

### 3.0. PAPUAN LINGUISTIC PREHISTORY, AND PAST LANGUAGE MIGRATIONS IN THE NEW GUINEA AREA

S.A. Wurm, D.C. Laycock, C.L. Voorhoeve, T.E. Dutton

#### 3.1. INTRODUCTORY REMARKS

The development of the linguistic picture during the last twenty years, and its nature, as described in various chapters and sections of this volume, have been conducive to speculations about the spreading of language groups through parts of the New Guinea area, and the probable directions of such movements.

As a result of the intensive linguistic work carried out in the New Guinea area in recent years, a sizable amount of linguistic and interdisciplinary evidence has emerged which makes it possible to draw some conclusions concerning the nature, directions and sequence of possible linguistic migrations into and within the New Guinea area in the past.

#### 3.2. LINGUISTIC EVIDENCE

Very briefly, linguistic evidence for such language migrations is as follows:

##### 3.2.1. PERSONAL PRONOUNS

Almost all the personal pronoun forms met with in the Papuan languages are members of three main sets which contain two sub-sets, and of which the third main set, set III (see 2.3.3.4. in this volume), seems to be derived from the other two. A fourth small set, set B, occurs in addition (see 2.3.3.7.). The distribution of these sets is regionally well defined and cuts across relationship boundaries in many instances. Nevertheless, the appearance of the first main set, set I (see 2.3.3.2.), shows strong correlations with the presence of languages of the large

Trans-New Guinea Phylum (see 2.5.2.2.) and seems to be closely associated with it. In border areas of that phylum which are often sub-phylic in status, pronominal members of the other sets predominate. The scattered occurrence of the fourth small set, set B, seems to be associated with language groups which do not belong to the two major Papuan phyla, i.e. the Trans-New Guinea and the Sepik-Ramu Phyla, and it also appears in aberrant, sub-phylic parts of these phyla (see 2.3.3.7.).

In many languages, separate masculine and feminine forms appear in the third person singular: in some languages which have no gender distinction and which are largely located to the east of languages with two genders in the New Guinea area, the third person singular pronoun forms give the appearance as if they were the result of a fusion of elements which are formally similar to the masculine and feminine pronouns in two-gender languages. At the same time, in some sections of the southern central New Guinea mainland which appear to have been areas of strong language contact when considering the appearance, in individual languages, of typological and other features which constitute a mixture of features appearing separately in individual languages elsewhere, pronominal forms denoting other persons are met with which seem to be products of a fusion between pronominal members of two different sets. Such forms re-appear further east in clearly defined areas along a potential language migration route. Furthermore, apparently more archaic pronominal forms of at least two of the sets predominate in western parts of the mainland.

### 3.2.2. *TYPOLOGICAL AND STRUCTURAL FEATURES*

The majority of the Papuan languages belongs to two main types which show considerable distributional parallelism with the occurrence of two of the main pronominal sets mentioned above, with languages containing the third set belonging to either of the types, with that associated with the first of the two main sets predominating (see 2.3.2.2.). However, considerable mutual influence and overlapping between the two main types can be observed and two more minor types are found, as well as some special types of rather restricted occurrence. Here again, mutual influences and overlapping are strongly present.

Apart from the similarities in the pronoun forms - and in part also pronominal systems - as referred to above, there is widespread identity or great formal similarity in subject and even more so object markers with verbs in a wide region within the Trans-New Guinea Phylum, extending from the Huon Peninsula, Finisterre Ranges and adjacent areas through the eastern part of the highlands of Papua New Guinea, and following the northern slope of the highlands ranges to the central hub-area of the

New Guinea mainland and from there westwards to the western limits of the highlands in Irian Jaya, and even beyond into the Bomberai Peninsula. This phenomenon is most strongly in evidence in the east and becomes progressively weaker westwards, and largely parallels the strongest distribution of the Austronesian loanwords mentioned below.

Considerable additional evidence concerning the patterned distribution of typological and structural features in various parts of the New Guinea area is available (e.g. Wurm 1964) which allows some conclusions to be drawn concerning possible past language migrations.

### 3.2.3. AUSTRONESIAN LOANWORDS

In their work leading to the establishment of the Trans-New Guinea Phylum, McElhanon and Voorhoeve (1970) unravelled the presence of a number of Austronesian loanwords, some of them recognisably of Eastern Oceanic type, far in the interior of the New Guinea mainland. Further work by the present writer (Wurm 1977, see also 2.5.4.2.2. in this volume) has demonstrated that such loanwords are present over a wider area than originally assumed by McElhanon and Voorhoeve, and are in evidence as far as the Bomberai Peninsula in Irian Jaya, and that their main distribution parallels that of the occurrence of the subject and object markers mentioned above in 3.2.2. As is the case with those markers, these loanwords are most strongly present in the east.

### 3.2.4. SUBSTRATA

The presence of a considerable number of mostly geographically quite well definable substrata in various language groups and language areas (see 2.5.4.2.1. in this volume) also constitutes important evidence for the subject matter of this chapter.

### 3.2.5. VOCABULARY

Lexical evidence agrees with that offered by typological and structural features in many instances, but there are quite a few instances of considerable contradiction between these two types of evidence. Many of these can be explained in terms of extensive borrowing between languages on all levels (see below 3.2.6.). Vocabulary is most strongly affected by this borrowing, and lexical evidence by itself has therefore come to be regarded as a criterion of very doubtful validity in Papuan linguistics - it only becomes valuable if supported by additional evidence (McElhanon 1970; Wurm 1977, see also 2.2.3. in this volume).

Lexical evidence can become important if it constitutes an obvious substratum feature. So for instance, low-level lexical and phonological correspondences that appear to exist (though the evidence is still very weak) in some South-East Papuan languages (T. Dutton, personal communication) may represent lexical substrata resulting from contact between these languages at some earlier time (see 2.13.1.1., also 2.9.5.7. and 2.9.5.6.).

### 3.2.6. SOCIO-LINGUISTIC FACTORS

A special peculiarity of the Papuan linguistic world is the ease with which features generally believed to be "unborrowable" or at least not readily borrowable have apparently been borrowed between languages to a very marked degree. Basic vocabulary items of one language which, as has been postulated by the tenets of lexicostatistics, are "unborrowable", can often be met with as obvious loanwords in other totally unrelated languages; pronouns, singly and in sets, are adopted by languages from other languages; also the structures of many languages have seemingly undergone quite drastic changes under the influence of other, sometimes unrelated, languages. Phonologies can be altered extensively under such an influence, and the only apparently relatively stable and persistent items and features in Papuan languages which, in consequence, have great diagnostic importance in comparative and classificatory work, are verbs and the principles underlying them, principles underlying pronominal systems - to a much lesser extent the pronouns themselves as lexical items - and semantic characteristics of the groupings of lexical items (e.g. *fire* and *tree* can, in one language, be two different meanings of one lexical item; but in another language, the meanings of two different lexical items: such principles are preserved in a given language even if the lexical items themselves are borrowed by it from another language in which such items have semantic ranges which are at variance with those observable in the borrowing language). There are several languages especially in the Sepik-Ramu Phylum, which show differing phonologies, relatively little cognation in nouns, and great differences in the form, but not the system, of their pronouns, but have many verbs in common, together with much of their verb morphology.

Instances of languages undergoing changes quite rapidly under the influence of other languages can be observed today in the New Guinea area, and while the reasons for the occurrence of very extensive mutual language influences in the Papuan linguistic world have not yet been studied in detail, it appears that the great prevalence of active and passive bi- and multilingualism in the New Guinea area may very well be

a contributing factor. The problem of "mixed" languages raised its head in this connection (see 2.2.2. and part (II) 4.5.). It seems that the question of "mixed" languages deserves a re-examination in the light of the results of Papuan linguistics (Wurm 1972a, 1977). The distribution of cultural vocabulary on the New Guinea mainland (Dutton 1973, see also (III) 5.2.0.) also offers important clues to the subject matter of this chapter, but all the problems briefly touched upon in this section 3.2.6. have an important bearing upon the question of past language migrations.

