prenasalized stops, although prenasalization is frequent in Papuan languages too. Overall one could say that Yélî has a more Australian-like consonantal inventory, but a more Papuan vowel inventory (although Yélî has many vowel distinctions, this is not without precedent in other Papuan languages; see Ross 1980).

As more Papuan and non-Pama-Nyungan languages become more fully described and on-line dictionaries of all these languages become more generally available, these and other speculations may become testable. Meanwhile, a bioinformatics analysis of the structural features of Australian and New Guinea languages does not support any close relation of Yélî Dnye to existing Australian languages (Reesink et al. 2009).

Much more tractable are linguistic connections over the last two millennia. A number of early Oceanic loans can be detected, that is, forms cognate with Proto-Oceanic rather than with the current surrounding languages. These have considerable interest for understanding prehistoric connections. They include the number words, and words for technological imports like the sail, pottery and the like (see Ross et al. 1998). Tables 1.7 and 1.8 list some candidates, some more plausible than others. The loans suggest that contact with Proto-Oceanic speakers brought a number of basic technological items for the first time to Rossel, including pottery, 'grass' skirts and mats, sea-faring equipment (the sail) and maritime lore, and at least the lime part of the betel-chewing complex. In addition, cognitive technology, like the decimal number system, probably replaced a limited Papuan counting system, and may have been associated with the shell money that has now become a highly characteristic Rossel cultural item (which has an antiquity greater than 500 years; Shaw 2015:306).

Table 1.7: Material culture (Abbreviations are for proto- or existing groupings: POc = Proto-Oceanic, PNGOc = Proto-New Guinea Oceanic; NNG = North New Guinea Oceanic; MM = Meso-Melanesian linkage, NNG = North New Guinea linkage; PWMP = Proto Western Malayo-Polynesian; Pan = Proto-Austronesian; NCAL = New Caledonia, SES = South-Eastern Solomonic; see Lynch et al. 2002).

ndipi 'lid'	<	POc *tupi 'lid, cover'
pód:a 'bottle' <	<	?PNGOc *bwadri 'water jar', NNG *bodi*, etc. (possibly also from English bottle).
pala 'woven coconut mat'	<	PEOc *bola 'coconut leaves woven together for any purpose, including mats'
'ne 'grass skirt'	<?	POc *nai
waali 'coconut oil'	<??	POc *pani, MM *vali* 'apply oil/paint to body'
tpidi 'woven armband'	<??	POc bara, MM (Tolai) *tabara*
chapê 'bagi-type necklace'	<	POc *sabi-sabi
dyimê 'comb'	?<	Sudest *ðuwe* < Oc *su(w)at
dpudu 'throb, sound of drums'	<	POc *kude 'hourglass drum'
d:ââ 'clay pot' ?<	? <	PAn *daReq (POc *raRoq, 'clay, pot', NCAL *doo*)
dpodo 'derris poison'	? <	POc *tupa

Table 1.8: Sea-faring and environment.

lyé 'sail'	<	PMP *layaR, NNG *lai* (Papua Tip *lara/naia*, etc.)
podo nee 'chief's racing canoe (without sail)'	?<	PWMP *padaw 'kind of sailboat'
m:ââ 'low tide, year'	?<	POc *maqati (NNG *mai/mat* etc.)
la 'branching coral (source of lime)'	<	POc *laje
koo 'lime, lime pot'	? <	POc *qapu (NNG *kau,* etc.)
wuwo 'coral head'	?<	POc *mwaloq (SES *walo*, etc.)
yópu 'wind'	?<	POc *upi
nt:eemi 'Western wind'	?<	POc *timu(R) 'wind bringing light rain' (NNG *tim,* etc.)
p:aa 'village'	?<	POc *panua 'village, inhabited area'
'n:uu/'nuwo 'nose, point, cape'	?<	POc *ngoro(k) (SES *nyora,* etc.) 'nose, point, headland, cape'

See the section below for complete observations, but the following numbers 5–9 (Table 1.9) are interesting since in many Papuan Tip Cluster languages these have been replaced with analytic numbers of the '5+1', '5+2' kind:

Table 1.9: Numbers.

