

DIVISION 1.

GENERAL LANGUAGE SITUATION

1-2

1.0. LANGUAGE DISTRIBUTION IN THE NEW GUINEA AREA

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1.1. INTRODUCTION

The part of the world known as the "New Guinea Area" includes the New Guinea mainland with the islands adjacent to it, as well as the islands of Halmahera, Timor, Alor and Pantar in the west, the Admiralty Islands in the north and the New Britain Archipelago and Bougainville Island in the east. From a linguistic point of view, the Solomon Islands and the Santa Cruz Archipelago in the east, and the eastern islands of Torres Strait in the south are also marginally included in it because a few Papuan languages are located in them. Areas to the west of Alor and Pantar Islands may perhaps also belong to it linguistically: a few as yet unknown Papuan languages may well be located there (see 2.10.1.).

This area has long been known as one of the, if not the, linguistically most complex and diverse areas in the world. Intensive linguistic research work carried out during the last fifteen to twenty years, mainly under the auspices of the Australian National University in Canberra and the New Guinea Branch of the Summer Institute of Linguistics, has largely succeeded in clarifying and at the same time greatly simplifying the overall linguistic picture of the New Guinea area, but the multiplicity of its languages, the nevertheless still formidable intricacy of its linguistic situation, and the now well-known structural complexity of many of the individual languages there still stagger the imagination.

In spite of the concentrated work carried out over recent years, the total number of distinct languages in the New Guinea area can at this stage only be estimated. Several areas, especially in Irian Jaya, are still linguistically insufficiently well known for reliable information on the exact number of languages in them to be extant, and with many communalects on which some information is available, the decision as to whether they constitute distinct languages or only dialects, cannot be

made with any high degree of certainty. Taking these uncertainties into account, it seems that the total number of distinct languages in the New Guinea area approximates (and quite likely even exceeds) one thousand or so - about one-fifth of all the languages of the world.

1.2. AUSTRONESIAN LANGUAGES

1.2.1. DISTRIBUTION OF AUSTRONESIAN LANGUAGES IN THE NEW GUINEA AREA

The languages of the New Guinea area belong to two quite distinct language types: Austronesian, and Papuan (also known as non-Austronesian). The Austronesian languages in the New Guinea area are very predominantly located in coastal, near-coastal and insular areas, only in the Markham, Watut and Bulolo River Valley system in the Morobe District, in the mainland portion of the Milne Bay District, some southern parts of the Central District, and in the neck portion of the Vogelkop Peninsula in Irian Jaya are Austronesian languages spoken at a considerable distance from the coast. Their total number in the New Guinea area as defined above is probably over three hundred, but most of them are spoken by small speech communities only - two notable exceptions in Papua New Guinea are for instance Tolai in northern New Britain and Motu in the Port Moresby area which have 65,000 and well over 10,000 speakers respectively - and the total number of speakers of Austronesian languages in Papua New Guinea for instance constitutes only a comparatively small fraction of the total indigenous population. In Papua New Guinea, two-thirds of the Austronesian languages are spoken in the eastern half of the mainland area of the Milne Bay District and in the insular region of that District, the Admiralty Islands and the New Britain-New Ireland area, and the northern half of the Bougainville Island area. The remaining one-third is scattered along portions of the north coast or situated in the Markham-Watut-Bulolo River valley area, and is found in portions of the south coast and its hinterland areas as far west as the border between the Central and Gulf Districts. No Austronesian languages are located on the south coast further west until the Bomberai Peninsula in western Irian Jaya is reached. In Irian Jaya and adjacent areas, a number of Austronesian languages is met with on the north coast of Irian Jaya east of the mouth of the Mamberamo, but their bulk is located in the Geelvink Bay area and on the nearby islands, in the neck-portion of Irian Jaya, on the Bomberai Peninsula, the islands to the east of the Vogelkop Peninsula, in the southern half of Halmahera, in parts of Timor, and on Alor and Pantar Islands. The great majority of the languages found in the British Solomon Islands are Austronesian, and many of them belong to the large Eastern Oceanic group whose main portion lies further east (see below, 1.2.2.).

1.2.2. GROUPING AND ORIGIN OF AUSTRONESIAN LANGUAGES OF THE NEW GUINEA AREA

These Austronesian languages belong to the far-flung Austronesian Group whose domain extends from Madagascar in the west across Indonesia, some parts of the South East Asian mainland and the Philippines to Taiwan in the north, and across Melanesia, Micronesia and Polynesia to Hawaii and Easter Island in the north-east and east.

The Austronesian languages are all interrelated (Dyen 1965), and several clear-cut subgroups such as the Polynesian language family have been established within them, but the precise subgroupings of the Austronesian languages of the New Guinea area is still a matter for further research. A considerable number of families have been established by linguists working independently from each other in different areas, and their results are discussed in the various sections of (II)4.4., but the Austronesian languages of the extreme eastern and western fringe parts of the New Guinea area as defined in 1.1. have not been dealt with there. However, a general comparative assessment of the Austronesian languages of the New Guinea area as a whole is likely to show that quite a number of these separate families can be combined into one, or a few, larger families, with the precise degrees of interrelationship still to be worked out. At this stage, it seems also clear, or in the case of some languages, likely, that many of the Austronesian languages of the New Guinea area belong to the very large Eastern Oceanic Group or Stock (Pawley 1969, 1972) which, outside the New Guinea area, comprises languages of the Central and Northern New Hebrides including the Banks and Torres Islands, those of Fiji (and probably Rotuma), Polynesia, and apparently most of those in Micronesia.

In the New Guinea area, it extends to the languages of the south-eastern Solomon Islands, and apparently some of western New Britain and the south coast of Papua New Guinea. It may perhaps be possible to link some of the Austronesian languages of the Morobe and Madang Districts with this group to some extent at least, but there appears to be a considerable break between the Austronesian languages to the west of Manam Island, and those to the east. The Austronesian languages in Irian Jaya and further west, especially those spoken in the Geelvink Bay area and westwards, may have to be looked upon as a different type again, perhaps with a stronger influence from languages further west (Milke 1958, 1961), though at least some of them clearly belong to the eastern, i.e. Oceanic, Austronesian languages (Grace 1971).

The Austronesian languages in the New Guinea area constitute relatively recent immigrant languages which came originally from the west, and an ancestral form of them, known as proto-Oceanic, is believed to have

established itself in the New Britain-New Ireland (and/or general north-eastern New Guinea) area about five thousand years ago with the likelihood of the speakers getting into contact with the earlier Papuan population in at least some of that area, with cultural, racial and linguistic influences resulting from this contact situation. From this area, local migrations appear to have spread Austronesian languages westwards along the northern coast of the mainland, eastwards into the northern Solomons and perhaps even much further, and southwards into parts of the nearby coast of the New Guinea mainland and the islands adjacent to it. A part of the immigrant proto-Oceanic speakers which appears to have stayed relatively free from Papuan contacts and may have moved on eastwards immediately, apparently proceeded directly as far as the Central New Hebrides from where they dispersed further eastwards, southwards, and (north-)westwards (Wurm 1976b). In this, it is of interest for the purpose of this chapter that by about 2,000 B.C., Eastern Oceanic Austronesian languages appear to have been established in the south-eastern Solomon Islands, in south-western New Britain and on parts of the south coast of New Guinea. It also seems that such languages have reached the Markham River valley in the Morobe District and penetrated into it, apparently being instrumental in an east-to-west Papuan language migration involving languages belonging to the Trans-New Guinea Phylum (see 3.4.1.) which carried some Eastern Oceanic Austronesian loanwords through the New Guinea mainland as far as the Bomberai Peninsula (see 2.5.4.2.2.).

