THE LANGUAGE OF THE RAO PEOPLE, GRENGABU, MADANG PROVINCE, PAPUA NEW GUINEA

by

John M. Stanhope

Department of Linguistics
Research School of Pacific Studies
THE AUSTRALIAN NATIONAL UNIVERSITY
PACIFIC LINGUISTICS is issued through the Linguistic Circle of Canberra and consists of four series:

SERIES A - OCCASIONAL PAPERS
SERIES B - MONOGRAPHS
SERIES C - BOOKS
SERIES D - SPECIAL PUBLICATIONS

EDITOR: S.A. Wurm.


EDITORIAL ADVISERS:
B. Bender, University of Hawaii
D. Bradley, University of Melbourne
A. Capell, University of Sydney
S. Elbert, University of Hawaii
K. Franklin, Summer Institute of Linguistics
W.W. Glover, Summer Institute of Linguistics
G. Grace, University of Hawaii
M.A.K. Halliday, University of Sydney
A. Healey, Summer Institute of Linguistics
L. Hercus, Australian National University
N.D. Liem, University of Hawaii
J. Lynch, University of Papua New Guinea
K.A. McElhanon, University of Texas
H. McKaughan, University of Hawaii
P. Mühlhäusler, Linacre College, Oxford
G.N. O'Grady, University of Victoria, B.C.
A.K. Pawley, University of Hawaii
K. Pike, University of Michigan; Summer Institute of Linguistics
E.C. Polomé, University of Texas
G. Sankoff, Université de Montréal
W.A.L. Stokhof, Jakarta
E. Uhlenbeck, University of Leiden
J.W.M. Verhaar, University of Indonesia, Jakarta

ALL CORRESPONDENCE concerning PACIFIC LINGUISTICS, including orders and subscriptions, should be addressed to:

The Secretary,
PACIFIC LINGUISTICS,
Department of Linguistics,
School of Pacific Studies,
The Australian National University,
Box 4, P.O.,
Canberra, A.C.T. 2600.
Australia.

Copyright © J.M. Stanhope.
First published 1980.

The editors are indebted to the Australian National University for help in the production of this series.
This publication was made possible by an initial grant from the Hunter Douglas Fund.

National Library of Australia Card Number and ISBN 0 85883 222 4
<table>
<thead>
<tr>
<th>Table of Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDITOR'S INTRODUCTION</td>
<td>v</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>vii</td>
</tr>
<tr>
<td>0. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1. LANGUAGE RELATIONSHIPS</td>
<td>3</td>
</tr>
<tr>
<td>2. SOUNDS (PHONEMES)</td>
<td>4</td>
</tr>
<tr>
<td>2.1. Vowels</td>
<td>4</td>
</tr>
<tr>
<td>2.2. Consonants</td>
<td>5</td>
</tr>
<tr>
<td>2.3. Orthography</td>
<td>8</td>
</tr>
<tr>
<td>3. GRAMMAR</td>
<td>9</td>
</tr>
<tr>
<td>3.1. Pronouns</td>
<td>9</td>
</tr>
<tr>
<td>3.2. Nouns</td>
<td>9</td>
</tr>
<tr>
<td>3.3. Adjectives</td>
<td>9</td>
</tr>
<tr>
<td>3.4. Postpositions</td>
<td>10</td>
</tr>
<tr>
<td>3.5. Adverbs</td>
<td>10</td>
</tr>
<tr>
<td>3.6. Verbs</td>
<td>10</td>
</tr>
<tr>
<td>3.7. Word Order</td>
<td>11</td>
</tr>
<tr>
<td>4. RAO WORDLIST</td>
<td>13</td>
</tr>
<tr>
<td>4.1. Nouns</td>
<td>13</td>
</tr>
<tr>
<td>4.2. Adjectives</td>
<td>16</td>
</tr>
<tr>
<td>4.3. Adverbs, etc.</td>
<td>16</td>
</tr>
<tr>
<td>4.4. Verbs</td>
<td>17</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>18</td>
</tr>
<tr>
<td>Map 1: New Guinea</td>
<td>20</td>
</tr>
<tr>
<td>Map 2: Ramu-Keram Region</td>
<td>21</td>
</tr>
<tr>
<td>Map 3: Seven Villages Round Grengabu</td>
<td>22</td>
</tr>
</tbody>
</table>
Figure 1: A Rao Woman Entering her House at Urinebu  
Figure 2: A Rao Grave at Urinebu  
Figure 3: The Grave of Rev. Henry Herget S.V.D.  
Figure 4: Chungrebu Village in the Flood Season  
Figure 5: Sacred Flutes at Pakingibu
EDITOR'S INTRODUCTION

The author of this description of the Rao language is a medical doctor, not a linguist. However, the work of doctors in Papua New Guinea often brings them into closer contact with the languages of the people than can be achieved by linguists undertaking surveys, or even spending a normal fieldwork period of perhaps a year with a particular language. This work is the product of ten years' work in a Rao-speaking area, and is published here because of the virtual lack of previously published data on the language.

It is clear that the work is not that of a professional linguist. In general, the data tallies with the survey list I recorded in 1971 with informants Wagumali, from Bumbera, and Njobar, from Nongito – essentially the same dialect as here described – but there are some discrepancies. The phonology, in particular, is over-differentiated. My data do not show glottalised consonants, and suggest that there is only slight evidence of contrast between b and g (Stanhope's h). Prenasalisation – or perhaps rather sequences with nasal first element – also extends to the alveopalatal and continuant series, with ns, nj, nz and nr [ndr] being common. Phonemes s and z are pronounced affricated in initial position: [ts], [dz].

For the pronouns, my data shows ngu/nga and ni/no for the first singular and second plural basic forms, rather than Stanhope's gu/ga and nyi/nyo; this may reflect dialectal differences. Basic word order, like that of almost all Papuan languages, is NA and SOV. In terms of relationships, there is no doubt that Rao is a member of the Sepik-Ramu Phylum, and that its closest relatives are Anor and Aiome. It is ultimately related to Akrukay, Banaro, and Breri, but, as these are in different stocks, the relationship is not very close.

