

2.8.2. THE MADANG-ADELBERT RANGE SUB-PHYLUM

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2.8.2.0. INTRODUCTION

The Madang-Adelbert Range Sub-Phylum (MASP) languages are located in the central part of the Madang District in the north-eastern portion of the New Guinea mainland. Their linguistic neighbours are the Sepik-Ramu Phylum languages in the west, the Finisterre Stock languages in the east, and the East New Guinea Highlands Stock languages in the south. A number of Austronesian languages are located along its coastal areas. The Wasembo language in the Gusap Valley in the Morobe District is probably another member of the MASP group, though aberrant and geographically split off from the main body (see 2.15.4.2. in this volume).

The aim of this study is to give a brief account of attempts to group or classify the languages of the Madang District (for a more detailed study of the history of research in Papuan linguistics in general see part 2.1. in this volume). In 2.8.2.2. a tentative classification of the MASP languages has been presented. The division into dialects and languages is based on the informants' opinion and on the inspection of data. For a survey study such as this one, time was insufficient to conduct a systematic test on the mutual intelligibility of these languages. It must be kept in mind that observations alone can be quite misleading. The grouping into families or stocks is based on Swadesh' principles and further subdivisions such as super-stocks and sub-phyla are on the basis of suggestions by Wurm (see 2.2.5. in this volume). Since the present chapter had to be prepared shortly after my finishing fieldwork in November-December 1973, it was only possible to a limited extent to compare systematically all of the approximately 300 items collected and to

establish the percentages of shared basic vocabulary cognates by computer techniques. However, about sixty words from each language were compared by the inspection method, and a tentative series of cognates tabulated and evaluated. From this, the tentative classification as presented in 2.8.2.2. of this study emerged. In 2.8.2.3., the personal pronouns in their free forms will be given and compared with the pronoun sets in Papuan languages (see 2.3.3. in this volume). In part 2.8.2.4., a comparative wordlist of eight items will be given to illustrate the unity and diversity of this language group and to demonstrate its lexical links with the Trans-New Guinea languages in general.

Other sources have been studied carefully, but the classification as presented in this study is based on the author's own materials, as are the data presented in 2.8.2.3. and 2.8.2.4. As much as possible was retained of O. Claassen and K. McElhanon's (1970) classification of the eastern part of the Rai Coast languages and Z'graggen's (1971a) classification of the Madang and Adelbert Range languages. Changes and corrections were made wherever newly acquired data made this necessary.

The author¹ carried out his first linguistic research in the Madang District in the Mugil area, to the north-west of Madang town, from August 1964 to January 1966. The aim at that time was to obtain an adequate picture of the linguistic situation of the area for which he was responsible as a missionary of the Roman Catholic Church. The linguistically complex area awakened in him a special interest in survey and comparative studies, rather than in a study of an individual language from which he would have benefited only for a small part of the area of mission interest. Another stretch of fieldwork was undertaken under the auspices of the Australian National University from January 1967 to March 1968 and again another from July to October 1969. The aim at that time was to survey as much as possible of the Madang District. The results were tentatively presented in Z'graggen 1971a. Fieldwork in the Madang District was resumed again under the auspices of the Anthropos Institute and in collaboration with the Australian National University in January 1971, and was completed in November 1973. The aim then was to complete the surveying of the Madang District. Districts are becoming more and more political, economic and social units, and studies on a district level in fields such as linguistics should in the long run be advantageous for administrative and educational purposes. The author was in many ways assisted by the excellent work of Nora Umbricht who helped collect and organise data from January 1971 to December 1972. To facilitate the collecting of data, a comparative wordlist was programmed (Z'graggen 1971b) which contained the standard non-cultural vocabulary items together with a list of cultural vocabulary items and other items which were of

particular interest to the author. A comparison of cultural vocabulary items should be of interest, though they are not to be considered in a study of genetic relationships between language groups. The data were collected through New Guinea Pidgin. To avoid misunderstandings, elicitation was carried out in complete sentences, rather than through using single lexical items. For instance, the word *where* was also elicited in a sentence such as *where do you go?* For further information on the author's method of collecting his data, see Z'graggen 1971b. The words and word-stems were systematically compiled in Z'graggen forthcoming a-d. The linguistic survey of the Madang District has been presented in Z'graggen 1975.

2.8.2.1. HISTORY OF RESEARCH

In this part a short account of the main contributions to the study of the Madang-Adelbert Range languages will be given and attempts to classify these languages will be discussed briefly. A more complete study has been given in Z'graggen 1971a and 1975 (see also 2.1.1.4.2. in this volume).

2.8.2.1.1. MIKLUKHO-MAKLAĪ

The Russian scholar N.N. Miklukho-Maklaĭ (Miklucho-Maclay) (1951:157-85) was the first scholar to collect linguistic data in languages of the north coast of New Guinea. He collected wordlists in nine languages which are members of the MASP. Later, Zöllner (1891) published short wordlists from six member languages of the MASP. However, Zöllner failed to recognize the basic difference between Austronesian and Papuan languages and regarded all the languages with which he was concerned, i.e. Austronesian and Papuan languages, as constituting a unit. His attempts at proving this were, however, unsatisfactory (see (II) 4.2.3.). Schmidt (1900) incorporated six of the MASP languages into his summarizing studies of German New Guinea. He described in detail the basic difference between the Austronesian and Papuan languages on the north coast of New Guinea. Dempwolff (1905) published another eight wordlists in languages of the MASP. Hanke's (1909) study comprising a grammar and dictionary of the Bongu language is the only comprehensive study of a single language which has been published. Kaspruś (1942-45) contributed extensive wordlists and some sentence materials to four languages: Mugil (Saker), Garus (Em), Murupi (Ate) and Rempĭ (A'e). Schmitz (1960) adds a surprisingly large list of language or dialect names. Unfortunately, he does not make a clear difference between languages and language groups. Some of his names are merely village names, others are unidentifiable, unless his linguistic

data are made available. Loukotka (1957) and Salzner (1960), in their overall studies, list language names and group them mainly in geographical order. The same applies to Ray (1919:32), though he did publish a list of pronouns, numerals and twenty item wordlist.

2.8.2.1.2. CAPELL

Capell included the Madang District in his survey work carried out in 1950 and obtained valuable new field materials in a number of languages. But his notes on the interrelationships of his Bogia languages are ambiguous and apt to be misinterpreted (see below). First Capell (1952:205) mentions with regard to a possible interrelationship of the Bogia languages:

...; any relationships with other groups lie beyond the present possibility of elucidation. From the amount of material gathered, only indications even of the smaller set of relationships can be given. There are three main groups of languages from a structural point of which*, with which vocabulary in the main agrees: I. Monumbo-Ngaimbom-Lilau. II. The languages east of Lilau. III. The western and inland languages.

Thus a trichotomy of language groups is clearly stated, but they¹ are "only indications". In his linguistic survey of the South-Western Pacific some years later, Capell ((1954), 1962a:49)² writes:

The languages seem to form two main groups, one embracing the Monumbo-Ngaimbom coastal people, and including Bogia station itself, and the other covering the remainder of the sub-district (see Map V). This does not imply complete homogeneity in the second area, but a relatively close connection between the languages as compared with those of the Monumbo-Ngaimbom group.