1.3. PAPUAN (NON-AUSTRONESIAN) LANGUAGES

1.3.1. INTRODUCTORY REMARKS

The main problem in New Guinea linguistics is constituted by the Papuan (or non-Austronesian) languages, their distribution, classification and grouping, nature, and possible origin. They have been in the New Guinea area very much longer than the Austronesian languages, and while at least some of them may have entered the area as immigrant languages in the not-too-distant past, though generally well antedating the arrival of the Austronesian languages, some of them can be assumed to have been in the New Guinea area for tens of thousands of years (see 3.4.1.).

The Papuan languages constitute something of an enigma: hemmed in by the vast realm of the Austronesian languages in the west, north and east, and the continent-wide territory of the Australian languages in the south, lies their world in the New Guinea area. Well over seven hundred distinct languages, with innumerable dialects, are located in the region stretching from - and perhaps even from the west of - the islands of Pantar, Alor, Timor and Halmahera in the west across the New Guinea mainland to the

islands of New Britain, New Ireland and Bougainville in the east, with a few scattered Papuan languages appearing further east in the Solomon Islands chain as far east as the Reef and Santa Cruz Islands. Between one-sixth and one-seventh of all the languages of the world are thus concentrated on a tiny fraction of the surface of the earth - the greatest concentration of languages met with anywhere in the world, with these languages showing only some very doubtful connections, if any, with a very few outside languages (see part 2.16.).

Approximately 2,756,000¹ people speak Papuan languages, which gives an average figure of only about 3,700 speakers per language if the total number of Papuan languages, including twenty to thirty or so as yet unidentified languages (see the end of 1.3.4.), is estimated to be about 750. In reality, hundreds of languages have very much fewer speakers than this, quite a few of them only a few dozen to a couple of hundred, because a large portion of the total number of Papuan speakers is claimed by a comparatively small number of numerically strong languages. So, for instance, the languages of the East New Guinea Highlands Stock in the Trans-New Guinea Phylum account for just over 5% of all Papuan languages identified to date, but the number of their speakers constitutes 33.7% of the speakers of Papuan languages! At the same time, the numerically largest Papuan language, Enga in the Western Highlands District of Papua New Guinea, has only about 150,000 speakers, which is only just over 5.4% of the total number of all speakers of Papuan languages.

To add to the complexity of the picture, the Papuan languages had, until just over two decades ago, been generally believed to be mostly unrelated to each other, and to constitute a great conglomerate of hundreds of highly diverse, very complex, numerically small languages which showed no apparent genetic links with each other or any outside language. Only very few Papuan languages could be included in mostly small groups of interrelated languages, with these groups showing no obvious connection with each other. The term 'Papuan languages' or 'non-Austronesian languages' was therefore only used as a negative classificatory term to describe languages thus named as distinct from Austronesian (and Australian) languages, without implying the existence of any genetic link between them.

Already during that early period, it had however been noticed that many Papuan languages displayed some typological and structural resemblances which were greater than those sometimes observed when making typological comparisons of unrelated languages in other parts of the world (Wurm 1954).

The only groups of interrelated Papuan languages of some size which were known or believed to exist towards the late forties - without the

total, now known, extent of these groups having been fully recognized at that time - were the Kiwai Family in the Fly Delta area and in coastal regions to the north of it, the Toaripi Family in coastal and near-coastal areas of the Gulf District, a group of unknown size and extent in the Huon Peninsula area, portions of what is now known to be the Binanderean Family in the Northern and the Koiarian Family in the Central District, the Marind-Kuni Family in south-eastern Dutch New Guinea, and a group in the northern half of Halmahera to the north-west of the New Guinea mainland. There were also suggestions regarding the possible existence of large groups in the highlands of both Australian and Dutch New Guinea, in the Middle Sepik area, and in southern parts of Dutch New Guinea, though the spectacular real extent of these groups which was to be established by subsequent work was not even suspected at that stage.

1.3.2. DEVELOPMENTS IN PAPUAN LINGUISTIC CLASSIFICATION FROM THE LATE FIFTIES TO THE MID-SIXTIES

A very large amount of research work has been carried out in the Papuan linguistic field since the late fifties, mainly under the auspices of the Australian National University and the New Guinea Branch of the Summer Institute of Linguistics - from the early fifties also by Dutch linguists working in former Dutch New Guinea until the Indonesian takeover in 1962 - and this work has been steadily intensifying and gaining in momentum and volume, especially so after the mid-sixties.

The immediate result of this work, especially in its earlier years, was the discovery and establishment of a considerable number of mostly quite large groups of interrelated Papuan languages. At the same time, it was found that there was a not inconsiderable number of Papuan languages, mostly members of the newly established large groups, which were spoken by quite sizeable speech communities numbering close to, and over, 100,000 speakers in a few instances.

These discoveries resulted in quite a profound change of the earlier Papuan linguistic picture, though they still appeared to indicate that the Papuan languages belonged to a considerable number of disparate, seemingly unrelated groups. By the mid-sixties the following groups were known or believed to exist:

The East New Guinea Highlands Phylum, then believed to consist of one stock comprising four families and one family-level language isolate, one more distantly related family and three language isolates, though this picture changed and expanded as a result of subsequent work (Wurm 1971). It was thought to be almost entirely located within the three Highlands and the Chimbu Districts of Papua New Guinea, but it is now known that languages and families subsumed under it in the now superseded

classification discussed below in 1.3.3. extend into adjacent districts, especially into the Gulf District.

The Ndu Family located in the Middle Sepik area between the Sepik and the north coast. Again, subsequent research showed this group to be of greater extent than at first believed.

The Ok Family in the geographical centre of New Guinea, extending from the uppermost course of the Sepik River to the south almost to Lake Murray, and straddling the central Irian-Jaya-Papua New Guinea border region.

The Awyu-Dumut Family in south-eastern Irian Jaya.

The Central South Coast or Kamoro-Sempan-Asmat Family located in the southern central coast and inland areas of Irian Jaya, between Etna Bay in the west and the mouth of the Eilanden River in the east.

The Yaqay-Marind-Boazi, Yelmek-Maklew and Frederik Hendrik Island language groups in south-eastern Irian Jaya. All three were recognized as language families soon after the mid-sixties (Voorhoeve 1968).

The Dani Family in the Baliem Valley area of the highlands of Irian Jaya.

The Ekagi-Woda-Moni Family situated in and to the east of the Wissel Lakes region in the western part of the highlands of Irian Jaya.

A stock of languages on Timor and adjacent small islands, and on Alor.

The West Papuan Phylum comprising the languages spoken in the northern half of Halmahera to the north-west of western Irian Jaya, and most of the languages of the Vogelkop Peninsula.

The Bomberai Peninsula Phylum situated in the Bomberai Peninsula in south-western Irian Jaya and overlapping into the Vogelkop Peninsula.

Just after the mid-sixties, the impression was gained that the groups mentioned in the last three paragraphs could be combined into a single phylum, and the name West Papuan Phylum was extended to cover them all (Wurm 1971; also Cowan 1965 and Anceaux 1958).

The North Papuan Phylum including the languages on the Upper Tor and the Tami Rivers in north-eastern Irian Jaya, and comprising some of the languages located between the two rivers.

The Sentani-Demta-Nimboran Phylum situated between the Upper Tor River and the Tami River sections of the North Papuan Phylum, and extending to the west and south.