In preparing Dr Stanhope's manuscript for publication, the author's text has been altered only where misunderstanding could arise, or where
other information suggested adding a word or two of explanation. The professional linguist will therefore find some of the terminology a little strange, but the general outlines of the language appear clear in the author's treatment, and the wordlist of several hundred items provides a useful basis for comparison of Rao with other Papuan languages of the area.

Don Laycock
Canberra, June 1980
ACKNOWLEDGEMENTS

The author is grateful to the people of the seven villages who patiently provided the data, and to missionaries at Tsumbar, Chungrebu and Annaberg who helped in various ways over the years 1962-1972. His Honour the Administrator kindly permitted access to government patrol reports.
0. INTRODUCTION

The Rao people inhabit an area of north eastern New Guinea along the Ramu and Keram Rivers, 80-100 kilometres inland from Hansa Bay. The population numbers about 4000. Their tribal territory includes several mission stations, notably Annaberg founded by SVD missionaries in 1934 (Stanhope 1968). Swamps and small lakes are interspersed with forests over most of the terrain, merging into low wooded hills to the south, along the edge of the Schrader Range.

The Rao were traditional traders. Stones for implements came in from the mountains in exchange for clay pots, while pots, stones and sago were traded to neighbouring swamp-dwelling tribes to the north for fish, taro, skirts, bows, arrows and baskets.

First contact was made by the German botanists Lauterbach and Tappenbeck in 1896-1898 (Stanhope 1968; Henderson 1962; New Guinea Handbook 1937 and 1943).

The Rao describe how a party of Germans came downstream and landed at Chungrebu, seizing pigs and planted coconuts. The people drove them off. An old man, Jidu, who died in 1968, told me this happened in his childhood.

In 1921 the geologist Evan Stanley sailed 200 miles up the river to Atemble and found traces of gold. On his way back he informed Mr E. Wauchope of Awar plantation, who went prospecting round Atemble but did not stay long (Moyne 1936). There is a Rao tradition that an Australian party travelling upstream was repulsed at Rota'bi, a hamlet of Urinebu village, subsequently eroded by the river. A boy Ngewi was taken by the party, and returned in 1946, a middle-aged man, having worked at Wau, Bulolo and Rabaul during the intervening years.

In 1936, Lord Moyne found that "except for two Catholic missions [Atemble and Annaberg - JMS] no white man lived there" on the Ramu River. One of his two launches was holed on a reef, presumably at Bangapela, a Banaro village on the river bank. The second launch was holed not far above the junction of the Ramu and the "Ramuta", which is
the Sogeram River, called Dramŋu-'ba by the Rao. He stayed for some time at a village which he named "Grengapoo" (Grengabu), and eventually reached Annaberg (Moyne 1936). This paper is based on data collected in the villages Wotabu, Dubu, Grengabu, Urinebu, Chungrebu, Monjibu and Pakingibu, all within two hours' walk of Moyne's "Grengapoo" locality.

The area was under minimal outside influence until the Japanese advanced up the Keram from Angoram to occupy Annaberg and Atemble in October 1943 (McCarthy 1959). Eight men in the Grengabu villages were appointed headmen by the Japanese - Mago and Dubai (Pakingibu), Yaŋgori and Neŋai (Chungrebu), Kanimba (Urinebu), Nyonai (Grengabu), Burukai (Dubu) and Ikuwun (Wotabu). One Pakingibu man, Greŋgan, was beheaded by Banaro men allegedly acting on Japanese orders, but there were no other casualties. The Japanese patrolled the Ramu above the Sogeram junction, and hid boats in Kurara creek. They used Daŋdaŋ lake south of Wotabu as a float-plane anchorage.

The Japanese left Annaberg in May 1944, ahead of Allied patrols. Some Sepik men marching with the Allies married Rao women, and have been influential figures in the present period (e.g. Kawari, refer Stanhope 1968). Australian government influence was initiated by a patrol in October 1946 (Jones 1946) and Catholic missionaries soon returned to Annaberg (District Annual Report 1946-47). Official censuses of Wotabu, Dubu, Grengabu and Chungrebu were made in August 1948.

Cahill (1950) recommended that the Sepik-Madang district border, which was then the Ramu River, be moved westwards so that all Rao and Breri villages be covered by the same officers. To administer the new Rao-Breri census division, Sirinibu was made a patrol post. This station was the site of a wartime airstrip, a few miles south of Annaberg mission. It had an aid-post, evidently of superior construction, which Cahill described as "a costly failure". The first resident officer, G.P. Taylor, found Sirinibu unsuitable and moved to Annaberg in July 1951 (Taylor 1951). In 1953 the patrol post was moved again, to Aiome at the foot of the Schrader Range (District Annual Report 1952-53). The Grengabu villages now experienced a period of social regression, due possibly to their distance from the Aiome station. Sick people were hidden from patrols. Flood made the maintenance of latrines and garbage pits impossible. Male absenteeism increased with more labour recruiting (Battersby 1958).

The Catholic mission by 1960 had a priest (Father Materne), a saw-miller, a nurse and another lay woman worker. Several of the Grengabu villages had catechist schools, but there was rising dissatisfaction with both mission and government, and the Grengabu villages made overtures to two Protestant missions seeking better schools (Moyle 1960a).
Kawari, a Sepik immigrant, started a trade store and bought an outboard motor, becoming an influential leader in Grengabu (Moyle 1960b). A Protestant mission station was opened at Chungrebu in 1960.

During the decade 1962-1972, elected local and national governments have come into being. Limited employment opportunities in the lower Ramu valley now provide an alternative to plantation labour outside the district. Schooling to grade 6 level is now available and a few boys have begun secondary education at distant boarding schools.

1. LANGUAGE RELATIONSHIPS

The inhabitants of the seven Grengabu villages speak the Rao language. Capell gives a brief description of this language under the name "Anaberg" (Capell 1951-52), naming Tjigurubu village as the source of his data. My informants could not identify this place [but almost certainly Chungrebu].