Capell (1962a:51) then gives a comparative wordlist of four items in nine languages located in the Bogia sub-district and comments:

This short word-list shows the groupings sufficiently clearly for it to appear that there is a certain amount of interrelationship throughout, but that the Monumbo-Ngaimbom languages stand apart, with a suggestion of linking with Gamia; Igom, Tanggum and Makarub are connected and through Makarub there is a bridge with Hubia-Bosngun. This Makarub connection holds further east till it gradually disappears in the Mugil region.

The Banara, Ulingan, Wanambre and Mugil languages "are also related in many ways to the Tangum-Makarub group" (Capell 1962a:52). These many ways were never substantiated by Capell. In inspecting his four-word lists, it is rather surprising to see that he suggests a link of Gamia (Gamei) with Monumbo. The original three structurally different groups have now become two "main groups" or maybe even one. In his overall study of Oceanic linguistics, Capell (1962b:373) repeats the "tentative classification into three groups", but at the same time he calls them now the Bogia group and sees this group in a wider context when he writes:

*Present author's note: misprint: should read "view".

There is probably at any rate a phylum connection of the Bogia group with the Mugil languages (Kasprus' 1942-45) and those in the hinterland of Madang, Nobonob, Amele etc.

Thus the original trichotomy becomes a subgrouping or is given up, as he takes more languages into consideration in the course of time.

Bogia Station is one of the linguistically most complex corners in New Guinea. Four structurally different language groups meet within ten miles of the Bogia District Office. These are: Group I: Torricelli languages; Group II: Adelbert Range languages; Group III: Ramu languages and finally, Sepa, an Austronesian language (see Z'graggen 1971a).

The Monumbo-Lilau (Ngaimbom) languages are members of the Torricelli Phylum. The author could, on his field trip in 1967-68, classify these two languages neither with languages to the west nor to the east of Lilau. Laycock, from an inspection of Vormann-Scharfenberger's (1914) and Z'graggen's materials of Lilau, identified Monumbo-Lilau finally as members of the Torricelli language group. A closer relationship of Monumbo with Valman was already suspected by Schmidt (1900:132). Kirschbaum (1926:277) also postulated a closer relationship of Monumbo with the Sepik languages, especially with Buna. Schebesta (1913:881) was however inclined to believe in a closer link between Monumbo and the Mikarew (Ramu) language. The Monumbo and Lilau languages are separated from each other by a fourth group of languages in the Bogia Sub-District area, the Sepa language, which is Austronesian and located closest to the Bogia station. The name of the Lilau-speaking tribe is Ngaimbom and Lilau is the name of a new settlement of the same tribe on the coast. The Ngaimbom or Lilau people are inland people with no special interest in the sea, but the Monumbo people are economically tied to it. Despite their difference in culture, their languages both belong lexically and structurally to the same language family.

The languages east of Lilau (Group II) are linked with the Madang-Adelbert Range Sub-Phylum and the languages west of Lilau (except Sepa and Monumbo) are linked with the Sepik-Ramu Phylum. Capell's wordlist of Atempte (Atempte) belongs to the Anor language (Ramu Super-Stock) and the Moresada (Murusapa) language has been assigned to the Adelbert Range Super-Stock, Josephstaal Stock, because of structural similarities.

2.8.2.1.3. VOEGELIN C. AND F.

The Voegelins (1965:50-5) propose a Madang (Bogia) Phylum while referring to Capell:

Some relationship apparently exists among nearly all the languages of the Madang District from its north-western border with the Sepik District along the coast and immediately inland as far east as the northern side of Astrolabe Bay beyond Madang. The relationships

between neighboring languages in some of the sub-areas are close enough to be obvious, but the relationships between the languages of different areas are more remote and less certain.

The geographic groups of languages ... may actually be language families, or possibly branches of a single family to which a few language isolates are more distantly related.

The Voegelins (1965:51ff.) propose three language groups which differ to some extent from those of Capell (1952). The groups are: 1) western and inland Bogia Sub-District group, 2) East-of-Bogia Coastal Group and 3) Ramu River group. The establishment of the Ramu River group is a new development after Capell's grouping. The Monumbo and Lilau (Ngaimbom) languages and those of the Rai Coast and Astrolabe area are regarded as unclassified.

2.8.2.1.4. WURM

Wurm (1971:606ff.) proposes a Bogia Phylum which consists of A) the Western and Central Stock, which includes the Western Family and Central Family and the Makarub, Bunabun and Wanambre languages, B) Monumbo, C) Tangum, D) Annaberg, and E) Eastern families and fifteen not yet classified languages. Wurm has compared some of the available material systematically for the first time, and gives percentage figures of shared vocabulary. His percentage figures are astonishingly high, though they match to some extent Z'graggen's (1971a) classification despite the latter's lower percentages. There is a considerable overlap of vocabulary between the Adelbert Range and the Ramu languages which justifies to some extent Wurm's Bogia Phylum. On the basis of some typological characteristics, Wurm (1971:610) distinguishes three different types of languages within the Bogia Phylum. Wurm was able to incorporate into his findings Z'graggen's (1968) field report, which was prepared at the invitation of the Anthropos Institute before he completed his fieldwork. In March 1968, shortly after returning to the Australian National University, Z'graggen again made a modified list of language names available to Wurm.

Wurm incorporated these two sources into Wurm 1971 and this explains the appearance of some new language and language group names. Z'graggen (1971a) however adopted or dropped some of his earlier names. Z'graggen (1971a) also proposed the Ramu Phylum, whose western boundaries were at the time not yet known, and which is now part of the Sepik-Ramu Phylum (Laycock 1973). Regarding the languages east of Lilau, Z'graggen (1971a) proposed their inclusion into the Adelbert Range and Madang Phyla. The interrelationship between these two separate phyla was not yet established at that time, but a possible link between the Adelbert Range and Madang languages and their extension further east was suggested by Z'graggen (1971a:103).

2.8.2.1.5. GREENBERG

In his Indo-Pacific hypothesis, Greenberg (1971) proposes a Monumbo language group which combines Capell's groups I and III. This Monumbo group constitutes a part of his North New Guinea Stock, which extends to the Sepik and to Irian Jaya. But none of the cognate series which Greenberg gives for illustration, link the Monumbo-Lilau (Ngaimbom) languages with the rest of his Monumbo sub-group, and therefore, his material militates against the existence of this link. The languages east of Lilau, and including the languages of the Astrolabe Bay area, form in Greenberg's opinion the Northeastern or the Madang sub-group. Ray (1919) to whom Greenberg refers, proposed a Bongu or Astrolabe group, but this group did not include the westernmost part which Greenberg includes, nor does Capell's group include Bongu and the Astrolabe area. Greenberg gives only two words which link the Madang languages with the Adelbert Range languages. The word for *star boi* is very common in the Madang languages, but very rare in the Adelbert Range languages. The word for *to die uma*, however, links most of the Adelbert Range languages with the Rai Coast languages, but the forms in the Mabuso Stock area deviate. This is hardly enough evidence to justify the grouping. Greenberg (1971:821) states furthermore:

the Northern group which includes Capell's group I and III, extends far to the east where it encounters a sharp linguistic boundary with the Northeastern subfamily, a boundary already recognized by Capell in principle.

But Capell's (1962b) two basic groups are Monumbo and the rest, i.e. the groups east and west of Lilau.