### 3.3. INTERDISCIPLINARY EVIDENCE

In addition to the linguistic evidence touched upon above in 3.2., some interdisciplinary evidence is available which corroborates conclusions drawn about possible language migrations on the basis of linguistic evidence, and is of particular value in offering possible solutions in instances in which the linguistic evidence is not conclusive. Evidence of this kind is offered by prehistory, for instance the valuable recent discovery that the presence of the pig in New Guinea dates back to only five thousand years or less (J. Golson, personal communication) which agrees well with the date at which the Austronesians are believed to have entered the New Guinea area (Wurm 1967) and with the presence of an Eastern Oceanic Austronesian loanword for *pig* in many Papuan languages (see above 3.2.3.). Physical anthropology also gives important clues such as the high presence of the Gerbich A negative blood type (Laycock 1973:57) which is a unique characteristic of speakers of Torricelli Phylum languages and also occurs in areas adjacent to them in the West and East Sepik Districts, amongst present-day Austronesian speakers of the Markham Valley, and also in areas further east. The distribution of certain axe types on the New Guinea mainland parallels that of some language types and groups to some extent - in particular, the area of distribution of the Gerbich A negative blood type just mentioned is similar to that of a particular type of axe (E. Crosby, personal communication). Other kinds of interdisciplinary evidence have been drawn upon in the study of possible past language migrations (Wurm 1964, 1966).

Cumulative linguistic and interdisciplinary evidence has led to interesting results in such studies (Wurm 1964, 1966; Voorhoeve 1969), and has been utilised in reaching the tentative present views concerning past linguistic migrations in the New Guinea area (Wurm 1972a, 1977) which will be briefly outlined below.

### 3.4. THE PICTURE OF POSSIBLE PAST LANGUAGE MIGRATIONS IN THE NEW GUINEA AREA

#### 3.4.1. PAPUAN MIGRATIONS

It appears that the presence of man in the New Guinea area goes back at least 60,000 or more years (Golson 1966a,b) and it may perhaps be possible to assume that at least some of the isolates and small phyletic groups as well as the languages of the Torricelli Phylum, are directly descended from very old languages, or at least contain very old substrata. Of the substrata observable in mostly aberrant and sub-phylum-level members of the Trans-New Guinea and Sepik-Ramu Phyla, some may be quite old too, and the same may well be true of the elements encountered in the West Papuan and East Papuan Phyla. In general, however, it seems unlikely that, as far as four of the five large Papuan phyla (see 1.3.4.) are concerned, the bulk of the language elements present in the Trans-New Guinea and Sepik-Ramu Phyla have been longer in the New Guinea area than perhaps 10,000 years or even much less, with the time-depth probably greater in the case of the West Papuan and East Papuan Phyla.

It seems impossible to even venture a guess at this stage as from where and by which route most of the very old languages and substrata referred to above may have entered the New Guinea area and spread within it. It seems plausible to assume that they came through the island world to the west of the New Guinea area from a region yet to be determined. Interdisciplinary evidence and the study of languages spoken by negritos in south-east Asia (see 2.16.1.) and on the Andaman Islands may perhaps contribute something to the solution of this problem. It may be appropriate to mention here Greenberg's (1960, 1971) work and his suggestion regarding the existence of some possible connection between Papuan languages of the New Guinea area and the languages of the Andaman islanders (see 2.16.3.2.3. in this volume).

The distribution and location of some of the major substrata in Papuan languages (see 2.5.4.2.1. in this volume) provide some vague pointers to the possible place of entry into, and the spreading in, the New Guinea area, of old Papuan linguistic elements. The languages of the Vogelkop Peninsula, especially those in the northern part of it, as well as those in the northern part of the non-peninsular main portion of Irian Jaya, contain a common lexical substratum which extends to the south into the eastern part of the Irian Jaya highlands areas. At the same time, a substratum manifesting itself mainly on the structural and typological levels, i.e., in a prevalence of set II pronouns, an overt two-gender system, a tendency to prefixing in the morphology, number marking with nouns, verb stem suppletion and alteration in connection

with object and subject marking and the absence of medial verb forms (see 2.3.2.2. in this volume) is, in varying degrees, mostly in evidence in the same areas (and reaches further east in the north), as well as in the south-eastern part of Irian Jaya, the adjacent southern parts of Papua New Guinea, and extends its influence, with interruptions, as far east as the Angan Family of the Trans-New Guinea Phylum (see 2.7.4.) whose speakers seem to have adopted an East New Guinea Highlands Stock type language, though a few of the features mentioned above appear in the Angan Family languages as a substratum element.

It seems tempting to suggest that this far-flung substratum, which may perhaps have surviving primary manifestations in some members of the West Papuan Phylum which have remained relatively free from outside influence such as the languages of Northern Halmahera, in the Torricelli Phylum and perhaps also in the East Papuan Phylum, may outline the earlier presence in the New Guinea area, of an old language type which entered the area from west of northern Halmahera and the Vogelkop Peninsula and spread from there to the regions of its present occurrence, to be later overrun and reduced to substratum level by subsequent language migrations. An apparently even older language level may be recognisable in terms of the scattered occurrence of pronouns of set B (see above 3.2.1.) met with in small language phyla and isolates not related to the large phyla, and in mostly sub-phylic and aberrant areas of the large Papuan phyla.

Another substratum is noticeable on the lexical level in the languages of the Kolopom (or Frederik Hendrik) Island and the South Vogelkop Sub-Phyla, with weaker occurrences in the Bomberai Peninsula area. It seems to reflect a language element which was present in these areas before the advent of the Trans-New Guinea Phylum languages.

The mentioning of set II and set B pronouns above indicates that the distribution of pronoun forms of various sets in the New Guinea area constitutes one good piece of tangible evidence for the spread of languages in the past, reaching back into periods which are well pre-Austronesian, i.e. well before 3,000 B.C. It appears that the pronoun forms of the first of the three main sets mentioned in 3.2.1., i.e. set I (see 2.3.3.2. in this volume) - and with it, an archaic lexical and at least in part also typological Trans-New Guinea Phylum element - may have entered the New Guinea area comparatively late via Timor, Alor and Pantar from where they reached the Bomberai Peninsula and the south coast of Vogelkop Peninsula, and penetrated east through the West New Guinea highlands and/or lowlands to a central region around the southern half of the present Irian Jaya-Papua New Guinea border. In this general area, the pronominal forms fused from two elements as mentioned above in 3.2.1. are largely found - they seem to have arisen from a strong contact

situation between the two strata represented by set I pronouns and the features associated with it (see 2.3.2.2. in this volume), and by set II pronouns and typological characteristics connected with it respectively. Of these, the set II stratum is much older than the set I stratum. Such contact situation areas may have been located both in the "neck" portion of Irian Jaya, south-east of the Vogelkop Peninsula where the two language migrations seem to have crossed, and in the central and central southern parts of the mainland.

From this central region, the element characterised by set I pronouns seems to have spread to the east to a moderate degree, into the highlands of what constitutes Papua New Guinea today, and to a much stronger extent to the south-east, perhaps as far as the Trans-Fly and - in addition to advancing also in other directions (see below) - along an easterly route inland from the Papuan Gulf and then turning north, into the Markham Valley and Finisterre Range-Huon Peninsula area. Archaic fused forms are found in that region too. From there, it appears to have entered the highlands and moved westwards in them for some distance, and also to have penetrated into the south-eastern tail-end of the mainland quite strongly, spreading into New Britain and the islands to the east of it, especially Bougainville, as well to some extent. It appears that the advancing of this language migration which could be regarded as the first Trans-New Guinea Phylum migration, into the south-eastern tail-end of the New Guinea mainland drove out another, earlier language group there which moved on to Rossel Island in the Louisiade Archipelago, east of the tail-end of the mainland, and to the New Britain-New Ireland area, perhaps superimposing itself upon even earlier languages there: New Britain appears to have been originally inhabited by representatives of a Papuan culture according to prehistoric evidence. In this connection Golson (1966b) draws attention to the distribution of the waisted axe which is typical of the Papuan culture tradition as opposed to the Austronesian, and has been found at sites in the highlands and elsewhere on the New Guinea mainland. Specimens have also been found in New Britain and in the north-western Solomons; but while in New Guinea and New Britain both polished and unpolished specimens are accounted for, only polished ones have been met with in the Solomon Islands.