The five riverside villages Chungrebu, Urinebu, Grengabu, Dubu and Wotabu call themselves Dram+, which is also their name for the Ramu River. They claim that the early explorers' "Ramu" is a mispronunciation of Dram+. The two villages away from the river, Pakingibu and Monjibu, are included under the name Wutangre. The seven villages class the rest of the Rao into groups which they say have differing ways of speaking the language, but all are mutually intelligible. The subdivisions of the Rao which result are:

1) Dram+/Wutangre, the seven Grengabu villages.

2) Wu-nə-ndu-ri occupying the Ramu banks from above Wotabu upstream to Jitibu. This area surrounds the Catholic Mission station Annaberg and the local government council chambers at Nodabu. Wu appears to be a name for the Ramu River round Annaberg, nə-ndu-ri means 'children of', hence "Wu's children".

3) Ndrevr+, occupying the Keram area from Guasingi near Annaberg down to Bumbera, with an offshoot across to the Ramu at Tsumbar.

4) Upper Keram, round the headwaters of the Keram River and on the lowest slopes of the Schrader Range. The Dram+ Rao do not distinguish these people from the upper Schrader Mountain people, Wrawru, though they recognise them as Rao speakers.

5) Munanga River, an isolated group inhabiting the villages on a small tributary of the Keram. This group is several miles west of the Ndrevr+, and until recently was not known to the Dram+ Rao.
Z'graggen (1970) assigns Rao, Anor (Anora) and Aiome to a common stock within a Ramu language phylum. Akrukay (Olton), Banaro (Ve'o) and Breri do not appear to be related, unless very distantly. Map 2 depicts the languages, under the names now commonly used by the Rao, together with Z'graggen's numbers, for easy comparison with his linguistic map of the western Madang region. Map 2 also includes languages mentioned in my earlier paper (Stanhope 1972), again labelled with Z'graggen's numbers.

The small letters within Rao area 66 refer to the five subdivisions listed above.

2. SOUNDS (PHONEMES)

2.1. VOWELS

There are seven distinct vowels.

- a as in father, sometimes shorter. May occur anywhere in a word, initial, medial or final.
- e as in egg. May occur anywhere in a word.
- i intermediate between the vowels of ink and steep.
- o as aw in awful, sometimes shorter.
- u as in full.
- ø as e in French de.
- ü an unrounded u.

All these vowels can occur medially or finally. I have not found u, or ü, initially. The following wordlist contains many minimal pairs which establish the separate identity of these seven vowels:

<table>
<thead>
<tr>
<th>Boehm</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>bado 'dermis root'</td>
<td>'reek'</td>
</tr>
<tr>
<td>bada 'tree'</td>
<td>'head'</td>
</tr>
<tr>
<td>gra 'flower'</td>
<td>'bird'</td>
</tr>
<tr>
<td>gro 'egret'</td>
<td>'wallaby'</td>
</tr>
<tr>
<td>me 'fish'</td>
<td>'house'</td>
</tr>
<tr>
<td>mi 'finger, eat'</td>
<td>'sago'</td>
</tr>
<tr>
<td>mo 'skin'</td>
<td>'hair'</td>
</tr>
<tr>
<td>mu 'red'</td>
<td>'eat!'</td>
</tr>
<tr>
<td>mbri 'owl'</td>
<td>' Ли'</td>
</tr>
<tr>
<td>mbra 'house'</td>
<td>'house'</td>
</tr>
<tr>
<td>mbra 'sago'</td>
<td>'sago'</td>
</tr>
<tr>
<td>mu 'red'</td>
<td>'red'</td>
</tr>
<tr>
<td>mua 'eat!'</td>
<td>'eat!'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kroeck</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>dði 'mayfly'</td>
<td>'butterfly'</td>
</tr>
<tr>
<td>dro 'cough'</td>
<td>'drum'</td>
</tr>
<tr>
<td>de 'ache'</td>
<td>'ache'</td>
</tr>
<tr>
<td>gra 'flower'</td>
<td>'flower'</td>
</tr>
<tr>
<td>kro 'bird'</td>
<td>'bird'</td>
</tr>
<tr>
<td>ku 'blood'</td>
<td>'blood'</td>
</tr>
<tr>
<td>kæ 'brother'</td>
<td>'brother'</td>
</tr>
<tr>
<td>kre 'wallaby'</td>
<td>'wallaby'</td>
</tr>
<tr>
<td>mee 'granddaughter'</td>
<td>'granddaughter'</td>
</tr>
<tr>
<td>mbrö 'owl'</td>
<td>'owl'</td>
</tr>
<tr>
<td>mua 'lily'</td>
<td>'lily'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boehr</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>fæ 'butterfly'</td>
<td>'butterfly'</td>
</tr>
<tr>
<td>fa 'drum'</td>
<td>'drum'</td>
</tr>
<tr>
<td>ku 'blood'</td>
<td>'blood'</td>
</tr>
<tr>
<td>ku 'blood'</td>
<td>'blood'</td>
</tr>
<tr>
<td>me 'fish'</td>
<td>'fish'</td>
</tr>
<tr>
<td>mbrö 'owl'</td>
<td>'owl'</td>
</tr>
<tr>
<td>mbrö 'house'</td>
<td>'house'</td>
</tr>
<tr>
<td>mu 'red'</td>
<td>'red'</td>
</tr>
<tr>
<td>mua 'lily'</td>
<td>'lily'</td>
</tr>
<tr>
<td>nö 'axe'</td>
<td>'axe'</td>
</tr>
<tr>
<td>pe 'sister-in-law'</td>
<td>'sister-in-law'</td>
</tr>
<tr>
<td>pe 'daughter-in-law'</td>
<td>'daughter-in-law'</td>
</tr>
<tr>
<td>ne 'hawk'</td>
<td>'hawk'</td>
</tr>
<tr>
<td>ni 'get'</td>
<td>'get'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Türrm</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>mbra 'sago'</td>
<td>'sago'</td>
</tr>
<tr>
<td>mbri 'hair'</td>
<td>'hair'</td>
</tr>
<tr>
<td>mua 'lily'</td>
<td>'lily'</td>
</tr>
<tr>
<td>mua 'lily'</td>
<td>'lily'</td>
</tr>
<tr>
<td>nö 'axe'</td>
<td>'axe'</td>
</tr>
<tr>
<td>pe 'sister-in-law'</td>
<td>'sister-in-law'</td>
</tr>
<tr>
<td>pe 'daughter-in-law'</td>
<td>'daughter-in-law'</td>
</tr>
<tr>
<td>ne 'hawk'</td>
<td>'hawk'</td>
</tr>
<tr>
<td>ni 'get'</td>
<td>'get'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Türrm</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>mbra 'sago'</td>
<td>'sago'</td>
</tr>
<tr>
<td>mbri 'hair'</td>
<td>'hair'</td>
</tr>
<tr>
<td>mua 'lily'</td>
<td>'lily'</td>
</tr>
<tr>
<td>mua 'lily'</td>
<td>'lily'</td>
</tr>
<tr>
<td>nö 'axe'</td>
<td>'axe'</td>
</tr>
<tr>
<td>pe 'sister-in-law'</td>
<td>'sister-in-law'</td>
</tr>
<tr>
<td>pe 'daughter-in-law'</td>
<td>'daughter-in-law'</td>
</tr>
<tr>
<td>ne 'hawk'</td>
<td>'hawk'</td>
</tr>
<tr>
<td>ni 'get'</td>
<td>'get'</td>
</tr>
</tbody>
</table>
ri 'small' rato 'cheek' mvra 'basket'
re 'betel nut' rato 'inquest' mvra 'enemy'
ru 'lime'
ra 'rain'
mvo 'froth' we 'breadfruit' nda 'you(sg.)'
mvt 'firewood' wo 'catfish' nde 'you(pl.)'
mve 'father-in-law' wa future marker ndo 'father'
mve 'girl' wi 'vine' ndu 'child'
nda 'tree'