2.8.2.1.6. CLAASSEN AND McELHANON

Claassen and McElhanon (1970) pioneered the linguistic survey of the Finisterre Range area which extends into the eastern portion of the Madang District. They established the western boundaries of the Finisterre language group in the Madang District and proposed for the first time a new language stock which they called the Rai Coast language stock. In 1969, Claassen kindly made available to Z'graggen a language map of the eastern part of the Madang District, upon the latter's request. McElhanon and the Summer Institute of Linguistics (S.I.L.) also kindly made available their field materials of the Madang District to Z'graggen for inspection in September 1972. These sources of the Summer Institute of Linguistics were studied by Z'graggen, and their pioneer work is herewith acknowledged. Z'graggen, however, subsequently proceeded to collecting his own material, mainly during 1973. Claassen's extensive contribution to the comparative linguistics of the eastern part of the Madang District came to an abrupt end when he tragically died in an air crash accident.

2.8.2.2. TENTATIVE CLASSIFICATION

The Madang-Adelbert Range Sub-Phylum languages are located in the Central part of the Madang District. Z'graggen (1971a) proposed two separate phyla, each with its special structural characteristics, such as prefixing in the Adelbert Range and suffixing in the Madang languages. An interphylic relationship between the two phyla was only suggested (Z'graggen 1971a:103). Wurm (personal communication) proposed that the two language groups constituted the Madang-Adelbert Range Sub-Phylum, which is a subgroup within the Trans-New Guinea Phylum. The pronouns and parts of the lexicon support such a combination, but the differences in structure may call for an explanation.

There were several gaps in Z'graggen's (1971a) survey involving the central part of the Adelbert Range and the southern part of the Upper Ramu area. Further gaps were discovered during the fieldwork period of 1971-73. In December 1973, still existing gaps were marked on the language map with "?". The languages of the Astrolabe Bay area and hinterland defied classification and the western boundary of Claassen and McElhanon's Rai Coast Stock was not yet established in 1971. Special care was taken to identify the linguistic affiliations of all the villages listed in the Village Directory 1973. This led to the discovery of some new languages. As much of the previous classification was retained as the inspection of materials justified. A few corrections became necessary as new materials were forthcoming and new languages were discovered. Family names which had been made up of the first syllables of language names were replaced by the names of rivers centrally located in the linguistic area, if new members of the respective families were discovered. Some language names were dropped, e.g. Bogadjim, where they proved to be names of dialects, or changed (e.g. Korapa) if they appeared to be unsuitable for language names.

The grouping of the MASP languages is shown in Table A. Most of the population figures are based on the 1973 census. The letters and numbers refer to the language map of the Madang District (Z'graggen 1973). The Bai language was identified only when work was well advanced, and is for this reason marked as Bx. The classification is based on an inspection of only a portion of the linguistic materials available and for this reason it is only tentative, but it should prove useful in organizing the data and in describing the linguistic situation. Undoubtedly, the classification as proposed now has yet to be confirmed or modified by a systematic comparison of more items.

The location of the language groups and languages is given on the accompanying map.

2.8.2.2.1. THE MADANG SUPER-STOCK

The Madang Super-Stock consists of two language stocks: the Mabusu Stock, extending east of the Lower and Middle Gogol River, and the Rai Coast Stock, extending in an easterly direction.

2.8.2.2.1.1. The Rai Coast Stock (B)

The Rai Coast Stock consists of six families: Evapia, Kabenau, Yaganon, Peka, Nuru and Mindjim. Claassen and McElhanon (1970) first proposed the Rai Coast Stock which comprised at that time only four families.

2.8.2.2.1.1.1. The Evapia Family, named after the Evapia River, consists of the following languages: Sinsauru, Asas, Sausi, Kesawai and Dumpu. The former name Koropa has been abandoned, because this village is bilingual, i.e. Asas and Sausi speaking. The Claassen and McElhanon wordlist for Koropa is of Asas. Kaikovu is not listed in the Village Directories for 1968 and 1973. The Claassen and McElhanon Kaikovu wordlist is Sinsauru. Another Kaikovu wordlist in the S.I.L. archives was collected in Kesawai village and is in the Kesawai language. The Claassen and McElhanon Taga wordlist was also collected in Kesawai village and is also in the Kesawai language. The name Watiwa is unknown to the informants and was for this reason replaced by Dumpu, a well-known name. Claassen and McElhanon (1970) link Dumpu (Watiwa) with the Kabenau Family, but a membership with Evapia seems more likely. Claassen and McElhanon (1970: 60) note with reference to Dumpu (Watiwa): "its inclusion in the Kabenau Family is tenuous and it may prove to be a language isolate".

2.8.2.2.1.1.2. The Kabenau Family as first proposed by Claassen and McElhanon (1970) consisted of disconnected sections on the Upper Ramu and the Middle Kabenau Rivers, and the coastal area. The newly proposed family still consists of three geographically separated sections. It consists of: Arawum, Kolom, Suroi, Lemio and Pulabu. Arawum and Pulabu are new members. Zöllner's (1891) wordlist of Kadda belongs to the Pulabu language. There must be a misunderstanding as far as Claassen and McElhanon's Gurumbu language is concerned. Claassen and McElhanon indicate a relationship of 71% between Gurumbu and Lemio. The present writer could not find a Gurumbu language wordlist in the S.I.L. archives. Informants finally assured the present writer that Gurumbu and Lemio were one language. A check with the help of data which the present writer collected himself at Gurumbu village confirmed this view. Suroi is referred to by earlier writers as the Rimba or Rumba language. Aufinger (in Kaspruś 1942-45) published, under the name Rimba, a short wordlist of their everyday language and their secret language, and some sentence materials.

Schmitz (1960) lists Rimba (Suroi) incorrectly as Melanesian. As regards Kolom, Dempwolff (1905:240-3) published an extensive wordlist under the name Langtub (now spelled Lamtub).

2.8.2.2.1.1.3. The Yaganon Family consists of the languages Yabong, Ganglau, Saep and Bai, and was first posited by Claassen and McElhanon (1970). Only when his work was well in progress did the author identify Maklaï's (1951) wordlist of the Bai village language as a member of the Yaganon Family, and has for this reason marked it with Bx to avoid re-numbering. Tappenbeck (1901) gives the location of Bai village in the Kulilau and Dumun area, which constituted a gap in the author's linguistic survey. Bai village is not listed in the Village Directory of 1973. The Yaganon Family is aberrant within the Rai Coast languages.

2.8.2.2.1.1.4. The Peka Family consists of the Usino, Sumau, Urigina and Danaru languages. Z'graggen (1971a) refers to this group as the Usur language group. Since Danaru is a new member of the family, the river name Peka has been adopted. Claassen and McElhanon (1970) refer to this group as the Usino Family, and include in it also the Bagasin or Girawa language. The Claassen and McElhanon wordlist for Bagasin-Girawa was, however, collected in Sumau village and this list belongs to the Sumau village language as a comparison of the material reveals. Bagasin-Girawa belongs lexically and typologically to the Mabusos Stock.

2.8.2.2.1.1.5. The Nuru Family consists of the languages Usu, Erima, Duduela, Kwato, Rerau, Jilim and Yangulam. Usu was pushed further south from the remainder of the Nuru Family by the Ham people who are Austro-nesian.

2.8.2.2.1.1.6. The Mindjim Family consists of the languages Bom, Male, Bongu, Songum. Bom is referred to by other sources also as the Bogadjim language. Z'graggen (1971a) lists a Bom and Bogadjim language, but at a later stage of research he realized that the two formed one language.