Golson notices a certain agreement between the distribution of this axe type and that of Papuan languages, and suggests that the polished version of the waisted axe constitutes a technological reflection of contact with, presumably Austronesian-speaking, newcomers. At the same time, he points out that the sole presence of the polished versions in Oceania proper, as well as that of Papuan languages as far to the east as the Reef and Santa Cruz Islands, may have resulted from the Austronesian newcomers imparting skills and stimulus for ocean voyaging to the



Papuans of south-eastern New Guinea and the Bismarck Archipelago. From Rossel Island the displaced language group which seems to have left behind recognisable lexical and phonological substratum in the south-eastern tail-end of the mainland, seems to have later spread to the Bougainville and Vella Lavella Islands in the Solomon Islands chain - probably as a result of Austronesian cultural influence (Golson 1966b) - and apparently largely from the latter to the New Georgia, Rendova, Russell and Savo Islands in the Solomons, and eventually into the Reef and Santa Cruz Islands far to the east. In consequence, all the Papuan languages located in the eastern island world are interrelated and form the East Papuan Phylum (see 2.13.1. in this volume) which is a distinct phylum though it shows quite noticeable traces of varying strength, of the influence of the displacing early Trans-New Guinea Phylum languages. Influence from the latter seems to be particularly strongly in evidence in the languages of the East Bougainville Stock of the East Papuan Phylum.




From the central region near the present Irian Jaya-Papua New Guinea border mentioned before, the Trans-New Guinea Phylum language element under discussion appears to have spread also to the south-west, and also to the north where it is typologically and lexically strongly in evidence in the Lake Sentani area near the north-eastern coast of Irian Jaya, though the pronouns appearing there belong to sets II and III obviously as a result of the postulated set II and set III east-west migrations in the north of the New Guinea mainland which are mentioned below.

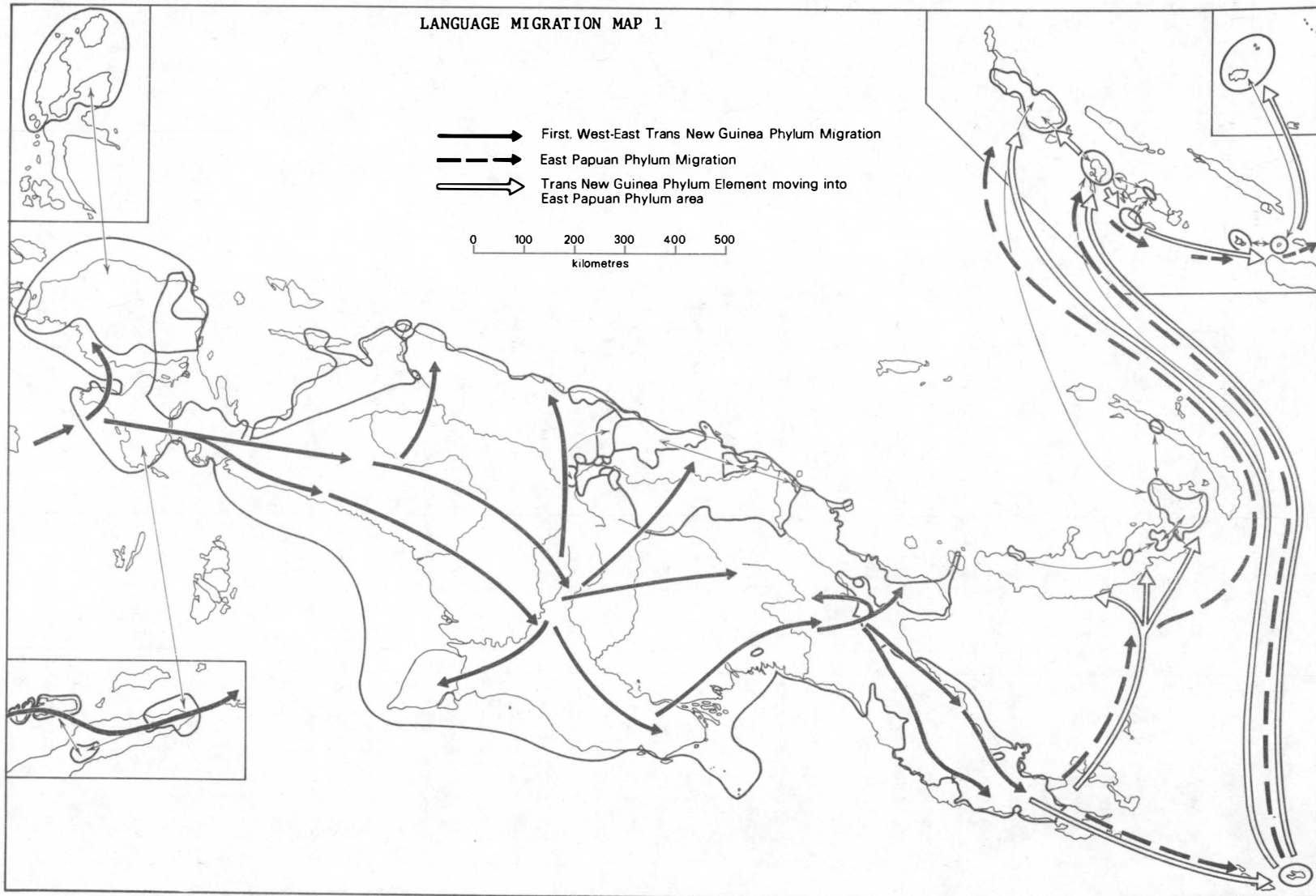
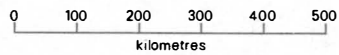
Voorhoeve (1969) found clear evidence in support of his assumption of a closer connection between Sentani on the north-eastern and Asmat on the central southern coast of Irian Jaya, with the nature of the evidence indicating that the ancestral forms or form of both languages had been spoken in a low-lying swampy area. It seems possible to suggest that the migration referred to above may have separated the ancestral forms of Sentani and Asmat, with their ancestral area lying centrally in the present day Irian Jaya-Papua New Guinea border area or further east, perhaps in the Upper Sepik (or Ramu) basins, or in the Upper Fly and more westerly regions, with the latter perhaps more likely when considering the much stronger presence of an old Trans-New Guinea Phylum type of language in the south than in the north.

It also seems that the language migration under discussion may have moved to some extent to the north-east into the Sepik-Ramu area.