A final a occurs on the end of most words that do not end in another vowel. In this situation a is probably not significant, but supplied for euphony.

2.2. CONSONANTS

The labial stops are p, b, mb and 'b.
p is as in English and may occur initially or medially. I have not found it to follow m.
b is as in English and may occur initially or medially. It is rare.
mb is much commoner than b, and may occur initially or medially.
'b is a preglottalised voiced stop. It is rare. The following vocabulary serves to distinguish some of this group

papa 'rat' 'b+ 'house' mb 'bud' mbra 'sago'
baba 'fan' mb 'spear' p 'sister-in-law' pra 'canoe'
mbapa 'ancestor'

'ba 'water' mbra 'house'
bra 'landing place'

p, b and mb are clearly distinguished but 'b could be a variant of p or b.Appearances in similar environments make it unlikely that 'b is a variant of p.
w is as in English after stops. When initial or between vowels it tends to be a fricative b. It is never final. It is distinguished from mb, p and 'b, but only tentatively from b.
mbo 'wife's grandfather' 'ba 'water'
wo 'catfish' wa (ba) future tense marker

baba 'fan' wawa (baba) 'uncle'

I found no minimal pairs to differentiate w from labialisation of other consonants (especially p, t, k, b, d, g and r) alone and in combination, and accordingly labialisation can be represented by w following the
consonants affected. I found also no minimal pair to differentiate consonant w from vowel u, but to use the same symbol for both would produce some puzzling words:

wawa'u 'frilled lizard' would then be written uawa'u
wuwawu 'sand' would be uuuauu.

m as in English. This may be initial or medial. When at the end of a word, some speakers attach a, while others pronounce m final. It is distinguished from mb:

mo 'skin'           mu 'red'           me 'fish'
mbmo 'wife's grandfather' mbu 'nephew' mbe 'they'

Probably also kam 'brother-in-law' kamba 'stone'.

There are two labiodentals, f and v.

f was only observed in initial position. As in English.
v may be initial or medial, and is pronounced as in English.

These two consonants are distinguished from p, b and w.

fi 'face'           vo 'coconut'        fe 'drum'
vi 'ago'            wo 'catfish'        pe 'sister-in-law'
wi (bi) 'vine'      mbo 'wife's grandfather'  mvo 'froth'

A labiodental nasal m can precede v. This cannot be differentiated from m, and only occurs in this environment. It is probably a variant of m and does not require a separate symbol.

The alveolar stops form a series corresponding to the labials, and are t, d, nd and 'd.

t is as in English and may occur initially or medially. I have not found it to follow n.
d is as in English and may occur initially or medially.
nd may occur initially and medially.
'd is a preglottalised stop. It is rare, and occurs initially and medially.

The following groups of words distinguish the four stops:

do 'creek'          'di 'net'
ndo 'father'        ndi 'tree'
to 'brother'        di 'head'

t, d and nd are clearly distinguished. 'd is separated from d and nd, but not from t, although occurrence in similar environments makes it unlikely that they are variants of one phoneme.

s as in English, always voiceless. May be initial, medial or final.
z as in English. May be initial or medial. Both these sibilants are distinguished from the corresponding stops.

- zi 'husband's parent'
- nzo 'swamp': compare with lists above
- sim 'grandfather'
- sra 'shell money'
- tim "big maus" fish'
- tra 'pandanus'

They are also distinguished from each other.

- niso 'grass skirt'
- nsu 'banana'
- niso 'headache'
- nzu 'wasp'

n as in English, may be initial or medial. It is distinguished from nd and m.

- nu 'egg'
- no 'axe'
- nam 'mother'
- mu 'red'
- mo 'skin'
- ndam 'sister'
- ndu 'child'
- ndo 'father'

r is trilled, as in Scottish English. It may occur initially or medially. It occurs as a free fluctuant, and Rao speakers learning English have great difficulty distinguishing it. r may be preglottalised.

- 'ru 'pig'
- ru 'lime'

There are two alveopalatals, c and j.

- c as oh in English. May be initial or medial.
- j as in English. May be initial or medial.

These two consonants are distinguished from t, d, s and z.

- ci 'now'
- ji 'sand'
- di 'head'
- zi 'husband's parent'
- sa 'mussel'
- ča 'faeces'
- ču 'milk'
- tu 'pig meat'
- vitu 'ash'
- viču 'spinning top'

y may occur initially or medially. It is distinguished from j and z.