Cowan (1957a,b) proposed the combination of the two last-named phyla into one under the name North Papuan Phylum. This suggestion was accepted by the present writer in Wurm 1971, but soon after the completion of its manuscript in mid-1968, research by C.L. Voorhoeve appeared to show (Wurm 1971, December 1969 supplement) that most of the languages composing Cowan's North Papuan Phylum constituted members of the Central and South

New Guinea Phylum established by the former (Voorhoeve 1968), except that the members of the Sko Family which Cowan had included in the North Papuan Phylum (Cowan 1957b) seemed more appropriately excluded from it and perhaps classified with the Torricelli Phylum in the Western Sepik District of Australian New Guinea, as had already been suspected by D.C. Laycock and the present writer (Wurm 1971). Soon afterwards it was demonstrated that the Sentani Group could definitely be regarded as a member of the Central and South New Guinea Phylum, with the Nimboran Family in all probability also belonging to it (Voorhoeve 1969, McElhanon and Voorhoeve 1970), along with the remaining languages of the originally postulated Sentani-Demta-Nimboran Phylum. At the same time, evidence was mounting in favour of the assumption that the members of the Sko Family were in fact unrelated to those of the Torricelli Phylum and, together with some other families and isolates of the central northern coastal and hinterland regions of the Papua New Guinea-Irian Jaya border area, constituted a stock not related to any other language of the New Guinea area (Laycock 1973). Of the other original members of Cowan's extended North Papuan Phylum, the languages located in the Upper Tor and the Tami River areas were demonstrated by Voorhoeve (1971) to show clear connections with the, by then, established Trans-New Guinea Phylum into which the original Central and South New Guinea Phylum had been included (McElhanon and Voorhoeve 1970). This clearly bore out Voorhoeve's abovementioned earlier suggestion (Wurm 1971, December 1969 supplement). By way of anticipation, and to prevent possible confusion on the part of the reader, it may be mentioned that in 1972, Wurm assessed the evidence available on these languages and other languages of the extreme western and north-western part of Papua New Guinea (in part kindly put at his disposal by D.C. Laycock from the latter's fieldnotes), and while agreeing with Voorhoeve's and Laycock's findings as discussed above, as far as they go, he found that the languages of the Upper Tor and the Tami River areas could actually be included in the Trans-New Guinea Phylum along with some other groups of the area, amongst them some about whose inclusion Voorhoeve had originally expressed doubts (Voorhoeve 1971). Work carried out since by Voorhoeve (1975) has demonstrated the accuracy of Wurm's assumption, and has also shown that there are stock-level relationship links between the Upper Tor area languages and languages located further south in the Lake Plain area.

The existence of the following five additional groups was only tentatively assumed in the mid-sixties:

A group, of unknown extent, of interrelated languages in the Huon Peninsula area.

A group composed of several, or perhaps all, of the languages spoken by Kukukuku type people in the Watut River and Menyamya areas of the Morobe District and adjacent parts of the Eastern Highlands and Gulf Districts.

The Awin-Pare Family between the Upper Fly and Upper Strickland Rivers in the Western District.

The Left May Family west of the May River, a southern tributary of the Upper Sepik River.

A group located in the Upper Sepik area.

As has been indicated above, the discovery of the existence of these quite numerous and predominantly large to very large groups, and their establishment, brought about a profound change in the Papuan linguistic picture as conceived of prior to these discoveries. At the same time, this changed situation constituted a strong qualification of the previously purely negative classificatory meaning of the term 'Papuan languages' (see 1.1.), though it seemed that Papuan languages still belonged to a quite extensive number of distinct groups which were apparently not related to each other.

1.3.3. DEVELOPMENTS FROM THE MID-SIXTIES TO LATE 1969

Already during the establishment of the large groups mentioned in 1.3.2., there had been indications that some distant relationship might exist between members of different groups. For instance, the suggestion was made by Wurm that there might be a distant relationship between the East New Guinea Highlands Phylum, the Huon Peninsula Group and the Dani Family (Wurm 1960), and perhaps also between the East New Guinea Highlands Phylum and the Binandere, Ok and Ndu Families (Wurm 1961, 1964). It was also mentioned as a possibility that the Ok, Awin-Pare and Awyu-Dumut Families might constitute a single large stock or phylum, and that the Kamoro-Sempan-Asmat Family might also be a member of it (Healey 1964). It was also proposed that some distant relationship might connect the Ok Family and a group of languages in the Mt Goliath area in the eastern highlands of Irian Jaya (Healey 1964). At the same time, Healey suggested that the lexical links between languages of the Ok Family and the Oksapmin Family located to the east of it, might be attributable to extensive borrowing rather than to genetic relationship. Earlier Wurm had noted that there appeared to be some probability of a relationship existing between the Ekagi-Woda-Moni and the Kamoro-Sempan-Asmat Families, with this relationship extending to a few other languages in the south-eastern part of what was then Dutch New Guinea (Wurm 1960). At the same time, Capell (1962) made similar observations concerning the possible

relationship of the Ekagi-Woda-Moni Family to the Dani Family, and of both of them to the East New Guinea Highlands Phylum.

Greenberg (1960) suggested wide interrelationships between Papuan languages, with these relationships going beyond the New Guinea area to include the Andamanese and also the Tasmanian languages.

Most of these various indications and suggestions were taken up by C. and F. Voegelin (1965) in setting up a tentative macro-phylum which covered a large part of the New Guinea mainland and comprised the East New Guinea Highlands Phylum, the south-eastern West New Guinea Phylum (composed of the Kamoro-Sempan-Asmat Family and a number of languages in south-eastern Irian Jaya), the Ok-Oksapmin Phylum, the Kâte Phylum (i.e. the Huon Peninsula Group), and the Binandere, Ndu and Dani Families (the Binandere Family is referred to by them as a Phylum).

The setting up, however tentatively, of this very large group of inter-related languages constituted a further major step away from the notion that the term 'Papuan languages' implied that South-Western Pacific languages so referred to were generally unrelated to each other. This macro-phylum included a good portion of the Papuan languages known at the time of its establishment, and its members had been assigned (if only tentatively) the status of at least distantly interrelated languages. Further intensive work by S. Wurm, D. Laycock, C. Voorhoeve, T. Dutton, K. Franklin, K. McElhanon, J. Zigragen and members of the Summer Institute of Linguistics, New Guinea Branch, between 1965 and 1969, produced a large amount of additional evidence for the more definite establishment of this macro-phylum, and, at the same time, extended its limits far beyond the area suggested by C. and F. Voegelin to cover about three-quarters of the New Guinea mainland, and to include well over half of the over six hundred Papuan languages identified by that time. In particular, the existence of the South-East New Guinea Phylum (Dutton 1969) and its membership to the macro-phylum was recognized, the geographically very far-flung Central and South New Guinea Phylum (Voorhoeve 1968) within the macro-phylum set up, and wide interrelationships in the Sepik area postulated, with the assumption (Wurm 1971) which later proved to be in error and to be based on the misinterpretation of borrowed features, that the large group established there might perhaps also link with the macro-phylum. The existence of wider local connections between languages in the highlands areas of Irian Jaya was also discovered, and the Kukukuku Group which was recognized as a single stock or family and named the Anga Stock (or Family), was found to be clearly linked with the macro-phylum.

All this constituted a change of quite revolutionary dimensions from the earlier Papuan linguistic picture, and definitely shifted the term 'Papuan languages' from its status as a negative classificatory term

towards that of a term denoting, for the greater portion of its area of applicability, apparently genetically interrelated languages of a definite type.

This fact resulted in a terminological dilemma which has not been resolved to the present day. If the majority of the languages referred to by the previously negative classificatory term 'Papuan' had been found to be interrelated, should the term 'Papuan' be only applied to these in the light of what has been said in the above paragraph, and the other 'Papuan' languages not related to them referred to exclusively by a different name or names, or should the term 'Papuan' be kept as a general term to refer to all non-Austronesian and non-Australian languages of the South-Western Pacific, with special names used to denote the separate large groups of interrelated languages? This latter procedure appears to be the most appropriate, and has been adopted for the purpose of this work in which the term 'Papuan languages' will be comparable in usage to, for instance, 'Amerindian languages'. The various separate groups of Papuan languages are referred to by their established phylum-level names such as Trans-New Guinea, Sepik-Ramu, Torricelli, West Papuan, East Papuan Phylum; Kwomtari phylum-level Stock, etc. For the first five, which are the largest, and together account for over 95% of all Papuan languages known today, the names 'Southern Papuan languages', 'North-Eastern Papuan languages', 'Central northern Papuan languages', 'Western (or North-Western) Papuan languages' and 'Eastern Papuan languages' might perhaps be possible as popular reference terms, but their use has not been proposed in this work or elsewhere.

