MUSIC IN NEW GUINEA

I. The Kauwerawèt (Van Rees Mountains) singing into the gramophone. *Photo C. le Roux*

VERHANDELINGEN

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MUSIC IN NEW GUINEA

THREE STUDIES
BY
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ENGLISH TRANSLATION AND CORRECTION
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FOREWORD

About a year after my husband's death I reread his three studies on Papuan music and was again impressed by the wealth of material, which he had gathered and analyzed in the course of many years, that was in them and it occurred to me that it would be worthwhile to have them republished. The Koninklijk Instituut voor Taal-, Land en Volkenkunde (Royal Institute of Linguistics and Anthropology) has now made this possible, and I am deeply indebted to them. The three studies are now in one volume. Two of the studies were already in English, which has been revised, and the third has been translated into English. New data that my husband collected in the years following the publication of the studies, comments he made on them and the conclusions he formulated have been included in the new edition.

The publication of my husband's first study of the Papuan music of Western New Guinea dates from 1927, the third, and last, published by the Koninklijk Instituut voor de Tropen (Royal Tropical Institute) came out in 1950. Since then no musicological studies on the music of Western New Guinea have appeared in print.

The material forming the basis of these studies came under my husband's scrutiny over a period of time and, correspondingly, his conclusions were also made over a period of time.

The Dutch-American New Guinea Expedition of 1926, lead by Mr. Ch. le Roux, the expedition's ethnographer and topographer, furnished my husband with 14 phonograms on which the songs and music for the flute of the Takutamesso or Kauwerawèt tribe had been recorded. Unfortunately, it had not been possible to make recordings of the songs of the Awèmbiak and the Dèm, but since two members of the expedition knew some of their songs by heart they could perform them for my husband — one sang them and the other played them on the violin.

The next opportunity he had to make a direct contact with Papuan music came in May, 1929, when the 150th anniversary celebrations of the Batavia Society of Arts and Science coincided with the holding of the Fourth Pacific Science Congress in Batavia where an ethno-

graphical exhibition was held at which groups of peoples, representative of the whole of the Archipelago, were present. Among them were Papuans from a few tribes living on the north coast of New Guinea, people from the Waropèn Coast, from the island of Yapèn, and from some of the villages on the shores of Humboldt Bay, and recordings were made of a number of their songs.

Then, in 1932, while on an official tour — of a non-musicological nature — my husband had the chance of recording several songs of Papuans from Waigéo and Sorong. It was also about this time that a collection of Marind-, Yé- and Kanum-anim songs, recorded in the neighbourhood of Merauke by Father Verschueren, was placed at my husband's disposal and also a collection of twenty-four Marind-anim songs that had been taken down by Mr. Soukotta, an Amboynese police officer who was serving in the area.

Finally, in 1939 the expedition to New Guinea organized by the Koninklijk Nederlands Aardrijkskundig Genootschap (Royal Netherlands Geographical Society) and again led by Mr. Le Roux, at last secured recordings of the music of the mountain tribes living in the Central Range and of songs of the coastal people of Utah (south-west coast).

Since my husband's studies were first published circumstances have brought about many alterations in place names in the New Guinea area, not least in the name of the island itself. To avoid confusion it has, therefore, been decided to retain the name of New Guinea throughout.

In conclusion, I wish to express my profound gratitude to the Koninklijk Instituut voor Taal-, Land- en Volkenkunde for the meticulous attention that has been given to this new edition and, in particular, to Dr. J. Noorduyn, the General Secretary of the Institute, whose painstaking efforts have made it come up to my expectations. I would also like to thank Miss Jeune Scott-Kemball for her admirable translation of Part III and for her revision of the English of Parts I and II, and Mr. Ernst Heins of the Ethnomusicological Archives, University of Amsterdam, who undertook the checking of the musicological terminology.

C. J. A. KUNST-VAN WELY

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A STUDY ON PAPUAN MUSIC

based on phonogram recordings made by
C. C. F. M. LE ROUX
on the 1926 expedition to the
Central Range (Nassau Mts.)

with line drawings by
MAS PIRNGADI

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1. INTRODUCTION

It is a somewhat onerous task to write about exotic music when one has not heard it in its natural surroundings and has not, therefore, felt its impact. There is the particular atmosphere, which is created by a variety of interacting elements: the sense of dedication of the musicians and their concentration; the contact between performers and audience; the local conditions; the effect of the hour and of the season, all things that cannot be recreated when one is listening to recordings made by another person, for the phonograph, however excellent and even indispensable a medium, only reproduces the sound correctly. This is undoubtedly the most important factor when one is conducting research into music, but it cannot re-establish that indescribable intangible other-world atmosphere which surrounds this music when it is heard on its "native heath".