As has been mentioned above, it is assumed that a language type characterised by the presence of pronoun forms of sets II and III, along with typological characteristics usually associated with set II, reached the New Guinea area via northern Halmahera and the northern main part of the Vogelkop Peninsula from where the language type containing set II

LANGUAGE MIGRATION MAP 1

-  First. West-East Trans New Guinea Phylum Migration
-  East Papuan Phylum Migration
-  Trans New Guinea Phylum Element moving into East Papuan Phylum area

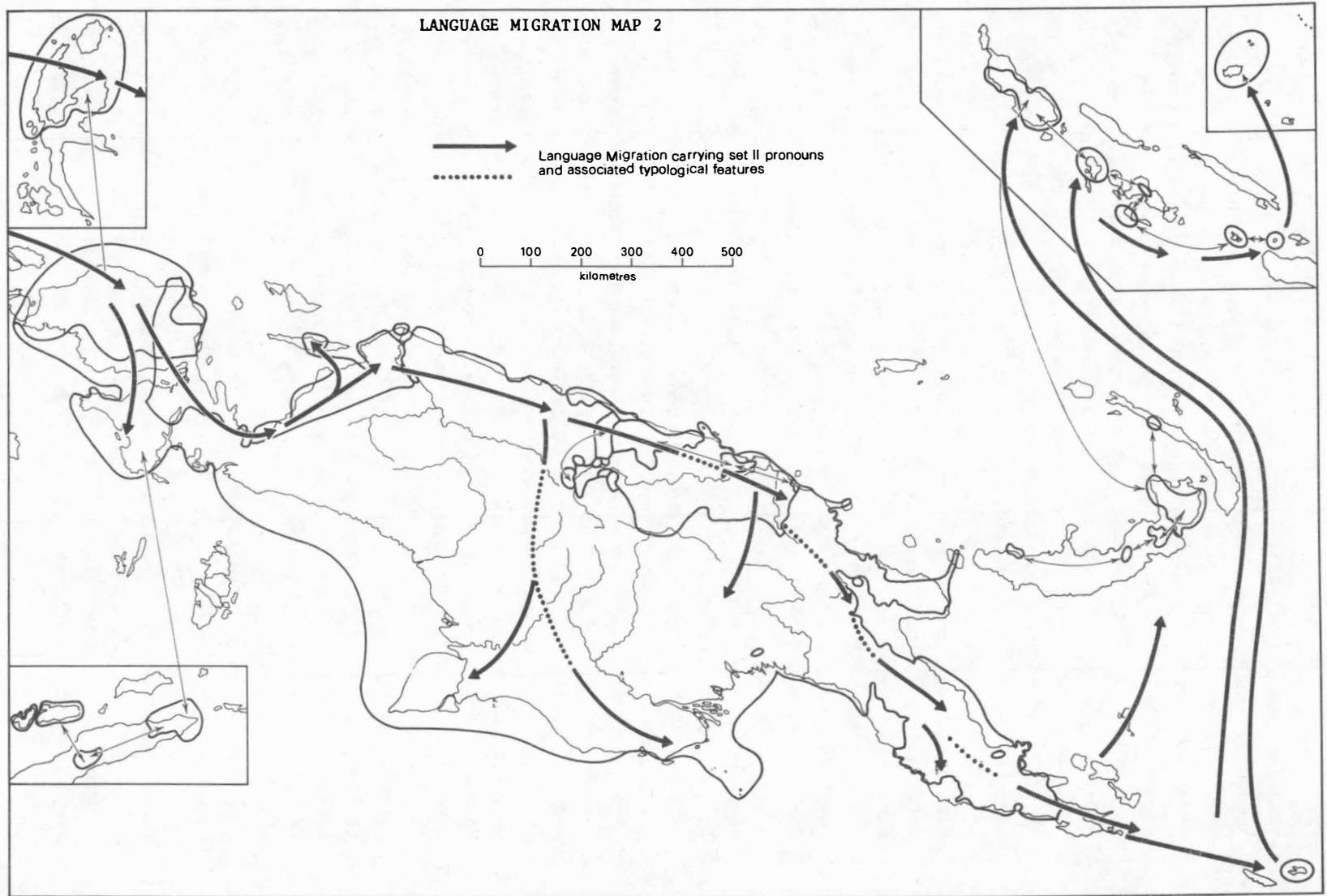


pronouns and associated typological features seems to have spread somewhat into the Bomberai Peninsula, but much more vigorously across the Geelvink Bay area eastwards into and through what is today northern Irian Jaya and on through the Sepik region to the Ramu area in which it manifests itself today mostly only through the presence of set II pronouns. From the central northern near-coastal and inland areas, the language type appears to have moved southwards as well to what is today the south-east of Irian Jaya and the Trans-Fly area of Papua New Guinea. Most of the evidence for this language type has been blotted out in the area between the north-eastern slopes of the highlands in Irian Jaya and the southern coastal regions, ostensibly by different later language migrations such as the second east-to-west, Trans-New Guinea Phylum migration, but it is very strongly in evidence in the southern area mentioned above. From the Ramu area, this language type, manifested today largely through the set II pronouns only, appears to have moved south and east through some parts of what is today the highlands of Papua New Guinea, and into the south-eastern tail-end of the mainland. From there, it seems to have spread out into the islands where both the set II pronouns and the typological features associated with it reappear in East Papuan Phylum languages. In the intervening areas most of its typological and structural features seem to have been blotted out by the subsequent Trans-New Guinea Phylum migrations.

The language migration carrying the pronoun forms of set III appears to have moved from the Vogelkop Peninsula area into the Bomberai Peninsula and the "neck" portion of Irian Jaya to some extent, but much more strongly eastwards across Geelvink Bay and along the northern coastal, near-coastal and inland areas all the way across to the present-day Madang District area of Papua New Guinea. From there it seems to have moved southwards through the central part of the highlands area into the Papuan Gulf region, and to a limited extent into the south-eastern tail-end of the mainland and on to the islands. In much of northern Irian Jaya, the Madang District area and the mainland areas mentioned after it, the languages are members of the Trans-New Guinea Phylum and as such, generally of the type associated with the pronoun forms of set I.

Of the two main language migrations mentioned above in connection with the pronoun forms of sets I and II, the one referred to in the second place may, as has already been pointed out, be assumed to have taken place earlier, because typological features and pronominal forms associated with it are found in many cases as substratum features in language groups attributable to the first mentioned, i.e. the Trans-New Guinea Phylum, migration. Also, the pronoun forms and typological