Late in 1969, the macro-phylum mentioned above which had been given the name Central New Guinea Macro-Phylum was believed to constitute a super-phylum consisting of several interrelated, but separate, phyla and phylum-level stocks and families which were the following:

- The East New Guinea Highlands Phylum.
- The Central and South New Guinea Phylum (including the Goliath Family).
- The Finisterre-Huon Phylum.
- The Madang Phylum.
- The South-East New Guinea Phylum.
- The West New Guinea Highlands Phylum.

The possibility of the presence of genetic links of members of the Central New Guinea Macro-Phylum with the following was believed to exist, with a high level of probability:

- The Anga Stock.
- The Adelbert Range Phylum,

and, with a low level of probability, with:

The Middle Sepik Phylum.

The Upper Sepik Phylum.

The Sepik Hill Family.

The latter three were believed to be interrelated and to possibly constitute a single phylum only. The next large group, Torricelli Phylum established by Laycock (1968) did not appear to link with any other group.

1.3.4. DEVELOPMENTS SINCE 1970

The first clear evidence pointing towards a possible closer connection between the East New Guinea Highlands Phylum and the Central and South New Guinea Phylum had become available in the independent classification, supported by some regular sound correspondences and other evidence favouring an assumption of genetic relationship, of the Duna language as a family-level isolate of both these phyla, by Wurm (Western Family: 1964, 1965, 1971) and Voorhoeve (in Wurm 1971, December 1969 supplement, and in McElhanon and Voorhoeve 1970), and of the Foe language as a family-level isolate in the Central and South New Guinea Phylum (Voorhoeve, oral communication; and Franklin 1968 can be interpreted in the same way: he includes Foe and Fasu into the Kutubuan Family, and Fasu had been classified as a family-level isolate in the Central and South New Guinea Phylum in Voorhoeve 1968 - Voorhoeve had at that stage not concerned himself with the classification of Foe) and at the same time, as a stock-level isolate of the East New Guinea Highlands Phylum (Wurm 1964, 1965, 1971). Also, Franklin (oral communication, later published in Franklin and Voorhoeve 1973) could demonstrate the existence of regular sound correspondences in first over sixty, then many more, cognate words in Fasu of the then Central and South New Guinea Phylum, and Kewa, a member of the West-Central Family in the then East New Guinea Highlands Phylum. Recent more detailed work carried out on the classification of these languages by Franklin and Voorhoeve (1973) has shown conclusively that Fasu and Foe, along with several newly established languages, are members of two different families which show a stock-level relationship to each other. This would allow their inclusion into a stock, and the name Kutubuan Stock has been proposed for it by Franklin and Voorhoeve (1973). At the same time, reservations as to the status of this group as a separate stock have been expressed by the same two linguists (Franklin and Voorhoeve 1973) in view of the fact that a chain-relationship exists between the two families and other families within the Central and South New Guinea Stock, and also with members of the West-Central Family of the East New Guinea Highlands Stock, especially the Kewa dialects. In view of this situation, the decision has been taken to regard the two families referred to above as

constituting the Kutubuan Stock, and to combine it with the Central and South New Guinea Stock into a super-stock seeing that the links between that stock and the Kutubuan Stock as a whole appear to be somewhat closer than those between the Kutubuan Stock and the East New Guinea Highlands Stock as a whole, though the transitional position of the Kutubuan Stock between these other two stocks is fully recognized.

As a very recent development, Franklin (see 2.14.2.) has proposed a re-classification of the Kutubuan Stock languages as members of two different stocks (see also 2.7.1.).

Earlier, Wurm (1964) had demonstrated the presence of striking typological agreements between languages of the East New Guinea Highlands Phylum, the Huon Peninsula Group and the Ok Family, with some of these agreements extending to the Binandere Family. This work was further advanced by McElhanon (1967) who drew attention to structural similarities between languages of the Ok Family and the Huon Peninsula area which were separated from each other by the large bulk of the East New Guinea Highlands Phylum. Later, Voorhoeve (1969), in looking at the question of the possible presence of genetic interrelationship between the Asmat language of the Central and South New Guinea Phylum, and the Sentani language in north-eastern Irian Jaya, found evidence indicating that the proto-language from which elements in both were derived had been located somewhere in a lowland riverine area and suggested the Sepik or Ramu River basins as possibilities. At the same time, he observed remarkable agreements between some lexical information on Madang District languages (Z'graggen 1971) and on languages of the Central and South New Guinea Phylum.

These discoveries heralded the second revolutionary change in the Papuan linguistic picture which took place during 1970 and 1971, and whose full effects and total extent began to crystallise clearly only towards the end of 1971 and during 1972 and 1973. The first decisive step in this was the setting up of a hypothesis by McElhanon and Voorhoeve according to which the member languages of at least a few of the separate phyla included in the Central New Guinea Macro-Phylum could be demonstrated to be members of a single phylum and therefore to be relatively closely related to each other. To prove this hypothesis, they undertook a comparison of lexical items of the Central and South New Guinea Phylum and the Finisterre-Huon Phylum, drawing on languages of other potential phyla only marginally, while intentionally leaving the geographically intervening East New Guinea Highlands Phylum out of consideration. In the course of this work, they could establish interphylic cognate series for fifty-three items, out of a total of eighty-five compared (McElhanon and Voorhoeve 1970), with the sound correspondences between members of given interphylic series so clear that there seemed to be little room for doubt that these series

constituted evidence of a relatively close genetic relationship between the languages concerned. In view of the discontinuous nature of the basis chosen for their work, the authors attempted the reconstruction of proto-forms only in a few instances.

The authors regarded their results as impressive enough to propose modifying the notion of the Central New Guinea Macro-Phylum as a super-group consisting of a number of separate, distantly interrelated, phyla in replacing it in part by the recognition of a single very large phylum, the Trans-New Guinea Phylum which they provisionally regarded as composed of the stocks constituting the former Central and South New Guinea and the Finisterre-Huon Phyla, as well as the Binandere Stock and the Sentani Group, with the stocks making up the East New Guinea Highlands and the Madang Phyla, the Rai Coast Stock, and the Nimboran Group as potential additional members. Voorhoeve (personal communication) later also suggested the inclusion of the Wisselmere-Kemandoga Stock (consisting of the Ekagi (or Kapauku)-Woda-Moni Family and Uhunduni (or Amung)) into the Trans-New Guinea Phylum.

The present writer took up McElhanon's and Voorhoeve's ideas and proceeded to systematically comparing lexical items of languages of the East New Guinea Highlands Stock, the major component of the East New Guinea Highlands Phylum, with the interphylic series established by McElhanon and Voorhoeve (1970). He found that the lexical equivalents in individual languages of the East New Guinea Highlands Stock which had been chosen for this work tied in very well with McElhanon's and Voorhoeve's interphylic cognate series in about three-quarters of the cases which was ample proof of their membership to the new Trans-New Guinea Phylum. This work was extended to member languages of the Anga Stock, with equally satisfying results, and when considering member languages of the stocks composing the Adelbert Range Phylum, evidence favouring the inclusion of these stocks into the Trans-New Guinea Phylum was also forthcoming. The same was the case with languages formerly included in Cowan's (1957a,b) extended North Papuan Phylum which had been recognized by Voorhoeve (1971) as having links with the Trans-New Guinea Phylum languages. The systematic application of this procedure to languages of all the stocks belonging to member phyla of the former Central New Guinea Macro-Phylum made it possible for the present writer to undertake the reconstruction of a number of Trans-New Guinea Phylum proto-forms (Wurm 1976a), and to propose the inclusion of all the languages of the thereby now superseded Central New Guinea Macro-Phylum into a new extended Trans-New Guinea Phylum, with the exception of those of the original Sko Family (see 1.3.2.) and some languages related to it, and of those of the Middle Sepik and the Upper Sepik

Phyla, and the Sepik Hill Family, whose similarities to Trans-New Guinea Phylum languages were then recognized as borrowed features, and which now form part of the newly established large Sepik-Ramu Phylum (see 2.11.) which does not seem to be related to the Trans-New Guinea Phylum. At the same time, work on these lines led to the inclusion (in part tentatively) of Papuan languages of the Vogelkop and Bomberai Peninsulas in Irian Jaya into the Trans-New Guinea Phylum, and showed up the presence of Trans-New Guinea Phylum lexical elements, on the basic vocabulary level, in language groups believed to be outside the Trans-New Guinea Phylum or at least not entirely includable in it, such as most member groups of the Sepik-Ramu Phylum, the Kwomtari and Sko Stocks, and the West Papuan Phylum, as well as the East Papuan Phylum.