	Yélî Dnye	POc
5	*limi*	*limá
6	*wéni (6th = wono)*	? *onom
7	*pyuda*	*pitu
8	*waali*	*walu
9	*chu*	(POc *siwa)

In general for these loans, looking at the closest sound correspondences in current languages perhaps suggests a North New Guinea (Bismarcks) or even Solomons link, rather than borrowing through the Papuan Tip cluster languages (the local Oceanic languages). Whether the ancestors of Yélî Dnye speakers were once located elsewhere more central to the Oceanic spread, or whether early Oceanic voyagers came through the Louisiades, must await further research. Lapita pottery dated to about 2300 BP and associated with proto-Oceanic spread has been found on Nimowa island only 100 nautical miles away, but pottery only appeared sporadically on Rossel from about 500 years ago (Shaw 2015). Interestingly, recent genetic work has shown a surprising contribution of Asian genes to Rossel ancestry, with mtDNA markers not found in the surrounding islands – suggesting indeed some early and separate but intense contact with Austronesian speakers (van Oven et al. 2014).

1.5 Checklist of typological features of Yélî Dnye

It may be useful to have a summary of the typological features of Yélî Dnye at the outset. They can be listed as follows:

1. There is a strong S–O–V major phrase order tendency, but phrase order is in fact free, while word order within phrases is strict.
2. The language is highly ergative in both nominal case-marking and in syntax, where NPs in Absolutive case undergo one set of rules, those in Ergative case another. It is not 'split ergative', although some 'nominative' behaviour is found with some uses of pronouns and with some aspects of the cross-referencing on the verb.
3. The language appears to be in the process of simplifying morphology – in the past this may have led to the loss of complex noun classes, numeral classifiers and valence-changing operations.

4. The language is in certain respects head-marking: genitives are marked on the head of the NP, on the pattern of 'John his house', and verbs carry cross-reference in the form of clitics.
5. In other respects, it is dependent marking: case is systematically marked on NPs by postpositions. Cases include Ergative/Absolutive, Experiencer, Dative/Ablative, Instrumental, Comitative. There are also large numbers of local postpositions.
6. The verb is associated with complex marking of subject/object, tense, aspect and mood properties.
7. Verbs tend to supplete on tense and aspect, and they may do so on a number of other parameters including imperative mood, person, number and even negation. Some nouns also supplete on number, and a few on possession.
8. There are very limited valence-changing operations, implying lexical proliferation of intransitive counterparts to transitive verbs.
9. There are nominal classifiers, a large inventory of local postpositions, and positional verbs used in both locatives and existentials
10. There are many features that have been thought of as 'Papuan': pronominal syncretisms of special kinds, S–O–V word order and associated features like postpositions, many tenses and two aspects, elaborate counterfactuals, singular/dual/plural distinctions in nominals and cross-referencing
11. There are many features that are not typically thought of as 'Papuan', like a huge vowel inventory, and two coronal stop positions. The language also lacks serial verbs, chaining, auxiliaries, switch reference, and dependent verbs. It has no important noun-class distinctions (although there are some possible remnants of such a system).

1.6 The nature of the textual base for this grammar

Although much of this grammar is based on elicitation, many constructions and observations have arisen from a large recorded corpus (c. 470 hours of video) of naturally occurring speech in many different genres: informal conversation, dispute settlements, village meetings, myth recountings, mortuary divinations, marriage speeches, song styles, child-directed speech, and so forth. In addition, there are extensive experimental recordings such as eye-tracking of language production, phonetic elicitations, systematic dialect data, staged conversations with separated channels using head-mounted microphones, recorded colour or odour classification or testing of children's lexical and kinship knowledge. Only parts of this large

corpus of material are transcribed, and less translated and aligned with the program ELAN. Contributions to this corpus have also been made by Penelope Brown and Marisa Casillas. Recordings date from 1975–2019. A lexicon in Toolbox format has been extracted from these texts and has over 7000 head entries with about 10,000 senses. The corpus is preserved in The Language Archive, Max Planck Institute for Psycholinguistics.