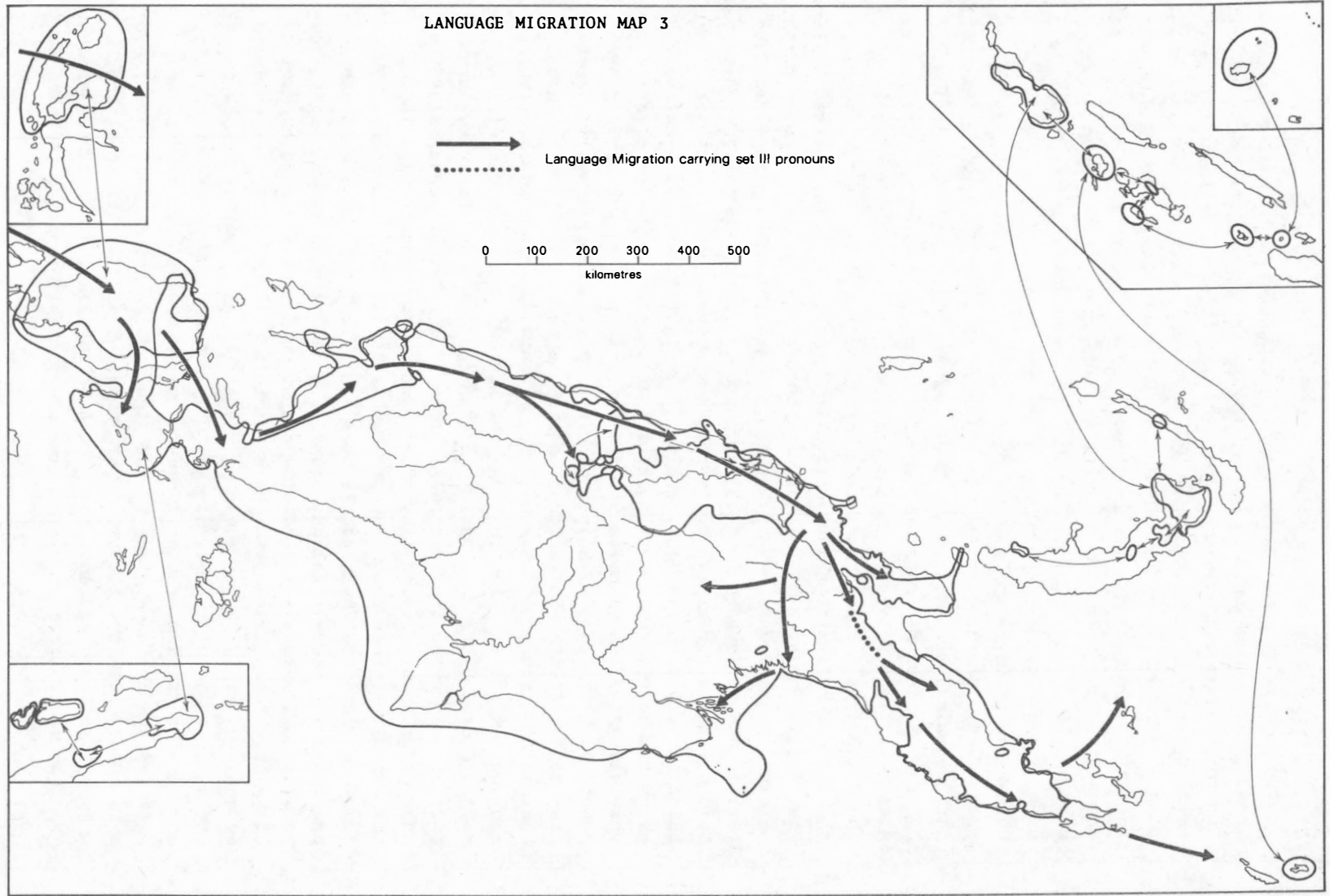
LANGUAGE MIGRATION MAP 2



features connected with the second migration mentioned appear in language groups which can be regarded as archaic for a variety of reasons. The third migration connected with the set III pronoun forms may have been appreciably later than the set II migration, but probably coinciding in time with the first Trans-New Guinea Phylum, i.e. set I migration seeing that the set III pronoun forms appear to be derived from set II and set I forms (see 2.3.3.4.4. in this volume). This migration may well have had its origin in the disturbances caused in the far western part of the New Guinea mainland by the impact of the first Trans-New Guinea Phylum migration there and typological and structural features associated with the eastward spreading of the set III pronouns may well have contained some of the Trans-New Guinea Phylum characteristics.

After the assumed migratory movements outlined above, a very major disturbing factor appears to have affected the linguistic picture of the New Guinea mainland as from approximately 5,000 or so years ago in the form of an Austronesian immigration centering on the Markham Valley. That area seems at that time to have been occupied by late forms of the original Trans-New Guinea Phylum languages which were characterised by certain sets of subject and object person markers with verbs, and certain typological features. These languages appear to have started migrating quite extensively at some time after the first Austronesian contact which had been long enough to allow them to adopt a number of basic vocabulary Austronesian loanwords - some of them, as has already been mentioned in 3.2.3., of Eastern Oceanic type. These migrations went essentially in three directions: north and north-west into the Huon Peninsula, Finisterre Range and the present-day Madang District areas, and south-west into what is today the Eastern Highlands District as far as the Chimbu District border, and into the Angan (or Kukukuku) area further east where the originally probably unrelated languages of the Angan people were replaced by a late Trans-New Guinea Phylum language which however shows strong substratum features. This subsequently developed into the Angan stock-level Family. The migration into the present-day Eastern Highlands District area may have given rise to some population pressure westwards and contributed to a westward expansion of the highlands languages into areas formerly unoccupied, or occupied by speakers of languages entering there from the first Trans-New Guinea Phylum language migration, perhaps displacing such languages to the south. The third migration direction was due west and seems to have followed the northern slope of the highlands ranges to the central hub area of New Guinea. All along these routes, and further west, the typological features mentioned, and Austronesian loanwords, are present. From the central hub area, the language migration appears to have

LANGUAGE MIGRATION MAP 3



continued in several directions: in the first place, north and north-west into the present-day border area between Irian Jaya and Papua New Guinea and the regions to the west of it, where the Trans-New Guinea Phylum languages apparently superimposed themselves upon unrelated languages brought in earlier by the Sepik-Ramu Phylum migration (see below) and upon languages of other groups, having such a strong influence upon them in terms of lexical, pronominal and typological features, that the languages affected are now classifiable as, albeit secondary, members of the Trans-New Guinea Phylum. However, the influence of this particular migration is very weak in the Sentani Lake area in north-eastern Irian Jaya. The language migration also seems to have moved to the south, south-west and south-east, down the Digul, Fly and Strickland Rivers where its influence is strongly in evidence in the Awyu, East Strickland, Bosavi and Ok Families of the Central and South New Guinea Stock, and also in the Marind Stock. Its influence is still noticeable along the Lower Fly, and peters out in the Fly Delta area and the Trans-Fly. On the south-western side, its influence fades out west of the Eilanden River in the Kamoro-Sempan-Asmat Family of the Central and South New Guinea Stock. In view of the weakness of the influence of this second, later, Trans-New Guinea Phylum migration in both the Asmat and Sentani language areas, it seems unlikely that the similarities between these two languages as observed by Voorhoeve (1969) (see above) may be attributable to this relatively late influence which is common to both.

An interesting probable language migration affecting the central part of the New Guinea mainland on the Papua New Guinea side is suggested by the presence of quite pronounced lexical links between languages of the East Strickland Family and, less so, some other language families of the same area, with languages of the phylum-level Left May Family (see 2.14.1.3. in this volume) in the Sepik Districts. No relationship between the languages constituting that family, and any other Papuan languages has yet been ascertained. At the same time, the Left May Family languages show characteristics which are strikingly reminiscent of those attributed to a substratum in several of the language groups in the interior of the Gulf, Western, Southern Highlands and adjacent parts of the Eastern Highlands and Chimbu Districts, and which manifest themselves in an abundance of nasal vowels, partial or complete absence of bound subject markers with verbs, simplicity or absence of medial verb forms and a proliferation of aspectual markers (see 2.3.2.3. in this volume). When taking corroborating interdisciplinary evidence into account, it seems possible to suggest that the presence of this substratum in the southern areas mentioned may be attributable to a southward migration of speakers of Left May Family languages into them. They subsequently

adopted the Trans-New Guinea Phylum language(s) of the area, preserving some of their Left May Family vocabulary and some of the structural and typological features of their original language(s) in the process.

Returning to the second Trans-New Guinea Phylum migration discussed above, it seems that the main direction of the continuation of that language migration from the "hub" area went in a westerly direction into the highlands areas of West New Guinea and across them to the "neck" portion of the mainland, and from there into the north-western extremity of the Bomberai Peninsula.