Another, in some respects perhaps even more revolutionary, step away from the Papuan linguistic picture prevailing in late 1969 was brought about by the results of extensive fieldwork by D.C. Laycock in the two Sepik Districts in 1970-71, in the course of which virtually every one of the languages of those areas was assessed, a number of new languages discovered, and the last linguistically unknown parts of those areas surveyed. It was found that of the previously known large groups in the area, the Upper Sepik and the Middle Sepik Phyla as well as the Sepik Hill Family were relatively closely interrelated, and that there were relationship links between them and quite a few other languages and language groups of the region, though not with those of the Torricelli Phylum and apparently also not with the Sko Family mentioned above in 1.3.2. Members of the Trans-New Guinea Phylum located in the Papua New Guinea-Irian Jaya border areas and occupying a portion of the extreme western and north-western part of the Western Sepik District are apparently unrelated to this large new phyletic language group consisting of the various groups referred to above, though they have to some extent been influenced by members of it. Exactly the same applies to a few small groups and isolates. It also became evident that the languages of the Ramu Phylum established by Z'graggen (1971) showed relationship links with this large new phylum which therefore occupies much of the northern part of Papua New Guinea, in particular the Sepik and Ramu River basins, and has in the light of this been named the Sepik-Ramu Phylum.

The working out of the interrelationships between the postulated members of this Sepik-Ramu Phylum has been particularly difficult because of evidence of quite extensive borrowing on almost all levels between members, and also between members and outside languages such as those of the Torricelli and Trans-New Guinea Phyla, which resulted in great variability of the structural set-up of the Sepik-Ramu Phylum languages. Much of the formal variations of these languages can be explained in terms

of postulated migrations and contacts between Sepik-Ramu Phylum languages and outside languages (see 3.4.1.), but some aspects of our knowledge of the internal composition of the Sepik-Ramu Phylum, less so of its total extent, are still to some extent tentative and remain to be worked out in greater detail after Laycock's first presentation of his findings (Laycock 1973)(see 2.11.).

Another decisive step away from the 1969 Papuan linguistic picture resulted from work carried out by Wurm in the Papuan languages of the island world to the north-east and east of the mainland on the basis of earlier studies, his own materials and materials kindly put at his disposal by A. Capell, G. Grace, A. Chowning and B. Hackman. Only two separate groups of interrelated languages had previously been established in that area, i.e. the Bougainville Phylum on Bougainville (Allen and Hurd 1965) and the Reef Islands-Santa Cruz Family (Davenport 1962, Wurm 1969, 1970), though the possibility of the existence of relationship links between a number of the languages of the area, most of which had earlier been regarded as unrelated isolates, had been suspected (Capell 1969, Wurm 1971). Wurm's recent work in the languages of the entire area gave indications that they were all interrelated in varying degrees, and he proposed their inclusion in a newly established phylum, to be named the East Papuan Phylum, and made suggestions concerning its internal composition (Wurm 1972)(see 2.13.1.). Some of Wurm's findings have recently been corroborated by E. Todd on the basis of extensive fieldwork in Solomon Islands Papuan languages, and the interrelationship of languages of that particular area found to be even closer than assumed by Wurm (see 2.13.1. and 2.13.2.).

The most recent major change in the 1969 Papuan linguistic picture resulted from Voorhoeve's work in the languages and language classification of western and northern Irian Jaya (Voorhoeve 1975, see also 2.10.2.). The two most important aspects of Voorhoeve's work are the following:

He could establish that most languages of northern Irian Jaya were interrelated and that they, and also the languages of Timor, Alor and Pantar which constituted a stock and had been thought to belong to the West Papuan Phylum, could be included into the Trans-New Guinea Phylum.

Voorhoeve's findings resulted in a considerable extension of the Trans-New Guinea Phylum and at the same time, led to a great reduction in the size of the West Papuan Phylum. At the same time, it became apparent that there were very few 'pure' West Papuan Phylum languages except perhaps for the Northern Halmahera area and some parts of the Vogelkop Peninsula, though the West Papuan Phylum language type as such seems to be recognisable to some extent as a substratum feature over wide areas on the New Guinea mainland and shows some of the features discussed in 2.3.2.2. in

connection with languages whose personal pronouns belong predominantly to set II.

The Timor-Alor-Pantar Stock languages which constitute the most recent addition to the Trans-New Guinea Phylum, contain strong West Papuan Phylum elements, and it seems possible to argue for their relationship with either of these two phyla. Capell (see 2.10.1.) treats them as part of the West Papuan Phylum, while recognizing the tenuous nature of their relationship to other members of that phylum.

Another result of Voorhoeve's recent work has been the establishment of two small phyllic groups and a few language isolates in northern Irian Jaya (see 2.14.3. and 2.15.2.).

In the light of what has been stated so far in this chapter, the present picture of Papuan language grouping in the New Guinea area is as follows:

A) MAJOR PHYLA:

1) The Trans-New Guinea Phylum covering most of the New Guinea mainland except for a) the greater part of the Vogelkop Peninsula, b) the north-western-most part of the non-peninsular portion of Irian Jaya, c) most of north-western Papua New Guinea, d) a few very minor areas occupied by isolates, and e) the regions in which Austronesian languages are met with (see 1.2.1.). It also extends to the Timor-Alor-Pantar Islands.

2) The West Papuan Phylum in the greater, northern, part of the Vogelkop Peninsula, and on northern Halmahera.

3) The Sepik-Ramu Phylum in the Sepik Districts and a western portion of the Madang District of Papua New Guinea.

4) The Torricelli Phylum in a comparatively small northern part of the Sepik Districts.

5) The East Papuan Phylum in the island world to the north-east and east of the mainland.

B) MINOR PHYLA:

1) The Sko phylum-level Stock in the northern border area between Papua New Guinea and Irian Jaya.

2) The Kwomtari phylum-level Stock in the north-west of the West Sepik District of Papua New Guinea, with one of its geographically discontinuous members across the Irian Jaya border.

3) The Arai (Left May) phylum-level Family to the south of the Kwomtari phylum-level Stock in the West Sepik District.

4) The Amtos-Musian phylum-level Stock in the area between the Kwomtari phylum-level Stock and the Left May phylum-level Family.

5) The Geelvink Bay Phylum in eastern coastal areas of the Geelvink Bay and on Yapen Island in Irian Jaya.

6) The East Bird's Head phylum-level Stock in an eastern portion of the Vogelkop Peninsula.

The Yuri Isolate in the extreme west of the West Sepik District of Papua New Guinea may be found to be related to Oksapmin which has been tentatively included into the Trans-New Guinea Phylum as a stock-level isolate, but this classification is doubtful (see 2.2.6.9.). If these two languages prove to be related to each other, this would result in the establishment of another minor phylum, i.e. a two-language phylum-level stock.