- nyi 'tinea'
- nyo 'you(pl.)'
- nji 'wife's uncle'
- nzo 'swamp'

It is not clearly distinguished from vowel i, but yeyleto 'coleus' would be confusingly written ieyleto, if y were not used as the consonant symbol.

The velar stops are k, g and ng. Presumably the preglottalised velar stop that we would expect to correspond to 'b and 'd is represented by the glottal stop'.

- k as in English. It may be initial or medial.
- g as in English, always hard. It may be initial or medial.
- ng as ng in angry. It may be initial or medial.

The following vocabulary serves to differentiate the three stops:
8

\[ \text{gi 'hot'  gri 'bamboo'  kro 'bird'  ngə 'ankle'} \]
\[ \text{ŋgi 'sausage pan'  ŋgr i 'sore'  gro 'egret'  kə 'brother'} \]

\( \eta \) as \( \text{ŋg} \) in \text{singing}. It may be initial or medial.
When final, the consonantal quality almost disappears, giving rise to
nasalisation of the preceding vowel. To distinguish \( \eta \) from \( \text{ŋg} \), \text{m} and \text{n},
the following words are given:
\[ \text{no 'axe'  gru 'dish'  nə 'ground'  nənə 'black'} \]
\[ \text{ŋgo 'yellow'  ŋru 'tree'  nəgə 'ankle'  məmə 'food'} \]
\[ \text{ŋo 'tree'  nənə 'afternoon'} \]

The glottal stop \( ' \) is a significant sound, and distinct from \text{k} and \text{g}.
It may occur medially or initially. The preglottalised consonants
\( 'b', 'd \) and \( 'r \) may also be thought of consonant clusters of the glottal
stop followed by \text{b}, \text{d} and \text{r}. The identity of \( ' \) is shown in the follow-
ing vocabulary:
\[ \text{'rī 'garden'  'ro 'oat'  'ru 'pig'} \]
\[ \text{ri 'small'  kro 'bird'  kru 'moon'} \]
\[ \text{'i 'crocodile'  gro 'egret'  ru 'lime'} \]
\[ \text{gi 'hot'} \]

\( \text{h} \) is a rough aspirate, well voiced. It is of rare occurrence, and
may belong to the same phoneme as \text{g}.
Stress falls on the first vowel of a word except when a later vowel
is followed by the glottal stop; in which case the later vowel takes
the stress. Stress does not appear to be significant.

2.3. ORTHOGRAPHY

The symbols shown in the sound system are proposed as a practical
alphabet. Hyphens are useful for showing the construction of compound
words, e.g. gra-ča 'cloud' from gra 'sun', ča 'faeces'.

Rao Sound System

\[ \text{p  t  k} \]
\[ \text{b  d  g} \]
\[ \text{i  j  u} \]
\[ \text{f  s  č} \]
\[ \text{e  o} \]
\[ \text{h} \]
\[ \text{v  z  j} \]
\[ \text{m  n  ŋ} \]
\[ \text{w  r  y} \]
3. GRAMMAR

The Rao language is of non-Melanesian (Papuan) type (Capell 1933), having complex verb conjugation, scanty number system, Latin-type word order and postpositions. There is typically no provision for separate inclusive and exclusive forms of the first person plural pronoun. But Rao lacks declension of nouns and noun classes, unlike many other non-Melanesian (Papuan) languages.

3.1. PRONOUNS

<table>
<thead>
<tr>
<th></th>
<th>First person</th>
<th>Second person</th>
<th>Third person</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Singular</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nominative</td>
<td>gu</td>
<td>na, nave, naku</td>
<td>ma</td>
</tr>
<tr>
<td>accusative</td>
<td>ga</td>
<td>nda</td>
<td>ma, mba</td>
</tr>
<tr>
<td>possessive</td>
<td>ηa</td>
<td>na</td>
<td>ma</td>
</tr>
<tr>
<td><strong>Plural</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nominative</td>
<td>nyi</td>
<td>nyo</td>
<td>me</td>
</tr>
<tr>
<td>accusative</td>
<td>nya</td>
<td>nyo</td>
<td>mena</td>
</tr>
<tr>
<td>possessive</td>
<td>nyana</td>
<td>nyona</td>
<td>mena</td>
</tr>
<tr>
<td><strong>Dual</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nominative only</td>
<td>ηgwaκe, nyimaκe</td>
<td>nemaκe</td>
<td>maκe</td>
</tr>
</tbody>
</table>

In the nominative, the pronoun given begins the sentence unless the object requires the emphasis, in which case the nominative pronoun is put back, to precede the verb at the end of the sentence. If the sense is sufficiently clear, a nominative may be omitted altogether. The accusative pronoun follows the subject of the sentence. The possessive pronoun precedes the object of possession.

The interrogative pronoun 'what?' is kuwa. The demonstrative 'this' is ke.

3.2. NOUNS

The Rao noun is indeclinable in number, and almost in case as well. The only inflection is the addition of -na to a noun to express the possessive case in the singular. Singular nouns may also express possessive relation by having ma 'his, her, its' after them. Plural possessives are expressed by having mena 'their', after them.

3.3. ADJECTIVES

These follow the noun they qualify and are indeclinable.
3.4. POSTPOSITIONS

Only one, pu 'in' was encountered. It followed the noun.

3.5. ADVERBS

All adverbs precede the verb except the negative. Some temporal adverbs (tense markers) are of very common occurrence. They are bia, we, wa 'now', present tense.
   ći 'now', immediate future, intention
   wa remoter future, indefinite
   ći-wa not-so-remote future

There is also an imperative adverb ku 'right now', which may be compounded with wa to give wa-ku 'straight away'.
   ći duplicated to ćiči conveys the sense of 'while' or 'during':
   gu ćiči tarai ... 'while I was going ...'
   'I was going when ...'

but is not a conjunction, since the following clause stands alone. The verb ćičiyi 'precede' could be related.