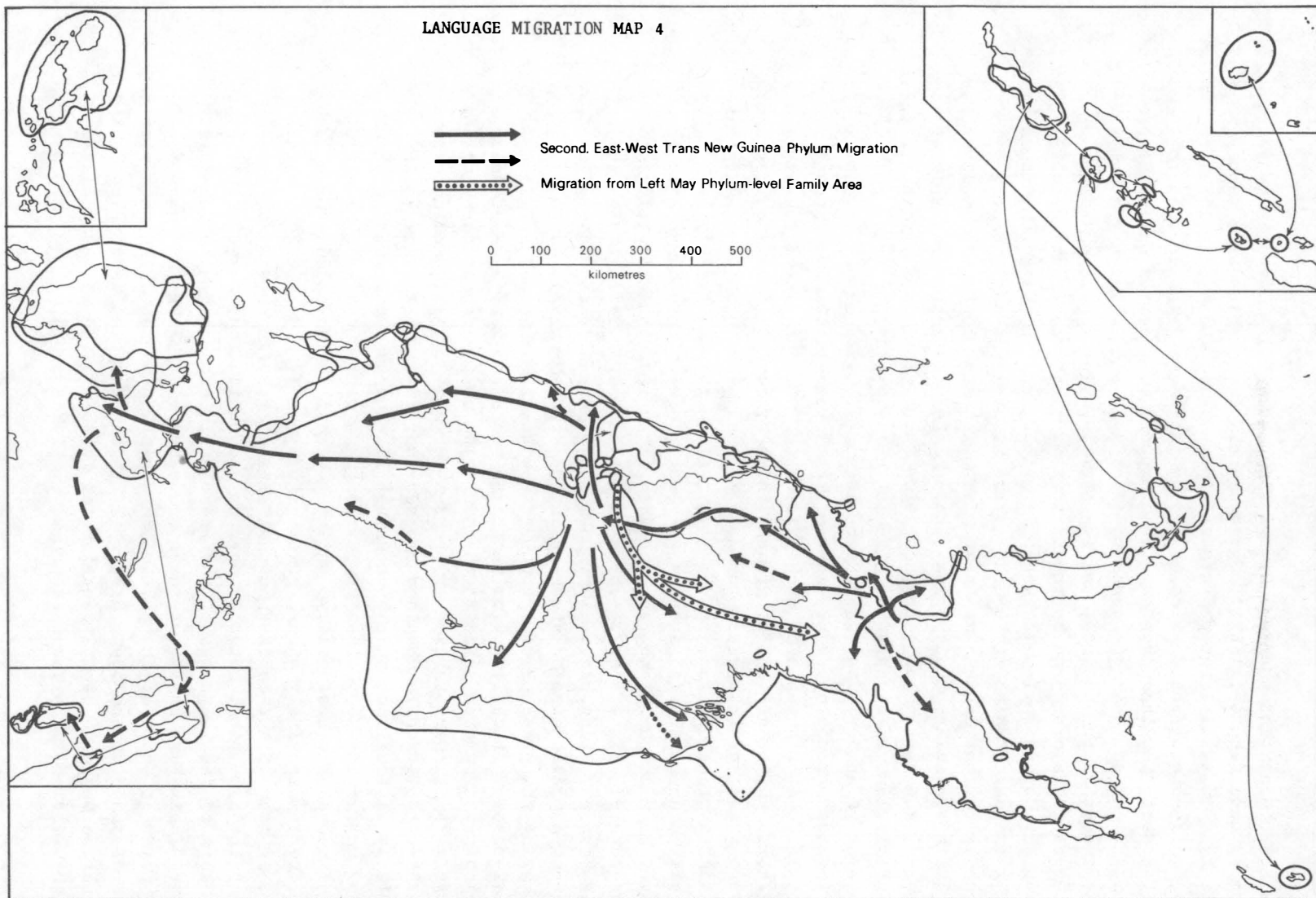
The Bomberai Peninsula as well as the Southern Vogelkop Peninsula area had apparently been within the borders of the Trans-New Guinea Phylum area from the beginning of the first, west-to-east, Trans-New Guinea Phylum migration. Both language areas, especially the southern Vogelkop, show marked influence from the adjacent West Papuan Phylum languages and appear to have encroached upon languages of that type.

The situation regarding the languages of the Timor-Alor-Pantar area remains somewhat unclear. They show strong links with the Bomberai Peninsula languages, and also display strong West Papuan Phylum substratum features. It seems possible that their Trans-New Guinea Phylum nature is attributable to the first Trans-New Guinea Phylum migration which encroached upon a West Papuan Phylum type language originally occupying the area. However, it is known that frequent contacts used to take place between people of the Bomberai Peninsula and the Timor-Alor-Pantar area, and significantly, the closest linguistic connections of the Timor-Alor-Pantar languages are with the Bomberai Peninsula languages: in fact, Timor-Alor-Pantar area languages which are geographically closest to the Bomberai Peninsula - such as Oirata and Kisar Island (see 2.10.1., Editors' Note 3) - show somewhat closer connections with Bomberai Peninsula languages in some respects (e.g. membership of pronouns to certain sets) than do Timor-Alor-Pantar languages located further away. It may be possible that the Trans-New Guinea Phylum nature of the Timor-Alor-Pantar area languages is more predominantly attributable to these later contacts, than to the first Trans-New Guinea Phylum migration, but very probably both these factors have played a part.

Quite independently of the Trans-New Guinea Phylum language immigration into the New Guinea area, and probably preceding it by a comparatively short span of time, another language immigration carrying the ancestral forms of the Sepik-Ramu Phylum languages appears to have entered the New Guinea mainland on the north coast approximately in the present-day Irian Jaya-Papua New Guinea border area, and penetrated south, and then to the east and north-east as far as the country between



LANGUAGE MIGRATION MAP 4



the Lower Sepik and the Ramu Rivers (Laycock 1973). These languages seem to have been originally of a comparatively simple basic type, and this type is still largely preserved in the east where only little, if any, influence of the Torricelli Phylum languages is noticeable in them. In the west, the languages have been exposed to a series of influences from various sources: the unrelated languages and language groups probably ancestral to the area, the Torricelli Phylum languages which appeared to have pressed southward at some time, the first and the second Trans-New Guinea Phylum language migrations, and in the north, the Sko Stock languages which may be the latest to have reached the area. In consequence, the Sepik-Ramu Phylum languages show considerable diversity in their vocabulary and typology, though they are recognisably inter-related, and the language fragmentation there, in relation to the size of the region, is amongst the highest in the New Guinea area, just as the average number of speakers per language is amongst the lowest.

The assumed southward movement of the Torricelli Phylum languages may perhaps be attributable to the influence of the postulated language migration which carried the pronoun forms of set III (see above) along the northern coastal areas - or more probably the foothill area because of the physical difficulties of moving along the coastal plains - to the present Madang District area and beyond. This is corroborated by the fact that a unique blood type characteristic (Gerbich A negative) (Laycock 1973:57) of the speakers of present-day Torricelli Phylum languages and of people of surrounding areas is also encountered amongst present-day Austronesian speakers in the Markham Valley, obviously betraying the presence of a group of now Austronesianised original speakers of Torricelli Phylum languages there who may, perhaps under pressure, have moved ahead of the migration of the people carrying the language type characterised by pronoun forms of set III, and upon reaching the Ramu, followed it down and crossed over into the Markham Valley.

If it is true that this pronoun set III language migration was carrying some Trans-New Guinea Phylum language elements as has been indicated above as a possibility, this may constitute an added explanation for the comparatively strong presence of Trans-New Guinea Phylum influence in much of the Sepik-Ramu and Torricelli Phyla areas.

At the same time, Laycock (personal communication) suggests that the speakers of the languages of the Lower Sepik (or Nor-Pondo) Sub-Phylum in the Sepik-Ramu Phylum may have proceeded east along the coast from the point of entry of the phylum languages in the west, and then migrated some distance up the Sepik River. If this assumption is correct, this migration may have been a contributing factor to the southward movement of the Torricelli Phylum speakers as mentioned above.

A central group of speakers of ancestral Sepik-Ramu Phylum languages seems to have moved south into the highlands area, perhaps yielding to pressures of over-population or excessive forest-clearing to the north of the Sepik. In the highlands area, they appear to have, at a later stage, come into contact with speakers of Trans-New Guinea Phylum languages and their languages were quite strongly influenced by this contact. Subsequently, they seem to have moved north into the Middle Sepik area and on to the north coast, splitting the Torricelli Phylum languages into two sections through absorbing the connecting part which now constitutes a substratum in the Sepik languages in the north. A small third group of Torricelli Phylum languages is found further east on the northern coast of the present-day Madang District - perhaps more likely an old refugee group than the result of another break in the original Torricelli Phylum area as a result of the eastern end of the original Sepik-Ramu Phylum language migration reaching the coast.