2.8.2.2.1.2. The Mabusos Stock (C)

The Mabusos Stock comprises one family-level isolate: Kare, and three families: Kokon, Gum and Hanseman, and this language group appears to be uniform in lexicon and in structure.

2.8.2.2.1.2.1. The Kare family-level Isolate belongs basically to the Mabusos language group, though it is aberrant in some respects. This might be due to its close geographical proximity to the Adelbert Range languages.

2.8.2.2.1.2.2. The Kokon Family consists of the Girawa, Bemal and Sihan languages. This family is located east of the Upper Gogol River system and fills a gap found in Z'graggen 1971a.

2.8.2.2.1.2.3. The Gum Family consists of the languages Sihan, Gumalu, Isebe, Amele, Panim and Bau. The family is located in a compact area west of the Lower Gogol River area. Since Panim is a new member of the family, the original name Abaian has been changed to the river name Gum.

2.8.2.2.1.2.4. The Hanseman Family consists of nineteen members: Raptng, Wamas, Samosa, Murupi, Saruga, Nake, Mosimo, Garus, Yoidik, Rempi, Bagupi, Silopi, Utu, Mawan, Baimak, Matepi, Gal, Garuh and Kamba. Some of these languages may prove to be only dialects because there appears to be mutual intelligibility among several of these languages, though informants insisted repeatedly that they were different languages. The area was previously more densely populated, as earlier reports of missionaries indicate. See, for instance, Kaspruś' (1942-45) village and language map.

2.8.2.2.2. THE ADELBERT RANGE SUPER-STOCK

The Adelbert Range Super-Stock extends from the northern half of Karkar Island across the central part of the Adelbert Range to the Middle Ramu River and across the Upper Ramu River towards Goroka. It consists of six stocks: the Mugil stock-level Isolate, and the Isumrud, Pihom, Josephstaal, Wanang and Brahman Stocks. The Mugil-Isumrud-Pihom languages and the Josephstaal-Wanang languages form lexical subgroups.

2.8.2.2.2.1. The Mugil stock(-level Isolate) (D)

The Mugil stock-level Isolate belongs structurally to the Adelbert Range languages, but it has been lexically heavily influenced by the neighbouring Mabusu and Austronesian languages.

2.8.2.2.2.2. The Isumrud Stock (E)

The Isumrud Stock - named after the Isumrud Strait between Karkar Island and the New Guinea mainland - is located on the northern part of Karkar Island and in the coastal area of the mainland opposite Karkar Island. Though the speakers of Isumrud Stock languages live in a near-coastal area, those on the mainland have no special economic ties with the sea. The stock consists of one family-level isolate: Dimir, and two families: Kowan and Mabuan.

2.8.2.2.2.2.1. The Dimir family-level Isolate is located on the mainland. Dimir is characterized by its overt number marking on nouns, which is the only observed instance in the Mugil-Isumrud-Pihom languages.

2.8.2.2.2.2.2. The Mabuan Family consists of the Malas and Bunabun languages, both located on the mainland.

2.8.2.2.2.2.3. The Kowan Family consists of the languages Waskia and Korak. The Waskia language is located on the northern part of Karkar Island and in Tokain village on the mainland. Korak is spoken on the mainland west of Karkar Island. Both languages prefix the possessive pronoun to nouns denoting a body parts and relationship term which is in contrast to the remainder of the stock.

2.8.2.2.2.3. The Pihom Stock (F)

The Pihom Stock - named after one of the highest mountains in the Adelbert Range - extends from the immediate coastal area across the central part of the Adelbert Range towards the upper Gogol River and consists of the Kaukombaran, Kumilan, Tiboran, Omosan, Numagenan and Amaimon families. Z'graggen (1971a) distinguished five families. Further fieldwork in the central part which was at that time still unsurveyed, resulted in some changes and additions: now five families and one family-level isolate (Amaimon) are recognized.

2.8.2.2.2.3.1. The Kaukombaran Family consists of four closely related languages: Pay, Pila, Saki and Tani. The languages are named after the word *talk*, *word* in the vernacular. Some earlier writers refer to those Kaukombaran languages as the Banara or Hatzfeldhafen languages or dialects. The Pay and Pila people are sea-oriented, but the Saki and Tani people are inland people with no special economic interest in the sea.

2.8.2.2.2.3.2. The Kumilan Family consists of three languages: Ulingan, Bepour and Moere. Because of new membership the former name Ubean has been changed to Kumilan.

2.8.2.2.2.3.3. The Tiboran Family consists of five languages: Kowaki, Mawak, Hinihon, Musar and Wanambre. Because of new membership, the original name Mawamuan has been changed to Tiboran. The originally assumed geographical location of Mawak was found to be in need of correction.

2.8.2.2.2.3.4. The Omosan Family consists of two languages: Koguman and Abasakur. This family fills a gap in Z'graggen 1971a.

2.8.2.2.2.3.5. The Numagenan Family consists of six languages: Wanuma, Yaben, Yarawata, Bilakura, Parawen and Ukuriguma. Because of new entries, the original name Wayapan has been changed to the river name Numagenan. The linguistic identification of the villages in this area was extremely difficult, and the informants' opinion was not always supported by lexical evidence. This area needs further attention, especially as regards migrations. The language group, except for Wanuma, deviates from the remainder of the stock in that the object marker *is*, in part, suffixed to the verb root.

2.8.2.2.2.3.6. The Amaimon family-level Isolate is located at the southern end of the Pihom Stock in the neighbourhood of the Wanang and Mabuso languages and has been tentatively included in the Pihom Stock.

2.8.2.2.2.4. The Josephstaal Stock (G)

The Josephstaal Stock is named after the Patrol Station Josephstaal and located on the southern slopes of the Adelbert Range in the neighbourhood of the Ramu languages. The stock consists of two families: Sikan and Pomoikan, and two family-level isolates: Osum and Wadaginam.

2.8.2.2.2.4.1. The Sikan Family consists of the Katiati and Sileibi languages. Sileibi is a new entry, additional to those given in Z'graggen 1971a. In the Sikan languages, the object marking pronoun is not affixed to the verb root.

2.8.2.2.2.4.2. The Osum family-level Isolate extends south from Josephstaal Patrol Station towards the Sogeram River. The southern boundaries are still uncertain. Numbers are overtly marked with nouns in it.

2.8.2.2.2.4.3. The Pomoikan Family consists of three languages: Pondoma, Ikundun and Moresada. Capell (1952) listed Moresada or Murusapa with the Ramu languages or with his Group III. Structural comparisons support their inclusion with the Adelbert Range and Josephstaal languages. The Pomoikan languages are the only languages with a concordance class system involving nouns and adjectives (see Z'graggen 1971a:118ff.).

2.8.2.2.2.4.4. The Wadaginam family-level Isolate is separated from the remainder of the stock by the Goam River and its speakers are at present

socially and economically more associated with the Tangu people. But the structure of the languages of the family links with that of the Josephstaal Stock.

2.8.2.2.2.5. The Wanang Stock (H)

The Wanang Stock - named after the Wanang River - is located north of the Middle Ramu River area and consists of two families: Atan and Emuan, and a family-level isolate: Paynamar. Pronouns are not affixed to the noun or verb roots, except for Paynamar which prefixes the possessive pronoun to some nouns denoting terms for relatives.