C) ISOLATES:

In addition to the major and minor phyla mentioned above under A) and B), over half a dozen Papuan languages can, at this stage of our knowledge, not be included in any group. The main reasons for this are inadequate information on them, and insufficient comparison of them with languages which are geographically widely separated from them. It seems likely that as our knowledge advances, most, if not all, of these isolates will eventually be found to be members of established groups, or to be combinable with each other into small groups. However, at present only some vague links are discernable, and it is not possible to say how far these may be attributable to loans resulting from language contacts, or to some very distant relationships.

These isolates are in the West Sepik District of Papua New Guinea and in northern Irian Jaya, and one each in the Morobe and Gulf Districts of Papua New Guinea, and Maisin (see (II) 4.2.1.) in the Northern District.

No major linguistically unknown regions are left in the New Guinea area today, but a few incompletely surveyed pockets remain, mainly in northern Irian Jaya, especially in the mountainous country between the eastern shores of the Geelvink Bay, the Rouffaer and the Mamberamo Rivers, in parts of the Vogelkop Peninsula, and to the east of the Lake Plain in north-eastern Irian Jaya. Some additional Papuan languages may be located on the islands west of Alor and Pantar in Indonesia. The total number of as yet undiscovered Papuan languages, including a possible half dozen or so which may have escaped discovery in Papua New Guinea (for instance in the uppermost Strickland and Carrington Rivers region), is not likely to be in excess of twenty or thirty or so.

TABLE OF GROUPS OF PAPUAN LANGUAGES IDENTIFIED TO DATE

Group	Number of Languages	% of Total	Approximate Number of Speakers	% of Total
Trans-New Guinea Phylum	493	67.9%	2,248,000	81.6%
West Papuan Phylum	24	3.3%	125,000	4.5%
Sepik-Ramu Phylum	98	13.5%	194,000	7.0%
Torricelli Phylum	47	6.5%	77,000	2.8%
East Papuan Phylum	28	3.85%	69,000	2.5%
Minor Phyla	28	3.85%	36,000	1.3%
Sko phylum-level Stock	8		6,600	
Kwomtari phylum-level Stock	5		3,300	
Arai (Left May) phylum-level Family	6		1,600	
Amto-Musian phylum-level Stock	2		300	
East Bird's Head phylum-level Stock	3		16,000	
Geelvink Bay Phylum	4		8,000	
Isolates	<u>8</u>	<u>1.1%</u>	<u>7,000</u>	<u>0.3%</u>
TOTAL	<u>726</u>	<u>100%</u>	<u>2,756,000</u>	<u>100%</u>

As can be seen from the table given above, the five major phyla comprise 690, i.e. 95.0%, of the 726 Papuan languages identified at present, with the Trans-New Guinea, Sepik-Ramu, and Torricelli Phyla containing 638 i.e. 87.9% of the total number of languages. The minor phyla, with a total of 28 languages, account only for 3.85%, and the isolates, with 8 languages, for only 1.1% of the total number of known Papuan languages. The situation is even more favourable for the languages of the major phyla when looking at the number of speakers: the five major phyla have a total of 2,713,000 speakers of their member languages, i.e. 98.4% of the speakers of Papuan languages, with the Trans-New Guinea, Sepik-Ramu and Torricelli Phyla, with a total of 2,519,000 speakers, together scoring 91.4%. The three phyla which have the largest number of speakers, i.e. the Trans-New Guinea, West Papuan and Sepik-Ramu Phyla, with a total of 2,567,000 speakers, together score even 93.1%. The minor phyla have only a total of 36,000 speakers, i.e. 1.3%, and the isolates 7,000 speakers, i.e. 0.3% of the speakers of Papuan languages.

The figures of languages given in the above table should only be regarded as having the value of near approximations. The discovery of one or a few hitherto unidentified Papuan languages, or the recognition of the fact that one or several communalects which until now have been regarded as separate languages are only dialects - both quite common events in Papuan linguistics - would have an effect on the numbers of languages given, and on the percentages relating to individual groups. Similarly, changes in the available information on the number of speakers of individual languages - many of the extant figures are at present only rough estimates - would have some affect on the overall figures and percentages of speakers of the various language groups listed in the table.

LEGEND TO MAPS OF PAPUAN LANGUAGE STOCKS

MAJOR PHYLA

TRANS-NEW GUINEA PHYLUM

MAIN SECTION

Central and Western Part

Finisterre-Huon Super-Stock

- 1 Finisterre Stock
- 2 Huon Stock
- 3 East New Guinea Highlands Stock

Central and South New Guinea-Kutubuan Super-Stock

- 4 Kutubuan Stock
- 5 Central and South New Guinea Stock
- 6 Angan stock-level Family
- 7 Gogodala-Suki Stock
- 8 Marind Stock
- 9 Kayagar stock-level Family
- 10 Sentani Stock
- 11 Dani-Kwerba Stock
- 12 Dem stock-level Isolate
- 13 Wissel Lakes-Kemandoga Stock
- 14 Mairasi-Tanah Merah Stock
- 15 West Bomberai Stock
- 16 Mor stock-level Isolate

Eastern Part

- 17 Binandere Stock
- 18 Goilalan stock-level Family
- 19 Koiarian stock-level Family
- 20 Kwalean stock-level Family
- 21 Manubaran stock-level Family
- 22 Yareban stock-level Family
- 23 Mailuan stock-level Family
- 24 Dagan stock-level Family

SUB-PHYLA

Madang and Adelbert Range Sub-Phylum

Rai Coast-Mabusso (Madang) Super-Stock

- 25 Rai Coast Stock
- 26 Mabusso Stock

Adelbert Range Super-Stock

Pihom-Isumrud-Mugil Section

- 27 Pihom Stock
- 28 Isumrud Stock

- 29 Mugil stock-level Isolate
Josephstaal-Wanang Section
- 30 Josephstaal Stock
- 31 Wanang Stock
Brahman Section
- 32 Brahman Stock
Teberan-Pawaiian sub-phylum-level Super-Stock
- 33 Teberan stock-level Family
- 34 Pawaiian stock-level Family
- 35 Turama-Kikorian Sub-Phylum
- 36 Inland Gulf Sub-Phylum
- 37 Eleman Sub-Phylum
Trans-Fly-Bulaka River sub-phylum-level Super-Stock
- 38 Trans-Fly Stock
- 39 Bulaka River (or Yelmek-Maklew) stock-level Family
- 40 Goliath sub-phylum-level Family
- 41 Oksapmin sub-phylum-level Isolate
- 42 Senagi sub-phylum-level Family
- 43 Pauwasi Sub-Phylum
Border-Tor-Lake Plain sub-phylum-level Super-Stock
- 44 Border Stock
- 45 Tor-Lake Plain Stock
- 46 Morwap sub-phylum-level Isolate
- 47 Molof sub-phylum-level Isolate
- 48 Usku sub-phylum-level Isolate
- 49 Tofamna sub-phylum-level Isolate
- 50 Nimboran sub-phylum-level Family
- 51 Kaure Sub-Phylum
- 52 South Bird's Head (or Vogelkop) Sub-Phylum
- 53 Kolopom (or Frederik Hendrik Island) sub-phylum-level Family
- 54 Timor-Alor-Pantar Sub-Phylum
- WEST PAPUAN PHYLUM
- Bird's Head Super-Stock
- 55 Central Bird's Head Stock
- 56 West Bird's Head stock-level Family
- 57 Amberbaken stock-level Family
- 58 Borai-Hattam sub-phylum-level Family
- 59 Northern Halmahera stock-level Family
- SEPIK-RAMU PHYLUM
- Sepik Sub-Phylum
- 60 Biksi stock-level Isolate
Upper Sepik Super-Stock

- 61 Upper Sepik Stock
- 62 Ram stock-level Family
- 63 Tama stock-level Family
- Middle Sepik Super-Stock
- 64 Yellow River stock-level Family
- 65 Middle Sepik Stock
- 66 Sepik Hill stock-level Family
- 67 Leonhard Schultze sub-phylum-level Family
- 68 Lower Sepik (Nor-Pondo) Sub-Phylum
- 69 Gapun sub-phylum-level Family
- Ramu Sub-Phylum
- Yuat Super-Stock
- 70 Mongol-Langam stock-level Family
- 71 Yuat stock-level Family
- 72 Piawi stock-level Family
- Ramu Super-Stock
- 73 Grass Stock
- 74 Arafundi stock-level Family
- 75 Annaberg Stock
- 76 Ruboni Stock
- 77 Goam Stock