Despite this difficulty, however, I felt bound to comply with Mr. Le Roux' request that I should make a study as complete as lay in my power, of the melodies he had recorded and had brought back from New Guinea, because I was convinced of the great interest of such an investigation and also because I knew that anybody else undertaking this task would be faced with the same problems.

The making of recordings cannot be done quickly enough and neither can analysis of them be too detailed. Von Hornbostel says rightly: "The few thousand phonographic recordings hitherto collected in museums and archives are only a beginning; they are haphazard fragments, instead of giving a general view. *What we need above all is to register systematically the musical material of all the peoples of the world by means of the phonograph.*" [1] And what this musicologist says in the same paper about African music, might be said with equal truth of the music of a large part of the East Indian Archipelago and of the South Sea Islands: "It is ... to be feared that the modern efforts to protect culture are coming too late. As yet we hardly know what African music is. If we do not hasten to collect it systematically and to record it by means of the phonograph, we shall not even learn what it was." [2]

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[1] Von Hornbostel VI, p. 4 et seqq.
[2] ibid. p. 33.

Studying the literature about New Guinea, one cannot help but be struck by the fact that there are almost as many opinions about the descent and ethnic composition of the Papuans as there are ethnologists who have dealt with this riddle.[3] On one point, however, there seems to be perfect agreement, viz., that the component parts of the population of this huge island are not homogeneous but a mixture; that these hundreds of tribes, large and small, possess in varying quantities the elements of different races; and that different strata of culture are to be found superimposed one upon the other.

The music of this region seems to confirm fully this heterogeneous character but study of this subject has not yet brought order out of the chaos. And even if it ever will be possible to find a way out of this ethnological labyrinth,[4] research is still too limited — and much of the island is either unexplored or only partly so — to expect musicology as yet to be of much help in solving the enigma presented by the Papuans.

Nevertheless, I venture to suggest that valuable indications may be obtained from what little musical material the various expeditions have brought back from this part of the world — despite its being, generally, a mere by-product of their work.[5] The expedition of 1926, thanks to Mr. Le Roux, has certainly done its part in furthering the objective, as will be shown in the course of this work.[6]

Even after a superficial examination of the musical data collected

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[3] See Seligmann I, p. 246 et seqq.; Graebner I; the Encyclopaedia Brittannica, 11th. ed. (1911), Vol. 20, p. 741; under Papuans; Reche, p. 481; Exploratie-verslag, pp. 220—235; the Encyclopaedia of the Neth. Indies, Vol. III, 2nd. ed., p. 298 under Papoea's; Kleiweg de Zwaan, pp. 23—27 and Wirz II, pp. 5—8.

[4] Much interest may be felt in the results of the analysis of recordings of Papuan music, now being conducted at the Berlin Phonogram Archives by Dr. Kolinski.

[5] It was impossible for me to consult all the literature on New Guinea; only the library of the Royal Batavia Society, which however contains a splendid collection of books on this subject, was accessible to me.

[6] This paper was nearly finished when Sachs' *Geist und Werden der Musikinstrumente* was published. After reading this masterly monograph I have made some modifications in my instrumental divisions, so that they may better be compared with those of Sachs. I therefore subdivided originally undivided instrumental groups into more narrowly circumscribed groups, for instance, the panpipes into 'raft' pipes and 'bundle' pipes; the trumpets and conch shells into instruments with a lateral blowing-hole, and those with a blowing-hole at the apex. Finally, in the index for the map showing the distribution of instruments, each form of instrument has been given, as far as possible, the number of the cultural stratum to which it has been assigned by Sachs.

by Mr. Le Roux during the expedition, one arrives at the conclusion that it may be divided rationally into two parts: the music of the Kauwerawèt, Van Rees Mts; and the music of the pygmy tribes living in the central range. This division is based not so much on locality as on the great difference musically in the character of this data. There can be no more convincing proof of the fact that at the present time in New Guinea there exist side by side several kinds of music which cannot be explained as, or regarded as, successive phases of development, than the evidence produced by a comparison between the two groups of melodies just mentioned. Stated generally, one can say that comparing these two groups of melodies proves that more than one civilization has made its influence felt in the cultural development of the Papuans.

One's first reaction to this fact is that there was a more or less original population which retreated into the mountain fastnesses, driven there by another more civilized and stronger race from overseas. However, before following up this train of thought, it is advisable to examine the songs brought back by the 1926 Expedition and to compare them, as far as possible, with the material already published.

2. THE MUSIC OF THE KAUWERAWÈT

A. Vocal Music

The Kauwerawèt (Takutamesso) songs that were recorded were sung by four different persons: Jacob (phon. I); Komaha, or Komasa, (phons. II, III, IV and XVI); Bidjowa, or Pidjowa, (phons. V, VI and VII); and Basakara (phon. XVI); phon. VIII was sung in unison by these four men.