3.6. VERBS

As indicated above, various kinds of present and future tense can be expressed by the use of temporal adverbs. Two verbs only were noted to have inflected future forms, nau 'will see' and ćou 'will throw'. The normal future form of most verbs is however wa followed by the simple form.

Some verbs, e.g. mi have several forms of past tense, but I am uncertain as to what distinctions they make in meaning.

The imperative always is preceded by a second person pronoun, but ku or wa-ku is optional.

The participles may act as adjectives, qualifying nouns. They are also used to express relative clauses, relating to the subject of the sentence. Like ordinary adjectives they follow their noun and are indeclinable.

Two verbs were found which had different stems for singular and plural subjects - sači, punači 'sit', and kumbači, kumvi 'sleep'.

Expression of negatives is complex. In the present tense, -nda is added to the imperative form to give the indicative.
   gu mi 'I am eating' mæ! 'eat!' gu manda 'I am not eating'

But the negative imperative is expressed by kroga 'dislike'.
   na mæ kroga! 'do not eat!'
In the future tense, -nde is added to the simple present indicative, with the proviso that verbs ending in -çi take -si-nde.

-gu wa minde 'I will not eat'  gu ma wa basinde 'I will not get it'

In the past tense, an auxiliary verb krai, kra'e, krare must accompany the present tense negative form.

-gu kumbakonde
-gu wa kumbasinde
-gu ọno kumbakonde krare
make ọno kumvənde krare 'I did not sleep yesterday'

'ma ọno kumvənde krare 'They two did not sleep yesterday'

3.7. WORD ORDER

1) Before the subject, there may be an adverb or adverbial phrase if requiring emphasis.

2) The subject which may be a noun, pronoun in nominative case, or a noun qualified by an adjective. If the context allows the subject to be understood, it may be omitted.

3) The object which may be a noun with or without adjectives or a pronoun in accusative case. If the object is to be emphasised, a pronoun subject is omitted.

4) The verbal pronoun, i.e. the subject of the verb. If the sentence is at all complex, or if there is a noun subject already in position 2, ma (sg.) or me (pl.) is obligatory. In a simple sentence with a pronoun subject, the verbal pronoun may be omitted. Thus in a short simple utterance, emphasis can be shifted from subject to object by changing nominative in position 2 to verbal pronoun in position 4:

1 2 3
santọ gu ma wa wi 'tomorrow I will scold him'

1 3 4
santọ ma ọnga wa wi 'tomorrow I will scold him'

Although having the same form as ọnga 'me' (accusative), in this example ọnga has a nominative meaning.

5) General adverbs if not already occupying position 1.

6) Temporal adverb or tense marker.

7) The verb.

8) The negative particle and auxiliary if required.
Some examples to show sentence construction:

'\textit{u'u nga yi}'

'cold I am/I am cold'.

\textit{zimbimbì nga yi}

'belly pain I am/I have a pain in the belly'.

\textit{njoci nda mbarai}

'cough you spoke/Did you complain of cough?'

\textit{nyi me ngam ə ou}

'we hook will throw/we are going fishing'.

\textit{de ə ə 'u' u}

'(it is) very cold/it is very cold (weather)'.

\textit{ne ku saka}

'you! sit/sit down!'

'ro nə ku ə ci mba ni

'oar you! now it bring/(get) the oar, then bring it!'

\textit{ha tu kuku}

'dog pork killing/(that is) a good hunter'.

\textit{təbə kumbakəkə}

'bench sleeping/(that is) a bed'.

\textit{ne kuwe ne mra'ai}

'you what you ate/what were you eating?'

\textit{ne ə zəəhe, gu ə ci ĉyi}

'you go last! I am first/after me, please!'\textit{mvendə 'b-i-pu ku va'e}

'woman house-in blood passed/the woman was at home menstruating'.

\textit{ne ə nga ku ə ci poke gu ə va}

'you me! now wait! I faeces pass/wait for me while I go to the toilet!'
4. RAO WORDLIST