TORRICELLI PHYLUM

- 78 West Wapei stock-level Family
- 79 Wapei-Palei Stock
- 80 Maimai Stock
- 81 Kombio Stock
- 82 Urim stock-level Isolate
- 83 Marienberg stock-level Family
- 84 Monumbo stock-level Family

EAST PAPUAN PHYLUM

- Yele-Solomons-New Britain sub-phylum-level Super-Stock
- 85 Yele-Solomons Stock
- 86 New Britain Stock
- Bougainville sub-phylum-level Super-Stock
- 87 East Bougainville Stock
- 88 West Bougainville Stock
- 89 Reef Islands-Santa Cruz sub-phylum-level Family

MINOR PHYLA

- 90 SKO PHYLUM-LEVEL STOCK
- 91 KWOMTARI PHYLUM-LEVEL STOCK
- 92 ARAI (OR LEFT MAY) PHYLUM-LEVEL FAMILY

- 93 AMTO-MUSIAN PHYLUM-LEVEL STOCK
- 94 EAST BIRD'S HEAD PHYLUM-LEVEL STOCK
- GEELVINK BAY PHYLUM
- 95 East Geelvink Bay stock-level Family
- 96 Yava stock-level Isolate

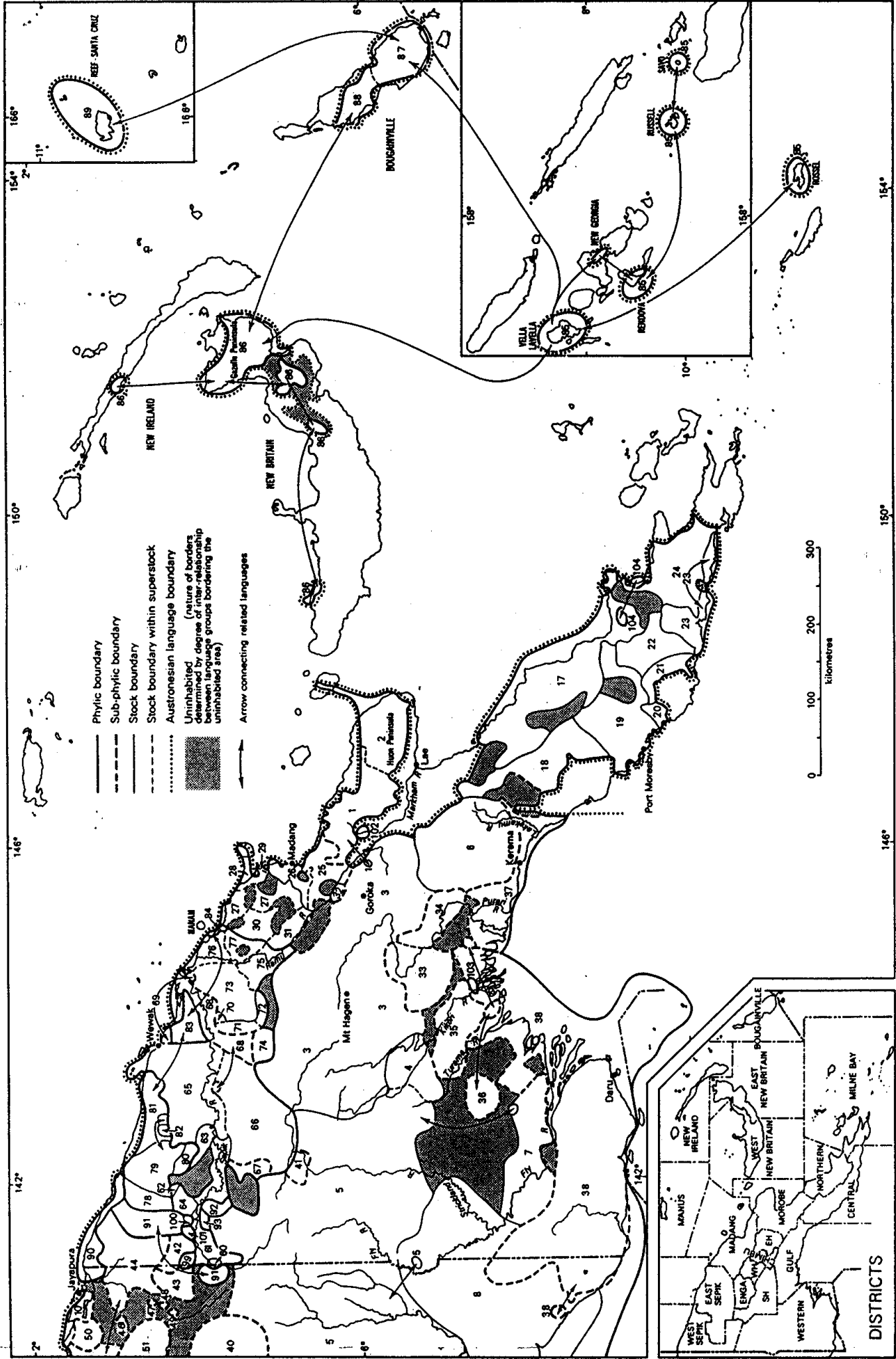
PHYLUM-LEVEL ISOLATES

- 97 WARENBORI PHYLUM-LEVEL ISOLATE
- 98 TAURAP (BOROMESO) PHYLUM-LEVEL ISOLATE
- 99 YURI PHYLUM-LEVEL ISOLATE
- 100 BUSA PHYLUM-LEVEL ISOLATE
- 101 NAGATMAN PHYLUM-LEVEL ISOLATE
- 102 WASEMBO (GUSAP) PHYLUM-LEVEL ISOLATE
- 103 POROME (KIBIRI) PHYLUM-LEVEL ISOLATE
- 104 MAISIN (AUSTRONESIAN-PAPUAN "MIXED" LANGUAGE)