2.8.2.2.2.5.1. The Atan Family consists of two languages: Atemptle and Angaua. Atemptle village is now disintegrating. Capell (1952:185ff.) inadvertently put his Anor wordlist under the name Atemptle.

2.8.2.2.2.5.2. The Emuan Family consists of two languages: Emerum and Musak. Tevari village is geographically separated from the Emerum speaking community.

2.8.2.2.2.5.3. The Paynamar family-level Isolate is spoken in just one small hamlet: Paynamar on the Sogeram River.

2.8.2.2.2.6. The Brahman Languages

The Brahman languages - named after the Brahman cattle station - are tentatively regarded as a family and included into the Adelbert Range languages. The Brahman Family consists of the following languages: Isabi (Maruhia), Biyom (Sasimo), Tauya (Inafosa) and Faita. Deibler of the Summer Institute of Linguistics first collected wordlists of three of the Brahman languages. His language names are put in brackets (see above) but they have not been adopted since the present writer's informants were not familiar with them. They are probably clan names. Z'graggen visited the area in May 1973 and collected his own materials. The languages appear to have belonged originally to the Adelbert Range area, though they have each, to a varying degree, been influenced by the Rai Coast and Highlands languages. Faita on the Ramu River has the closest links with the Adelbert Range languages and its mythology links them with the Wanang area. Biyom was originally believed to be linked with the Gende language and the East New Guinea Highlands Stock. The language appears to be tonal. Tauya is spoken in only two villages (Tauya and Kausi) at the foothills of the Bismarck Range. The Isabi speaking people had close social and economic ties with the Gahuku people of the East New Guinea Highlands

Stock. Isabi is heavily influenced by the East New Guinea Highlands Stock languages (Wurm, personal communication) and appears to be tonal.

In all Brahman languages, the possessive and object marking pronouns are prefixed to the stem, which is characteristic of the Adelbert Range languages. The singular pronoun forms are similar to the forms in the Adelbert Range, whereas the plural forms are similar to those found in the Rai Coast languages.

2.8.2.2.3. OVERALL CLASSIFICATION PROBLEMS

Claassen and McElhanon (1970:58) classified the Rai Coast and Finisterre languages as being

in different micro-phyla for a number of reasons. The lexicostatistical relationship is slight and within the range which could be attributed to chance or to the presence of unrecognized loans. The pronominal system differs as also do a number of vocabulary items which are generally stable throughout the Finisterre-Huon Micro-phylum.

The data collected by the present writer appear to support this view.

Wurm (1971:610f.) suggests "the existence of some very distant link" between the languages of his Bogia Phylum and the Central New Guinea Macro-Phylum. This is because of "some sporadic lexical correspondences" and "some typological agreements". Sentence medial verb forms are definitely present in Waskia, Wanuma and Mugil and other languages. Dual number in person is very common in the Madang languages, but rare in the Adelbert Range languages.

In 1970 McElhanon and Voorhoeve proposed their Trans-New Guinea Phylum and Wurm (personal communication) considering the linguistic situation in a wider perspective grouped the Madang-Adelbert Range as a sub-phylum in the Trans-New Guinea Phylum.

However, the present writer finds a comparison of languages with the Trans-New Guinea Phylum material as presented by McElhanon and Voorhoeve a very difficult task indeed. In their publication two formerly separate phyla are brought together and shown to be genetically related. These phyla are the Central and South New Guinea Phylum with 68 members and the Huon-Finisterre Phylum with 72 member languages, i.e. a total of 140 languages. For 25 languages, most of them at the south coast, none of the cognates are given, but they are apparently included on other grounds not presented in this publication, probably those constituted by the recognition of a reasonably close relationship between them and languages included in the comparison. Fifty-three words are presented which are manifested in 93 cognate series. At least twelve roots are of Austronesian origin (see 2.5.4.2.2. in this volume) and some more may not have been discovered yet. About half of the words are manifested in two, three

or four cognate series in free or merged form, e.g. *tongue*, or occurring simultaneously or in complementary distribution in individual languages, e.g. *nose*. Only half the words are found to occur in a single series of cognates, and these are frequently marked with a,b,c,d,x,? indicating unexplained elements which might be parts of an undiscovered root. Twenty-two cognate series are found in less than 5% of the languages compared, with the lowest number 3%, but these languages are widely scattered through the two phyla in most instances. Only ten cognate series are found in more than half of the languages, the highest number being 96 for the word for *I* - these are the pronouns and the words *eye*, *urine*, *mother*, *louse*, *eat*. The word for *louse* might be culturally conditioned and the word for *mother* might be partly child language. The word for *to eat* is one of the very widespread roots and links also with most of the Rai Coast and Adelbert Range languages. In the writer's opinion, the evidence listed may be inadequate for the postulation and illustration of a genetic relationship in the traditional way. The pronouns in the Madang-Adelbert Range languages differ from those commonly encountered in the Trans-New Guinea languages. Undoubtedly there are some Trans-New Guinea Phylum roots present in the Madang and Adelbert Range languages, but a comparison on wider grounds seems impossible before more material is made available.

2.8.2.3. THE PERSONAL PRONOUNS

In this section, the personal pronouns in their free forms are set out in Table II and subsequently compared with a number of Wurm's pronoun sets in non-Austronesian (or Papuan) languages (see 2.3.3. in this volume). The third person plural pronoun has not been included because of its complexity. Most of the pronoun forms contain a second element, which in most cases could be identified as a number marker, which is marked in Table II by a dash (-). No marking is made if forms are unrecognizably fused or doubtful. Unexplained elements are marked with "x" (not to be confused with Wurm's set x (see 2.3.3.6.) - members of that set occur in Madang-Adelbert Range languages in only some very few instances and are of no importance in them). The figures 1,2,3 etc. placed after the pronouns in Table II indicate to which of Wurm's sets I,II,III etc. (see 2.3.3. in this volume) a particular pronoun belongs.

The first and second persons singular pronoun forms in the MASP languages belong, with only a few exceptions, to set III (see 2.3.3.4. in this volume), whereas those in the majority of the Trans-New Guinea Phylum languages belong to set I (see 2.3.3.2.). In the Madang, Josephstaal, Wanang and Brahman languages the third person singular pronoun forms belong mostly to set III, whereas most of the Isumrud and

Pihom forms belong to set II (see 2.3.3.3.). The assignment of the form u'pa with its labio-velar point of articulation causes some trouble. This form could be assigned to set II or set III. The affixed forms of the possession and object marking forms belong to set I. It is possible that a demonstrative was given instead of the third person singular pronoun, though care was taken to avoid this error. Most of the Trans-New Guinea Phylum forms belong to set I and a few to set III. The first person plural forms belong mostly to set III, but the Josephstaal, Kowan and Numagenan languages, and a few others, belong to set I. The Trans-New Guinea Phylum forms belong to set I. The second person plural forms belong to set I in the Rai Coast languages, except for the Mindjim Family, and in most of the Brahman languages. The rest, with some exceptions, especially among the Wanang languages, belong to set III. The Trans-New Guinea Phylum language forms belong mainly to set I, though possibly a few of them belong to set II. Thus, there is a great difference between the pronoun sets of the Trans-New Guinea Phylum and the MASP languages, but the facts indicate in part a unity of Madang and Adelbert Range languages.

The pronouns have been studied in their free and emphatic forms as well as in their possessive and object marking forms. Space does not allow the inclusion of them all, and in a few cases some additional field enquiry has to be done. But a few notes on the occurrence of structural patterns of the affixed pronouns will be given. The occurrence of the structural patterns is displayed in Table I.