4.1. NOUNS

afternoon ɳənə
ankle ɳə
arm mi-tə
arrow vra
ash vitu
axe no
bamboo grɨ ngemɨŋ
banana nsu
bandicoot bendu
basket (fish) mvri
beach, landing place bra
bean zai-grə
belly čado
belly-ache zimbimbi
bench təbə
betel nut re
bird kro
bird of paradise krwamve, mində
blood ku
bone grato
bow mitaga
breadfruit we
butterfly fi
buttock zaro
buzzard mɨmɨrɨ
calf (leg) moča
 cane (common) kro
cane (pitpit) rigaga
cane (sugar) zəba'
canoe pra
cassowary kranɨ
catfish wo zori
centipede trwe
cheek rato
child ndu
chin kaka-grə
cinnamon zi
clay gingu
cloud gra-ča
cockatoo (white) twal
cockatoo (black) kwi
coconut vo
cornice sito
cough (moist) ɳoči
cough (hacking) dro
cough (dry) jora
crane wunde
creek do
crocodile 'i
croton wonzo
cucumber giru
cuscus sɨ'u
daisy-like flower mradru
death adder ndopa
derris root bədo
dish (bark) pagadə
dish (wood) Şgru
dog ha
dove mbu-ri
drum (hand) ndu
drum (slit) fə
ear rum
earth tremor janju
eel məki, unɨ
egg nu
elbow mi-kədu
enemy mvra
eye piri
eyebrow pez
face fi
faeces ča
fan babə
finch keakam
finger mi
fingernail mi-vra
fire mvida
firewood mvi
fish yawu
fishline brade
flooring mia
flower, pod mia
fly wiwenza
fly swat gwigwi
food mamé
forearm prakuto
friend sclsito, nvo
frog zungwa
frogmouth yavndo
froth mvo
fungus wodo
garden 'ri
ginger wewé
goanna kwavra
gourd 'u'wa
grass wranyi, zoţzaţ, wo-ţzaţ
grass (kunai) nogora
grass skirt ŋiso
ground (gen.) ŋo
ground (hard) ŋinjar
grub (aago) mţnzi
hair mbri
hammer manda
hand mi-gra
hawk ne, nečo, rumbre
head di
headache ŋizo
heel čadu
hibiscous ŋwo
hook mnegram
hornbill ŋarnbai
house (main) 'bi
house-annex 'mbré
image mro-fi
inquest roto
island rwi
jaana bird maglip
kapok tree yoro-ta
knee mbudu
knife (stone, metal) grasi
knife (bamboo) diyo
"kum" (spinach) nyinum, ŋrimu
ladder tãs
"laulau" nyawara
leg metãgré
lily (gorgor) orwi, muma, čungwat, yara'
lime ru
lip kaka, domo
lizard (gen.) gweva
lizard (frilled) wawa'u
lizard (green) misra
loincloth jim
man frenda
mango wrí
mayfly dř
medicine man (traditional) tít-t-dudu
medicine man (western) ngiričičo
milk ču
millipede wenguam
moon kru
mosquito ha
moth (aago) kuwi
mountain topu
mouth dotomo
mud (on path) ničagwi
mud (on river bank) wu-na-ji
mussel sa
name ji
nasal discharge ra-suba
neck bãgra
net (fish) 'di
net bag (small) keso
net bag (large) yenga
nettle mrea
nose ra-ta
oar 'ro
ochre gwonymé
owl mimi, ŋavi
palm "limbom" brepu-ta, sru-ta,
mrezra-ta
pandanus tra-te, muyu-te
parrot (green) ra
parrot (red female) rwi
parrot (small red) zinggra
parrot (small green) zanza
pelican zaga-gro
pepper nimbè
perfume banana
pig 'ru
pig meat tu
pigeon (goura) krovrî
pigeon (common) gwake
plover tretre
poseum (flying) ñgawi
post go
prawn mase
pumice gra-tu
quail njera
rain ra
rat (bush) ponugum
rat (house) papa
ridge pole vata
road, path rido
sago (raw) mbra
sago (cooked) vi
sago basket wuso
sand ji, wuwawu
sandpiper kwekrwe
sauoepan, pot (deep) ñgi
sauoepan, pot (shallow) mes
sauoepan, pot (broken pieces) ñgi-saku
sawfish mrakro, nsara
shark bamber
shell money sra
shell pendant ware
shoot, bud mbø
skin mo
sky wenak
smoke mvî-'î
snake (gen.) kenam
snake (grass) muge
sorcery (personal) vrî
sorcery (community) mrataji
sore (small) ngî
sore (ulcer, yaws) mëte
spear mbî
spider bumugra
spirit (gen.) mro
spirit (tree) ridu
spirit (evil) ronîndrim
star sunyi
stone (large) kamba
stone (gravel) ji-vam
sun gra
swamp nzo
sweet potato nzerivi
sweet potato (yellow) ñgo-vranak
tadpole rwamvi
taro nangana, ngiriwa
thatch brea-krî
thatched roof brea
thigh datø
thunder gra-mvuvre
tinea tinea
tobacco čukwai
toe moraku
toe (big) minzo
tongue jito
tooth trago
top (toy) viču	
tortoise shell wem
tortoise shell wem-do

tree (gen.) baba

"taun" njapu-ta
red dye nimimi-ta
"talise" gadum-ta
"kwila" ndawa-ta
"garamut" hindî-ta
fioue a-ta, wrinøa
"tu-lip" jo
kapok inari
"lima" twawu-ta
wild breadfruit pabo
tree kangaroo  krevu
twine, string  warl
urine  nzaba
vine  (d'Albertis)  mrerado
wagtail  ikwera, veço
wallaby  kre
wasp  nzu
water  'ba
wild fowl  ñwñwap
wind  guri
woman  mvenda
yam  mu, dro-mbudu
yam  ("mami")  yangomango

Unidentified species

birds  wetke, prweprwe, krogo, inçogore, 'ina, nodadu, gukam, minđė-bam

4.2. ADJECTIVES

big  rove
long  suri-rove
small  ri
short  wata-ri
one  jandakro
two  kawuku
three  karuku
four  srakru
first  čičina
last  gezana
intermediate  kumanà
very last  gezana-pamanà
tame, planted  ñambi

bananas  rwab-tō, apā, je-tō, je-nsu,
 ravak, kitì, dorambo, minzi-nsu,
gu-ñambi, kakambra, wiängà,
jakundi, kwas

diseases
fever  mo-wiwi
rash  bombe
chickenpox  bombe-ri
smallpox  janam
epilepsy  mo-manji, mo-madasi
madness  'u'rowu

fish  bwore, nzri, rengro, me, mra,
nwapu
"bigmauà"  timò

trees  sindi-tō, drogo-tō, mor-tō,
 kurwi, no-tō, nda-tō, ñru-tō,
 rokro, wrango-tē, pundu-tō

vines  wi, kutar, tiwà, mre'da,
jambra-pra, makinku, graba, gë-pra,
ndрогuto, papugu

blue, green  moku
black  ngñë
red  mu
white  dákwas
yellow  ngø
many  zupunde
several, some  sisi
bad  nambačì
disobedient  ñano'i

4.3. ADVERBS, ETC.

no!  aye
yes!  ara
yesterday  ŋno, ŋro
where?  embe
now  ñì

soon  či-wa
today  masì
quickly  kwangà
very  dàza
tomorrow  santé
### 4.4. VERBS