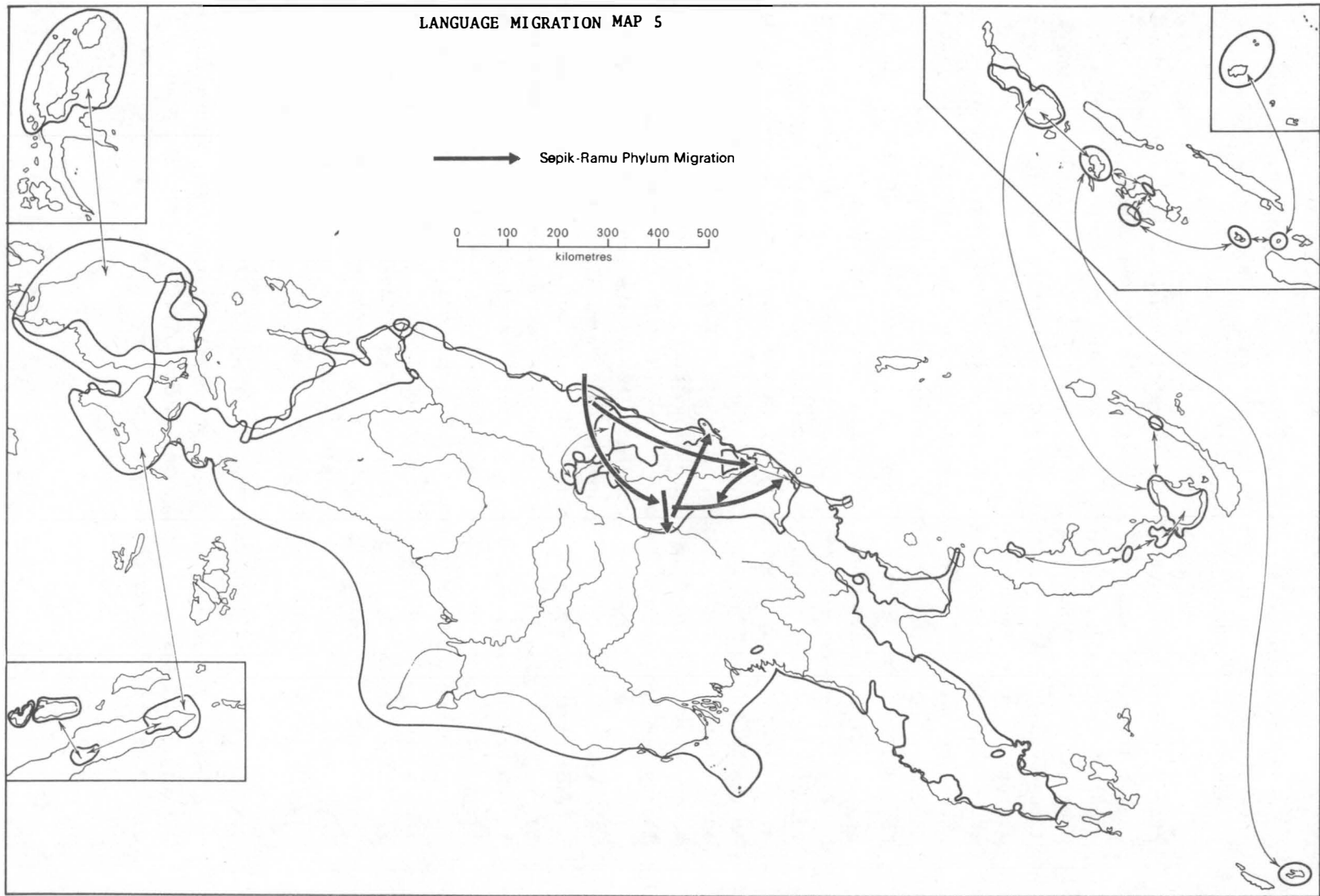
The present-day Torricelli Phylum languages are quite numerous, but relatively similar to each other which appears to militate against the assumption of their great antiquity in the area which has been suggested at the beginning of 3.4.1. To explain this problem it may well be assumed that most of the original Torricelli Phylum-type languages were absorbed by other languages, and disappeared as a result of the various language migrations referred to above, and only one or several very closely related languages survived to become the comparatively recent ancestral language(s) of the present-day Torricelli Phylum languages.

Amongst the small groups in the Western Sepik District, the languages of the Sko Phylum-level Stock may perhaps be relatively late arrivals in the New Guinea area. They are coastal languages with a tonal morphology which is unique in the New Guinea area, though they also show quite strong Trans-New Guinea Phylum pronominal and lexical influence. The speakers of these languages use tacking sailing canoes which again are unique in the New Guinea area, with their nearest occurrences in present-day Indonesia. This language group deserves careful comparison westwards as it seems not impossible that its origin or at least an element in it, may be traceable far to the west.

#### 3.4.2. MIGRATIONS INVOLVING PAPUAN AND AUSTRALIAN LANGUAGES

A detailed discussion of language contacts between New Guinea area languages and Australian languages (Wurm 1972b) has been given in 2.16.2. in this volume and need not be repeated here.

LANGUAGE MIGRATION MAP 5



## 3.4.3. AUSTRONESIAN MIGRATIONS IN THE NEW GUINEA AREA

The first Austronesians to reach the New Guinea area about 5,000 years ago or so are believed to have settled in the New Britain area and in north-eastern New Guinea (Grace 1964). It may seem plausible to suggest that they reached the New Britain and New Ireland areas first, because they may certainly be assumed to have come from the west, and during the north-westerly winds season it is very difficult for small sailing craft to land on the north coast of New Guinea because of the extremely rough conditions. At the same time, any vessels following the north coast westwards sailing before the north-westerly winds are certain not to miss the New Britain-New Ireland island curve. In the south-easterly winds season, landing on the north coast of New Guinea is easy, and it may well be suggested that as far as the present Papua New Guinea area is concerned, the ancestors of the north coast Austronesians came from New Britain where they made their first landfall. It may be mentioned that there is a marked linguistic break between the Austronesian languages spoken west and east of Manam Island in the Madang District: this may bear out to some extent what has been said above and suggests that the two types of Austronesian languages involved owe their presence in their current areas to different migrations. The Austronesian languages of the area east of Manam Island may not all have come from the New Britain area in the first place. Those of south-western New Britain and those of the central south coast of the mainland may well prove to be members of Eastern Oceanic (Pawley 1969a, 1972) and may have reached those areas as a result of a retrograde migration from the east (Pawley 1969b). The same may be true of other Austronesian languages spoken on the south coast to the east of its central part. The postulated Austronesian migration into the Markham Valley which is believed to have given an impetus to the second, east-to-west, migration of the Papuan Trans-New Guinea Phylum languages about 5,000 or so years ago (see 3.4.1.) is likely to have been one of Eastern Oceanic speakers, because the Austronesian loanwords found in the Trans-New Guinea Phylum languages involved are Eastern Oceanic lexical items.

Capell (1943) suggested three separate strata of Austronesian words in south-eastern Papua which he attributed to separate migrations from different parts of present-day Indonesia.

The status of the Austronesian languages in Irian Jaya is different, and it may well be that they are languages whose ancestors came directly from the west. Milke (1958) suggested that there had been an extended period of contact between speakers of proto-Eastern Oceanic and speakers of earlier stages of Philippine, Celebes and eastern Indonesian languages,

and also assumed that the languages ancestral to present-day New Guinea Austronesian languages remained in contact with languages ancestral to present-day eastern Indonesian languages.