With regard to the expression of a possessive relationship, nouns are frequently divided into two classes (2C1): the class of terms for relatives (R) and parts of body (B), which form together the RB class, and the object class (O). The latter includes all exceptions to the RB class. In a one-possessive class system (1C1) this distinction is not made.

The markers expressing possessive relationship (PM) are immediately prefixed or suffixed to the noun base, but in the Kokon languages a ligative is inserted between them. In some languages, affixes are directly added only to some of the potential members of a class of nouns, with a common exception being the word for *blood*. Some of the noun bases change and the third person singular forms are frequently irregular in the Madang languages.

The prefixing pattern is typical of the Adelbert Range languages, and the suffixing of the Madang languages, but there are exceptions in the Rai Coast languages (see Table I). In some of them, the possessive marker is prefixed only to terms denoting relatives, and in the case of Danaru, only to terms indicating parts of the body. These variations are marked

in Table I by R or B respectively. Some of the Rai Coast and Adelbert Range languages have a 1Cl system. For illustrative material the reader is referred to Z'graggen 1971a:121-42.

In a number of languages the person or number of fillers of the object slot have to be in agreement with the verb, i.e. the object is related to the verb via the object marker (OM). The object marker is prefixed in most of the Adelbert Range languages. However, in the Numugenan languages, except Wanuma, the object marker is suffixed to some of the verbs. In all of the Mabusu languages the object marker is suffixed, as is the case in most of the Rai Coast languages, with the exception of Pulabu. In some of the Rai Coast languages, the OM is prefixed to some of the verbs while it is suffixed to others. For illustrative material see Z'graggen 1971a:159ff.

Table I illustrates the occurrence of the abovementioned structural characteristics. Presence is marked by +, absence by --, a class which includes only body parts by B, and only terms for relatives by R.

TABLE I: STRUCTURAL PATTERNS OF PERSONAL PRONOUNS:

		RAI COAST LANGUAGES				
LANGUAGE	1Cl	2Cl pref.	2Cl suff.	OM pref.	OM suff.	
B1 Sinsauru	+	--	--	--	+	
B2 Asas	--	--	+	--	+	
B3 Sausi	+	--	--	--	+	
B4 Kesawai	+	--	--	--	+	
B5 Dumpu	+	--	--	--	+	
B6 Arawum	--	R	--	--	+	
B7 Kolom	+	--	--	--	+	
B8 Suroi	--	--	+	--	+	
B9 Lemio	--	R	--	--	+	
B10 Pulabu	--	R	--	--	--	
B11 Yabong	--	--	+	--	--	
B12 Ganglau	+	--	--	--	+	
B13 Saep	--	--	+	--	+	
B14 Usino	--	--	+	+	+	
B15 Sumau	--	--	+	--	+	
B16 Urigina	--	--	+	--	+	
B17 Danaru	--	R	?	+	+	
B18 Usu	--	--	+	+	+	
B19 Erima	--	--	+	+	+	
B20 Duduela	--	--	+	--	+	
B21 Kwato	+	--	--	--	+	
B22 Rerau	+	--	--	+	+	
B23 Jilim	--	R	--	--	+	
B24 Yangulam	+	--	--	--	+	
B25 Bom	+	--	--	--	+	
B26 Male	+	--	--	--	+	
B27 Bongu	+	--	--	--	+	
B28 Songum	+	--	--	--	+	

TABLE I (cont'd)

MABUSO LANGUAGES

LANGUAGE	1C1	2C1 pref.	2C1 suff.	OM pref.	OM suff.
C1 Kare	--	--	+	--	+
C2 Girawa	--	--	+	--	+
C3 Munit	--	--	+	--	+
C4 Bemal	--	--	+	--	+
C5 Sihan	--	--	+	--	+
C6 Gumalu	--	--	+	--	+
C7 Isebe	--	--	+	--	+
C8 Amele	--	--	+	--	+
C9 Bau	--	--	+	--	+
C10 Panim	--	--	+	--	+
C11 Raptng	--	--	+	--	+
C12 Wamas	--	--	+	--	+
C13 Samosa	--	--	+	--	+
C14 Murupi	--	--	+	--	+
C15 Saruga	--	--	+	--	+
C16 Nake	--	--	+	--	+
C17 Mosimo	--	--	+	--	+
C18 Garus	--	--	+	--	+
C19 Yoidik	--	--	+	--	+
C20 Rempi	--	--	+	--	+
C21 Bagupi	--	--	+	--	+
C22 Silopi	--	--	+	--	+
C23 Utu	--	--	+	--	+
C24 Mawan	--	--	+	--	+
C25 Baimak	--	--	+	--	+
C26 Matepi	--	--	+	--	+
C27 Gal	--	--	+	--	+
C28 Garuh	--	--	+	--	+
C29 Kamba	--	--	+	--	+

MUGIL-ISUMRUD-PIHOM LANGUAGES

LANGUAGE	1C1	2C1 pref.	2C1 suff.	OM pref.	OM suff.
D1 Mugil	--	+	--	+	--
E1 Dimir	+	--	--	+	--
E2 Malas	+	--	--	+	--
E3 Bunabun	+	--	--	+	--
E4 Korak	--	+	--	+	plural*
E5 Waskia	--	+	--	+	--
F1 Pay	--	+	--	+	--
F2 Pila	--	+	--	+	--
F3 Saki	--	+	--	+	--
F4 Tani	--	+	--	+	--
F5 Ulingan	--	R	--	+	--
F6 Bepour	+	--	--	+	--
F7 Moere	+	--	--	+	--
F8 Kowaki	--	+	--	+	--
F9 Mawak	+	--	--	+	--
F10 Hinihon	+	--	--	+	--
F11 Musar	+	--	--	+	--
F12 Wanambre	+	--	--	+	--
F13 Koguman	+	--	--	+	--
F14 Abasakur	+	--	--	+	--
F15 Wanuma	--	R	--	+	plural*
F16 Yaben	--	R	--	+	+
F17 Yarawata	--	R	--	+	+
F18 Bilakura	--	R	--	+	+
F19 Parawen	--	R	--	+	+
F20 Ukuriguma	--	R	--	+	+
F21 Amaimon	+	--	--	--	--

TABLE I (cont'd) JOSEPHSTAAL-WANANG-BRAHMAN LANGUAGES

LANGUAGE	1Cl	2Cl pref.	2Cl suff.	OM pref.	OM suff.
G1 Sileibi	+?	--	--	--	--
G2 Katiati	--	R	--	--	--
G3 Osum	--	R	--	+	--
G4 Pondoma	--	R	--	--	--
G5 Ikundun	--	+	--	+	--
G6 Moresada	--	+	--	+	--
G7 Wadaginam	--	+	--	+	--
H1 Atempte	+	--	--	--	--
H2 Angaua	+	--	--	--	--
H3 Emerum	+	--	--	--	--
H4 Musak	+	--	--	--	--
H5 Paynamar	--	R?	--	+	--
I1 Isabi	--	+	--	+	--
I2 Biyom	--	+	--	+	--
I3 Tauya	--	+	--	+	--
I4 Faita	--	+	--	+	--

*"plural" (Mugil-Isumrud-Pihom Languages section of the table) indicates the presence of a single marker denoting plurality of object and not varying for person.