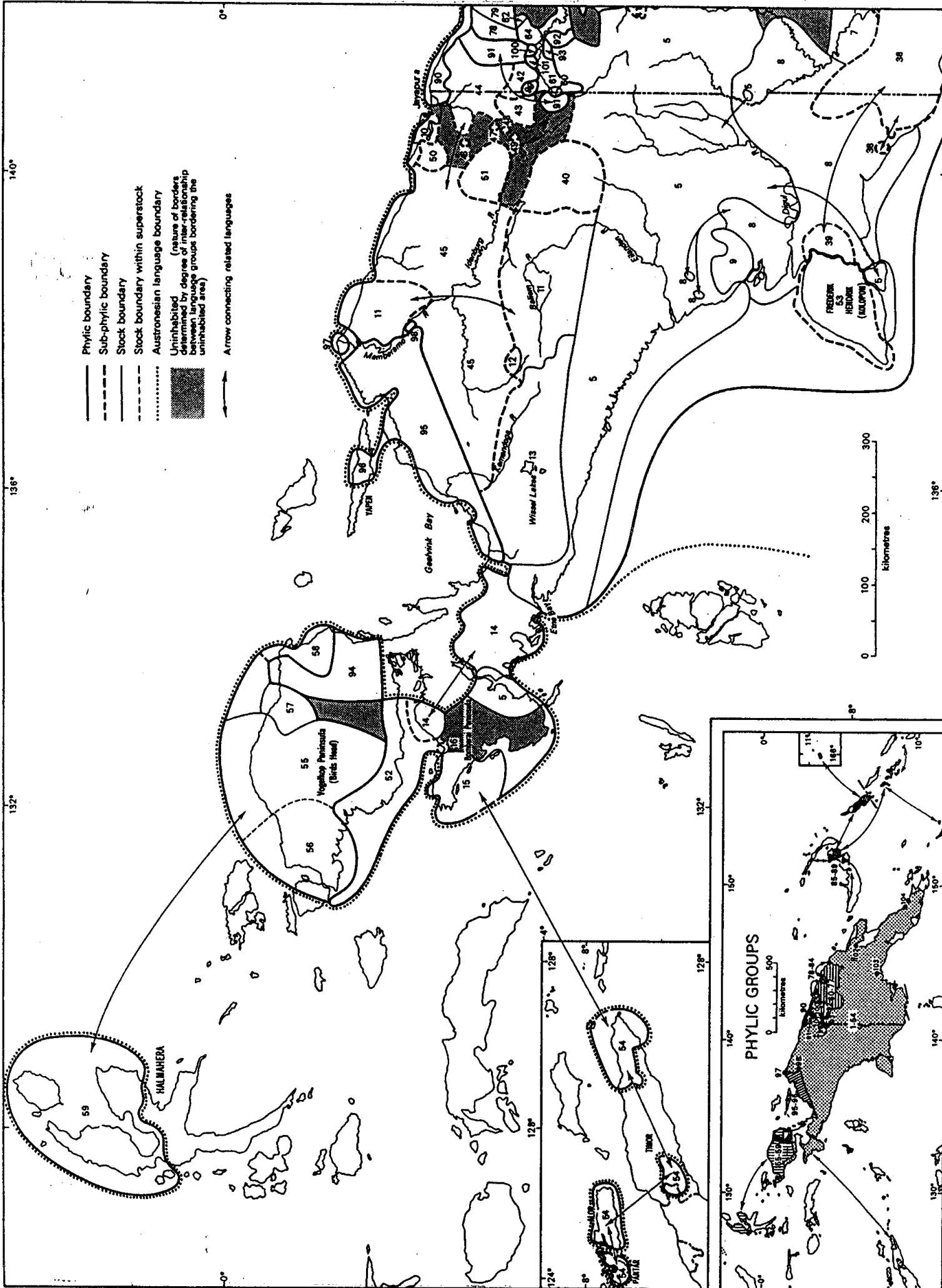
MAP I

PAPUAN LANGUAGE STOCKS - PAPUA NEW GUINEA

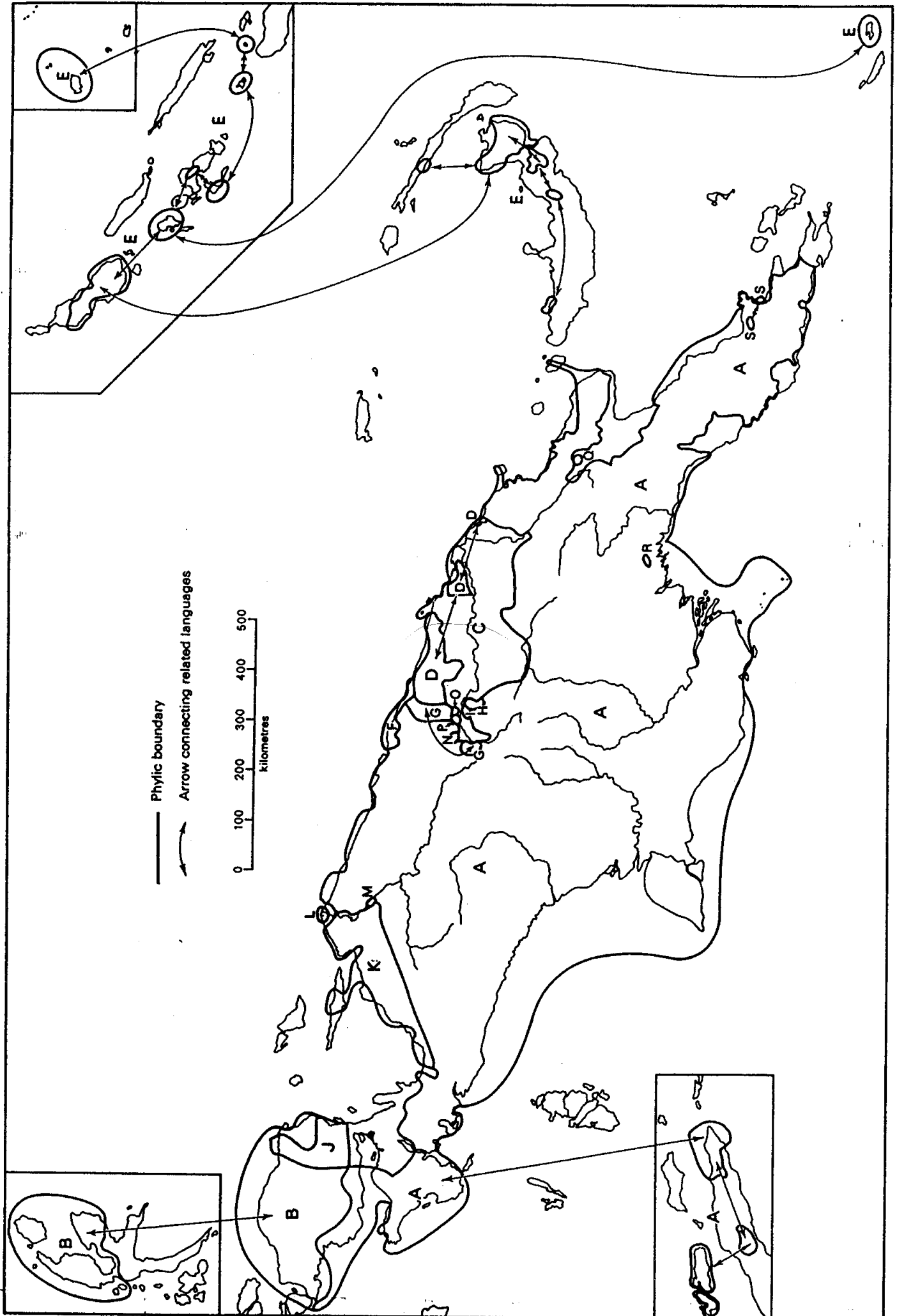
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on its back!)



MAP I: PAPUAN LANGUAGE STOCKS - PAPUA NEW GUINEA



MAP II: PAPIAN LANGUAGE STOCKS - IRIAN JAYA



MAP III: PAPUAN PHYLLIC GROUPS

LEGEND TO MAP OF PAPUAN PHYLIC GROUPS

- A Trans-New Guinea Phylum
- B West Papuan Phylum
- C Sepik-Ramu Phylum
- D Torricelli Phylum
- E East Papuan Phylum
- F Sko phylum-level Stock
- G Kwomtari phylum-level Stock
- H Arai (Left May) phylum-level Family
- I Amtto-Musian phylum-level Stock
- J East Bird's Head phylum-level Stock
- K Geelvink Bay Phylum
- L Warenbori phylum-level Isolate
- M Taurap (Boromeso) phylum-level Isolate
- N Yuri phylum-level Isolate
- O Busa phylum-level Isolate
- P Nagatman phylum-level Isolate
- Q Wasembo (Gusap) phylum-level Isolate
- R Porome (Kibiri) phylum-level Isolate
- S Maisin (Austronesian-Papuan) "mixed" language

1.0. LANGUAGE DISTRIBUTION IN THE NEW GUINEA AREA

N O T E

1. This figure was arrived at by adding up the established and/or estimated numbers of speakers of individual Papuan languages as given in the various chapters in this volume. In some instances in which no figures were available, rough estimates were made on the basis of the known population distribution and densities in given areas. Seeing that most of the figures given are based on population counts which are several years in the past, and population increase in the New Guinea area has been considerable in recent years, it is very likely that the total number of speakers of Papuan languages is at present greater than indicated, by perhaps as much as 3-5%.

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