<table>
<thead>
<tr>
<th>English</th>
<th>Present</th>
<th>Past</th>
<th>Future</th>
<th>Imperative</th>
<th>Participle</th>
</tr>
</thead>
<tbody>
<tr>
<td>be present</td>
<td>yi</td>
<td></td>
<td></td>
<td>ya</td>
<td></td>
</tr>
<tr>
<td>be able</td>
<td></td>
<td></td>
<td></td>
<td>mworka</td>
<td></td>
</tr>
<tr>
<td>be cold</td>
<td></td>
<td>'urai</td>
<td></td>
<td></td>
<td>'u'ul</td>
</tr>
<tr>
<td>beat, kill</td>
<td>kwi</td>
<td></td>
<td></td>
<td>kwa</td>
<td>kuku</td>
</tr>
<tr>
<td>cry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cut</td>
<td>granse</td>
<td>gransai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dislike</td>
<td>krogai</td>
<td>krogare</td>
<td></td>
<td>kroga</td>
<td></td>
</tr>
<tr>
<td>dig up</td>
<td>mi</td>
<td>mre</td>
<td></td>
<td>mœ</td>
<td>mœmœ</td>
</tr>
<tr>
<td>eat</td>
<td></td>
<td></td>
<td></td>
<td>mrai</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mra'e</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mra'ai</td>
<td></td>
</tr>
<tr>
<td>follow</td>
<td>gazəni</td>
<td></td>
<td></td>
<td>gazənə</td>
<td>gazənə</td>
</tr>
<tr>
<td>grow</td>
<td>dwe</td>
<td>dwači</td>
<td></td>
<td>dwa</td>
<td></td>
</tr>
<tr>
<td>go</td>
<td>tare</td>
<td>tarai</td>
<td></td>
<td>tara</td>
<td></td>
</tr>
<tr>
<td>have, get</td>
<td>baI</td>
<td>bači</td>
<td></td>
<td>bači</td>
<td>bako</td>
</tr>
<tr>
<td>like</td>
<td>'i</td>
<td>'rare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>prepare sago</td>
<td>we</td>
<td>wol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>precede</td>
<td>čičlii</td>
<td></td>
<td></td>
<td>čičlø</td>
<td></td>
</tr>
<tr>
<td>play</td>
<td>gwe</td>
<td>gware</td>
<td></td>
<td>gwačø</td>
<td></td>
</tr>
<tr>
<td>pull out</td>
<td>jwi</td>
<td>jwe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>see</td>
<td>nai</td>
<td>nau</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>scold</td>
<td>wi</td>
<td></td>
<td></td>
<td></td>
<td>wœ</td>
</tr>
<tr>
<td>sit</td>
<td>sači</td>
<td>sakrai</td>
<td></td>
<td>sakø</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>punači</td>
<td>punakrai</td>
<td></td>
<td>punakø</td>
<td></td>
</tr>
<tr>
<td>speak</td>
<td>mbare</td>
<td>mbarai</td>
<td></td>
<td>mbara</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mbarə'al</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stand</td>
<td>dači</td>
<td></td>
<td></td>
<td>daka</td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td>kumbači</td>
<td>kumbakrai</td>
<td></td>
<td>kumbakø</td>
<td>kumbakø</td>
</tr>
<tr>
<td>P</td>
<td>kmvi</td>
<td>kmve</td>
<td></td>
<td>kmvø</td>
<td></td>
</tr>
<tr>
<td>take, bring</td>
<td>ni</td>
<td>nyi'e</td>
<td></td>
<td></td>
<td>nana</td>
</tr>
<tr>
<td>throw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>urinate</td>
<td>vi</td>
<td>va'e</td>
<td>va</td>
<td></td>
<td></td>
</tr>
<tr>
<td>defecate</td>
<td></td>
<td>with appropriate noun nzaba 'urine', ča 'faeces' or ku 'blood'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>menstruate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td>ayi</td>
<td>agarai</td>
<td></td>
<td>pojakø</td>
<td></td>
</tr>
<tr>
<td>wait</td>
<td></td>
<td></td>
<td></td>
<td>pokeø</td>
<td></td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

AUSTRALIA: Prime Minister's Department

BATTERSBY, J.B.

CAHILL, J.

CAPELL, A.
1933 The Structure of the Oceanic Languages. Oceania 3:418-434.

HENDERSON, W.O.

JONES, F.D.
1946 Bogia Patrol Report No.2 of 1946-47.

McCarthy, Dudley
1959 South-west Pacific Area - First Year: Kokoda to Wau. Australia in the War of 1939-1945, Series 1, vol.5. Canberra: Australian War Memorial.
MOYLE, J.B.

MOYNE, Lord

STANHOPE, J.M.

TAYLOR, G.P.
1951 Madang Patrol Report No.5 of 1951-52.

TERRITORY OF NEW GUINEA
1946-47, District Annual Reports, Madang, New Guinea.
1952-53

Z'GRAGGEN, J.A.
MAP 1: NEW GUINEA

WI = West Irian  
P = Papua

Rao = The tribal territory of the Rao people
MAP 2: RAMU-KERAM REGION

The language names are those mentioned in this paper and in Stanhope 1972, identified by number with Z'graggen's list. Within Rao 66,

- a = Grengabu villages
- b = Ndrevri
- c = Upper Keram group
- d = Munanga group
MAP 3: SEVEN VILLAGES ROUND GRENGABU
LEGEND TO MAP 3

Key:

▲ Hamlets currently occupied (1972)

△ Hamlets abandoned prior to 1972

🌿 Swamp (sago forest).

Hamlet names

2. Çarendo-'bî 15. Old Yeto-'bî 27. Rambare-'bî
13. Çungrî-'bî  upper Rwina-'bî 38. Ndrato-'bî
39. Jituri-'bî
The sleeping area is at the rear, near the river bank. The ladder leads to a small eating and cooking area. The cat (left foreground) is a post-contact introduced animal. A long-handled spade and a bamboo water-carrying tube are leaning against the house.
The body is placed in a grave 1½-2 metres deep, dressed in its best clothes, with the face painted with red and white pigments. It is wrapped in bark sheets, and covered with wooden planks to allow an air space above the corpse. The grave is then filled with earth. The top of the grave is protected from excessive rain water seepage with palm frond axils, to prevent premature collapse of the earth into the air space.

Graves were formerly situated under or close by the house of the deceased, but now due to government regulation are placed in cemeteries at the edge of the village.
Died at Annaberg in 1934 soon after the Annaberg station was opened.
The annual rainy season results in frequent flooding, especially in the months January-March, when foot travel may become impossible.
The flutes are kept in the men's spirit house, where they cannot be seen by the women, and are used to simulate the voices of water spirits. Each flute plays two notes, and is combined with a fellow to provide music based on a pentatonic scale. A carved wooden face is attached to each flute. Each pair of flutes is known by the name of its associated divinity (Stanhope 1970).