TABLE 11 (cont'd)

PRONOUN: <i>ye</i>	RAI COAST (A)	MABUSO (A)	wu 2	MUGIL (B)	ne 3	JOSEPHSTAAL (B)	WANANG (B)	WANG (B)	TI (ngara) 1
B1	Sinsauru	C1 Kare	wu 2	D1 Mugil	ne 3	G1 Sileibi	H1 Atemptle	I1 Isabi	ti (ngara) 1
B2	Asas	C2 Giraw	ʌʌ 3	ISUMRUD (B)	ne-n 3	G2 Katiati	H2 Angaua	I2 Biyem	si 1
B3	Sausi	C3 Munit	age 3	E1 Dimir	na-n 3	G3 Osum	H3 Emerum	I3 Taya	ti (ni) 1
B4	Kesawai	C4 Bemal	ʌg 3	E2 Malas	a-ne 3	G4 Pondoma	H4 Musak	I4 Faifa	nant 3
B5	Dumpu	C5 Sihan	ake 3	E3 Bunabun	ni-mtan 3	G5 Ikundun	H5 Paynamar		
B6	Arawum	C6 Gumalu	age 3	E4 Korak	ni-na 3	G6 Moresada			
B7	Kolom	C7 Isebe	ʌge 3	E5 Waskia		G7 Wadaginam			
B8	Suroi	C8 Amele	ake 3	PIHOM (B)					
B9	Lemio	C9 Bau	ake 3	F1 Pay	ni-maka 3				
B10	Pulabu	C10 Panim	ʌge 3	F2 Pila	nai 3x				
B11	Pulabu	C11 Raptang	ak 3	F3 Saki	nai 3x				
B12	Yabong	C12 Wamas	ʌge 3	F4 Tani	ni 3				
B13	Saep	C13 Samosa	ʌge 3	F5 Ulingan	ni 3				
B14	Ganglau	C14 Murupi	aga 3	F6 Bepour	ni 3				
B15	Usino	C15 Saruga	ʌga 3	F7 Moere	ni 3				
B16	Sumau	C16 Nake	ʌg 3	F8 Kowaki	ni 3				
B17	Urigina	C17 Mosimo	ʌge 3	F9 Mawak	ni 3				
B18	Danaru	C18 Garus	eg 3	F10 Hinihon	ni 3				
B19	Usu	C19 Yoidik	ʌg 3	F11 Musar	ni 3				
B20	Erima	C20 Remp1	hak x3	F12 Wanambre	ni 3				
B21	Duduela	C21 Bagupi	eg 3	F13 Koguman	ni 3				
B22	Rerau	C22 Silopi	eg 3	F14 Abasakur	ni 3				
B23	Jilim	C23 Utu	ek 3	F15 Wanuma	ni 3				
B24	Yangulam	C24 Mawan	ak 3	F16 Yaben	ni 3				
B25	Bom	C25 Baimak	ak 3	F17 Yarawata	ni 3				
B26	Male	C26 Matepi	eg 3	F18 Bilakura	ni 3				
B27	Bongu	C27 Gal	ʌg 3	F19 Parawen	ni 3				
B28	Songum	C28 Garuh	ʌg 3	F20 Ukuriguma	ni 3				
		C29 Kamba	ag 3	F21 Amaimon	ni 3				

(A) = MADANG SUPER-STOCK, (B) = ADELBERT RANGE SUPER-STOCK

2.8.2.4. COMPARATIVE WORDLIST

In the following section a comparative wordlist of eight items will be given for illustration. Only brief comments will be made on the words, and they will be compared with the Trans-New Guinea Phylum languages and the Austronesian languages. Space does not allow the inclusion of more items, and these have been selected because of their comparability with the Trans-New Guinea Phylum languages and Wurm's proto-forms (see 2.4.1.5.5. in this volume). Cognate series (S) are marked with numerals, and subsets with some common phonetic features by letters. Unexplained elements are marked with an x and residues which are found only in very few instances are marked with R. The cognate series were identified with the help of Wurm's Trans-New Guinea Phylum proto-sound system (see 2.4.1. in this volume). In doubtful cases, the geographical location of the languages to which given words belonged was also taken into account.

A number of cognate series occur as free forms or as constituents of a combined form. Examples from the Trans-New Guinea Phylum languages are the words: *eye*, *tongue*, *hair*, *head*, *knee*. One can rightly assume that the combined, fuller form is the proto-form from which different elements have broken off in the course of development. The nature of the break-away process is obvious in many cases. On the other hand, one has also to take into account the possibility of the joining of two previously independent roots. For instance, the form *ɲamge eye* (Bongu) is such an example. A consonant sequence *m+g* indicates a morpheme boundary in Bongu. Thus, from the morpheme structure, one may assume the presence of two roots instead of one. In addition, the words for *tongue* and *head* in the Trans-New Guinea Phylum vocabulary (see McElhanon and Voorhoeve 1970) are in fact combinations of an Austronesian with a Trans-New Guinea Phylum root. The Austronesian proto-forms *shas*, of course, been adopted according to Trans-New Guinea Phylum rules. For these reasons the present writer has hesitated to trace some of the cognate series back to one origin. For inspection, some data are given in Table III.

TABLE III (cont'd)

WORD: <i>skin</i>		RAI COAST (A)		MABUSO (A)		MUGIL (B)		JOSEPHSTAAL (B)		WANANG (B)		BRAHMAN (B)	
B1	Sinsauru	mete 1	C1	Kare	daru 2x	D1	Mugil	san 2?	G1	Sileibi	far 1	I1	Isabi
B2	Asas	mede 1	C2	Girawa	?eru 2	E1	Dimir	goq-man R	G2	Katiati	yuptr xl	I2	Biyom
B3	Sausi	mete 1	C3	Murit	gera 2	E2	Malas	gunu 2	G3	Osum	sangata 4+2	I3	Itaiya
B4	Kesawai	mete 1	C4	Bemal	gala 2	E3	Bunabun	kar 2	G4	Pondoma	karabu 2+x	I4	Faita
B5	Dumpu	midi 1	C5	Sihan	kana 2	E4	Korak	kim 2x	G5	Ikurdun	wus 1		
B6	Arawum	njal 2x	C6	Gumalu	ganau 2	E5	Waskia	goan R	G6	Moresada	monak R		
B7	Kolom	mande 1	C7	Isebe	gana 2				G7	Madaginam	sowange- R		
B8	Suroi	ngaro 1	C8	Amele	tewen R								
B9	Lemio	gef 2	C9	Bau	kana 2								
B10	Pulabu	cinaway R	C10	Panim	gana 2								
B11	Yabong	gotonj 1	C11	Raptang	gana 2	F1	Pay	nar 2	H1	Atemple			
B12	Ganglau	gulam 2	C12	Wamas	gara 2	F2	Pila	ndia 4	H2	Angau			
B13	Seep	gei'ag 2	C13	Samosa	gara 2	F3	Saki	dia 4	H3	Emerum			
B14	Usino	mubo 3	C14	Murupi	gara 2	F4	Tani	uka 3	H4	Musak			
B15	Sumau	mubu 3	C15	Saruga	gara 2	F5	Ulingan	kanema 2x	H5	Paynamar			
B16	Uriginu	membe 3	C16	Nake	gara 2, fe 1	F6	Bepour	han 2x					
B17	Danaru	ngurarif 2+R	C17	Mosimo	gara 2	F7	Moere	kar 2					
B18	Usu	gija 2	C18	Garus	gara 2	F8	Kowaki	fu'u 3					
B19	Erima	kokola R+2	C19	Yoidik	sa 2?	F9	Mawak	fuku 3					
B20	Duduela	kana 2	C20	Rempi	gara 2	F10	Hinhon	fuk 3					
B21	Kwato	kaukana R+2	C21	Bagupi	gara 2	F11	Musar	huku 3					
B22	Rerau	mujungum R	C22	Silopi	keri 2, fe 1	F12	Wanambre	uku 3					
B23	Jilim	kom R	C23	Utu	gara 2, fe 1	F13	Koguman	ogu 3					
B24	Yangulam	jelam 2	C24	Mawan	gari 2	F14	Abasakur	gugu R					
B25	Bom	ga'ra 2	C25	Baimak	gara 2, feru 1	F15	Wanuma	goan 2a					
B26	Male	ko 2x	C26	Matepi	gara 2	F16	Yaben	guanu 2a					
B27	Bongu	garu 2	C27	Gal	gari 2, feri 1	F17	Yarawata	guana 2a					
B28	Songum	?o 2x	C28	Garuh	gara 2	F18	Bilakura	guan 2a					
			C29	Kamba	gone 2	F19	Parawen	goana 2a					
						F20	Ukuriguma	guan 2a					
						F21	Amaimon	mura 1					