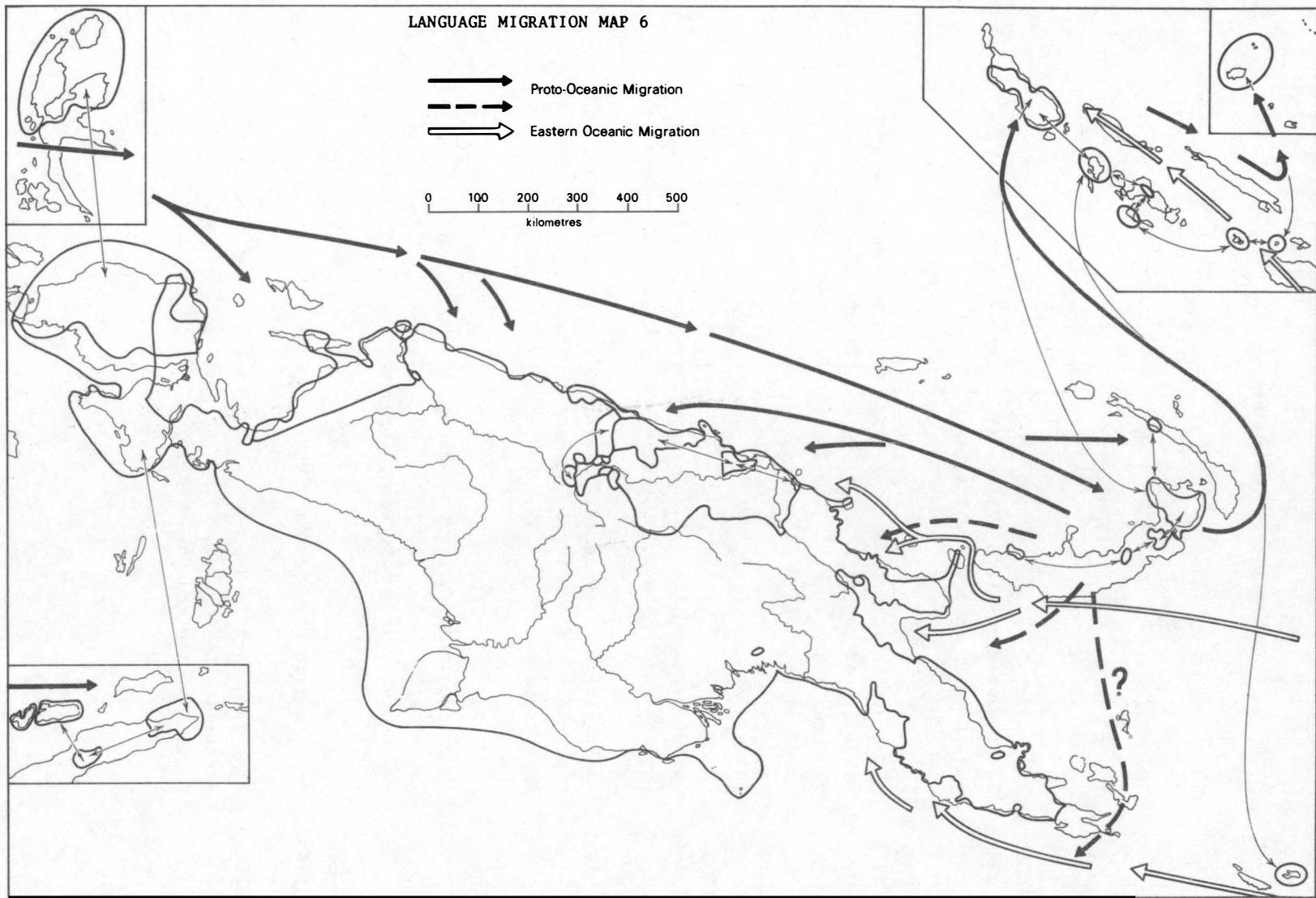
It has also been assumed that a part of the immigrant Austronesians continued moving on to the east immediately, without getting into close contact with the New Guinea area, and apparently proceeded directly to the central New Hebrides which became the focal point for a subsequent Austronesian expansion through Island Melanesia and beyond. By about 2,000 B.C. and later, the Austronesians appear to have expanded through much of the New Hebrides, predominantly in a northerly direction, reached the south-eastern Solomon Islands and advanced westwards in the Solomon Island chain, and settled in western New Britain and on parts of the south coast of Papua New Guinea (Pawley 1969b, Wurm 1976).

No specific mention is made by this particular theory of the Austronesian languages in other parts of the New Guinea area. However, as has been pointed out above, it seems likely that some of the Austronesian language elements found in the northern coastal areas east of Manam Island in the Madang District are also of Eastern Oceanic origin. At the same time, many of these languages are believed to have been subject to strong Papuan influence (see (II) 4.5.1. and (II) 4.5.2.) and this makes the determination of their exact place of origin rather difficult. Much further work is needed before the problems of the apparently multiple migrations of Austronesian languages in the New Guinea area can be solved to satisfaction (see also 1.2.2. in this volume).

LANGUAGE MIGRATION MAP 6

- > Proto-Oceanic Migration
- - - - -> Eastern Oceanic Migration

0 100 200 300 400 500  
kilometres



BIBLIOGRAPHY

CAPELL, A.

- 1943 *The Linguistic Position of South-eastern Papua.* Sydney. Australasian Medical Publishing Co.

DUTTON, T.

- 1973 '"Cultural" Items of Basic Vocabulary in the Gulf and other Districts of Papua. Part 1: Foodstuffs and Associated Agricultural Terms'. Franklin, K., ed. *The Linguistic Situation in the Gulf District and Adjacent Areas.* PL, C.26. 411-538.

GOLSON, J.

- 1966a *50,000 years of New Guinea History.* Paper read at the Meeting of the New Guinea Society on July 26. Mimeographed.
- 1966b *Archaeological prospects for Melanesia.* Paper read at the Eleventh Pacific Science Congress in Tokyo, August 1966. Mimeographed.

GRACE, G.

- 1964 'The Linguistic Evidence'. Kwang-Chih Chang, Grace, George W. and Wilhelm G. Solheim II, eds. *Movement of the Malayo-Polynesians: 1500 B.C. to A.D. 500.* CAnthr 5.359-406.

GREENBERG, J.H.

- 1960 *Indo-Pacific Etymologies.* Mimeographed.
- 1971 'The Indo-Pacific Hypothesis'. Sebeok, T., ed. *Current Trends in Linguistics, Vol.8: Linguistics in Oceania.* The Hague. Mouton and Co. 807-71.



## LAYCOCK, D.C.

- 1973 *Sepik Languages - Checklist and Preliminary Classification.*  
PL, B.25.

## McELHANON, K.A.

- 1970 'Lexicostatistics and the classification of Huon Peninsula Languages'. *Oceania* 40.214-31.

## McELHANON, K.A. and C.L. VOORHOEVE

- 1970 *The Trans-New Guinea Phylum: Explorations in Deep-level Genetic Relationships.* PL, B.16.

## MILKE, W.

- 1958 'Zur inneren Gliederung und geschichtlichen Stellung der ozeanisch-austronesischen Sprachen'. *ZEthn* 83.58-62.

## PAWLEY, A.

- 1969a *On the internal relationships of Eastern Oceanic languages.*  
Paper presented at the Conference on Oceanic Prehistory in Fiji, August 1969. Mimeographed.

- 1969b *Map of movements of Eastern Oceanic languages.* Mimeographed.

- 1972 'On the Internal Relationships of Eastern Oceanic Languages'.  
Green, R.C. and M. Kelly, eds. *Studies in Oceanic Culture History*, Vol.3. *Pacific Anthropological Records* 13.  
Honolulu. Bernice P. Bishop Museum. 1-142.

## VOORHOEVE, C.L.

- 1969 'Some notes on the linguistic relations between the Sentani and Asmat languages of New Guinea'. *BijdrTLV* 125.466-86.

## WURM, S.A.

- 1964 'Australian New Guinea Highlands languages and the distribution of their typological features'. *AmA* 66/4, part 2.79-97.

- 1966 'Language and agriculture in New Guinea'. *New Scientist* 31.216-8.

- 1967 'Linguistics and the pre-history of the South-Western Pacific'.  
*The Journal of Pacific History* 2.25-39.

- 1972a 'The classification of Papuan languages, and its problems'.  
*Linguistic Communications* 6.118-78.
- 1972b 'Torres Strait - a linguistic barrier?'. Walker, D., ed.  
*Bridge and Barrier, a Natural and Cultural History of Torres Strait. Biogeography and Geomorphology Publications* 3.  
School of Pacific Studies, Australian National University.  
345-66.
- 1976 'Developments in Papuan Genetic Linguistics until 1972'.  
M.A. Jazayery, E.C. Polomé and W. Winter, eds. *Linguistic and Literary Studies in Honor of Archibald A. Hill*. Vol.III.  
Lisse. Peter de Ridder Press.
- 1978 *Papuan Languages of Oceania*. The Hague: Mouton (In press.)