(A) = MADANG SUPER-STOCK, (B) = ADELBERT RANGE SUPER-STOCK

1. *ARM* Wurm *kös^(r)ĩ(u)č^Mü

S1 in the Madang-Adelbert Range languages links with SII of the Trans-New Guinea Phylum languages as listed in McElhanon and Voorhoeve 1970 and matches the first part or all of the reconstructed form. S2 in the Madang-Adelbert Range languages links with SI of the Trans-New Guinea Phylum languages, but an additional initial vowel is found. Differences between dewu versus bara in the Mabusu languages can be explained by metathesis. S4 could be linked with S2 when postulating that in the S2 forms, the initial k- sound had been dropped. But S2 and S4 co-occur in Koguman abu-gaum, and this makes a one-root explanation doubtful.

2. *EYE* Wurm *(avu-)DAžK^MA(-Pur⁽ⁿ⁾)

S1 and S2 are found in separation and in combination as in, for example age-mu. Subset 1a could be understood as an amalgamation of 2+1, but this would be in contrast to the Bongu form ŋam-ge 1+2. S2 links with SI of the Trans-New Guinea Phylum (McElhanon and Voorhoeve 1970) in a full or abbreviated form. S4 links with the SI of the Trans-New Guinea Phylum. S2 and S4 probably have the same root though the material provides no direct evidence. S6 links with the pur element in some of the Trans-New Guinea Phylum languages and with the *-Pur⁽ⁿ⁾ part of Wurm's reconstruction. This co-occurrence makes the same root possibility doubtful.

3. *SKIN* Wurm *KODOP^MIka

S1 links with *-P^MIka and S2 with *KODŌ- of the reconstructed form. S2 links with SI of the Trans-New Guinea Phylum languages as listed in McElhanon and Voorhoeve 1970. Both forms are found as variants in a few languages of the Hanseman language group. S2 may well have originated in the Oceanic proto-form *kuli(t). The form kuli, together with its variants, is common among Austronesian languages in the Madang area and this form is in contrast to tini *body*. The author has taken great care to elicit the forms for both *skin* and *body*, though subsequently he has had some doubts as to whether he always received the right forms. The form tewen (Amele) is another Austronesian form. S4 could be explained as a breakaway form of S1, but the writer has not found enough evidence for this.

4. *EAR* Wurm *(Ō)KAĐAM(a) ~ ((Ō)ČAĐAM(a))

S1 links largely with the proto-form, mainly with its part *(Ō)KAĐ- and with Trans-New Guinea Phylum SII as listed in McElhanon and Voorhoeve 1970. S2 could be regarded as a subset of S1 with metathesis of Đ and M allowed for in many instances. S3 could perhaps also be regarded as a subset of S1, and reflecting the part *-ĐAM(a) of the proto-form, though

the final element -oy (damoy in Songum) would have to be explained (< *(a)?). As pointed out, S1, S2 and S3 could be traced back to Wurm's proto-form, but this proto-form would then have had to have undergone a complex history of changes and adaptations. This item illustrates a great complexity and diversity within this language group.

5. FIRE Wurm $*(\ddot{i})\text{D}\ddot{A}\begin{cases} -\text{De} \\ -\text{kaP}^{(M)}\ddot{A} \end{cases}$

S2 links largely with the Trans-New Guinea Phylum form SI as listed in McElhanon and Voorhoeve 1970 and matches Wurm's $*(\text{I})\text{D}\ddot{A}-\text{De}$ to a considerable extent. This proto-form suffered many changes in the Madang-Adelbert Range area. S1 links with Wurm's $*-\text{kaP}^{(M)}\ddot{A}$. This form might have its origin in the Austronesian root *api*. Forms such as *kembi* could be interpreted as an amalgamation of S2 + S1, i.e. Trans-New Guinea Phylum plus Austronesian. The final -p as in *enap* (Silopi) might be due to Austronesian influence. But *yab fire* is a common form for many Austronesian languages of the New Guinea mainland.

6. LOUSE Wurm $*\text{T}^n\text{Im}\ddot{A}\begin{matrix} n \\ 0 \end{matrix}$

S1 in its full and shortened form links with Trans-New Guinea Phylum SI as listed in McElhanon and Voorhoeve 1970, and with Wurm's proto-form, and is found almost universally in the Madang, Josephstaal, Wanang and Brahman languages. S2 is very common in the Isumrud and Pihom languages. S5 is an Austronesian loan.

7. EAT $*(\ddot{i})_n^{(d)}\text{A}(i) \sim *(\ddot{i})_N^{(d)}\text{A}(i)$

The full form in MASP appears to be *ɲanim*, and deviations may perhaps be regarded as breakaway forms. S1 links with the Trans-New Guinea Phylum SI as listed in McElhanon and Voorhoeve 1970 and with Wurm's proto-form, though for the Madang-Adelbert Range area an additional $*-m$ proto-sound would have to be postulated. For forms such as *za*, *da* another series S2 is postulated since a sound shift from $*n$ to *z*, *d*, *r*, *l* is not for instance, paralleled by a similar change for the form *na* (*you*). The assignment of the root form *a*, *e* (Male) is difficult and it could conceivably be assigned to S1 or S3.

8. SLEEP $*\text{P}\ddot{A}\ddot{C}\ddot{A}(g)0$

S1 links with residue forms of the Trans-New Guinea Phylum languages as listed in McElhanon and Voorhoeve 1970. The initial consonant in Sla changes to *k-*, *s-* or *h-* and is dropped in Slb. Slc forms such as *nig* can be explained as the result of a metathesis of *g-* with *-n-*. This form seems to be based on the Austronesian form *eno*. The initial *kV-* syllable is also found in a number of Austronesian languages in the Madang District area. If this is the case one may wonder why such an everyday word would be borrowed over such a large area. S2 links with Trans-New Guinea Phylum forms such as *isi*, etc.

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2. The author was unable to check the 1954 edition.

2.8.2. THE MADANG-ADELBERT RANGE SUB-PHYLUM

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