These recordings consist of only three songs, all of them different. (Plate I shows the actual making of the recordings.) This is a fortunate circumstance because there is therefore at hand more than one version of each of the songs: song α on phons. I, II, III and VI, sung by Jacob and Komasa, who sang the song on two separate occasions, and Pidjowa, respectively; song β on phons. V, VII and VIII, sung by Pidjowa at two different times (phons. V and VII) and sung by all four men together (phon. VIII); song γ on phons. IV and XVI, sung by Komasa and by him and Basakara together, respectively.

All these songs are very short, so that they could be recorded several times. Each time they were sung with a different text. The texts could be called strophic, though the metre is rather free: the number of syllables in one line varies considerably,[7] which affects the rhythm of the melody. It was these factors that made it possible to determine which part of these melodies should be considered as essential and which as variable.

In most cases it has been possible to fix definitely the pitch of the tones sung. This applies mainly to those tones which may be regarded as principal tones: in song β these are the key-note (if it may be called that), its lower fourth and its lower octave; in song γ, four of the five tones used. The intonation of the remaining tones of these two songs is not constant and can only be determined approximately: these tones have been bracketed in the Table of Measurements. In one case only, phon. IV, has it proved to be impossible to determine the number

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[7] Cf. Le Roux, pp. 507—8.

of vibrations for *one* of the tones (which occurs only occasionally and is unstressed).

In song α all the tones can easily be measured. Bird calls are interwoven into the singing of this song, and occasionally, of song β also. Twittering that is more or less pleasant, alternates with very realistic gobbling and quacking. Komasa, especially, was expert at imitating bird calls.

Van der Sande,[8] writing about the playing of the sacred flutes of Nacheibe (north-east of West New Guinea) says that the players often imitate the calls of certain birds.[9] From this he concludes that perhaps these birds play a particular role in religious thought. It is, therefore, possible that the origin of similar sounds in the *singing* of these tribes is also to be sought in their religion. Pulle [10] records of the Pesechem, who inhabit the southern slopes of the central range in the neighbourhood of Mt. Wilhelmina, that they also weave the calls of animals into their songs as a musical ornament. According to the verbal statements of Mr. Le Roux, the tribes he visited in the Nassau Mts., deliberately symbolize certain animals on their jew's harp and this is not always done as one would be inclined to suppose by imitating the call or the cry of the animal in question, but also by producing other sounds which, to the untutored ear, seem to have no connection with the animal at all.

To the ear trained to European melody, the most remarkable characteristic of these songs, besides their shortness, is their tendency to descend the scale. This is a common feature of primitive melody,[11] and henceforth it will be termed here "tiled" music.

This Kauwerawèt music is "Australian" in type. Similar songs, besides being met with in north-west Australia, especially among the tribes at Beagle Bay,[12] are also found on the islands in Torres Strait.[13] And, apart from the style of the Wedda, with its narrow

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[8] N.G. III, p. 296.

[9] See also p. 17 below.

[10] Pulle, p. 191. Cf. also Wirz II, pp. 118—9.

[11] "In purely melodic songs, certain natural traits have maintained themselves which, in our harmonic music, have been superimposed on or supplanted by other traits. They are "natural", i.e. rooted in the psychophysical constitution of man, and can therefore be found all over the world. The natural motion of melody is downward, like breathing or striking; from tension to rest". (Von Hornbostel V, p. 7).

[12] Statement by Professor Von Hornbostel.

[13] Myers passim.

intervals, and that of some of the tribes of Terra del Fuego, it is undoubtedly the most primitive music known at the present day.[14]

The forms of the rhythm are simple. As a rule, one always hears some tones of small value followed by a long drawn out note, generally a lower one. It depends upon the text whether 16ths occur, or quintuplets, or triplets. The frequent use of the latter (in songs β and γ) has already been observed in other parts of East New Guinea viz., among the Orakavia (by Williams),[15] on the islands in Torres Strait (by Myers),[16] among the people living at Humboldt Bay (by Van der Sande),[17] and among those of the central range (by Jongejans).[18] I myself heard figures in 6/8 time and triplets in the songs of the people from Humboldt Bay and Yapèn which were sung at the Ethnographical Exhibition held at Weltevreden in May, 1929.

This use of the ternary rhythm is not, however, a peculiarity which distinguishes Papuan music from that of other peoples living in that part of the world, for it seems that triplets are also very common in the music of the natives of Queensland,[19] and they are not rare in Melanesian [20] and Indonesian [21] melody.

Before reproducing the songs that were recorded and analyzing them, some comment must be made on the quality of the actual recordings. The sound is fairly clear, but as far as an analysis of the rhythm is concerned, they present some difficulties because there is occasionally a "slip", caused by the records being played too often before they were copied and a few of them display an inclination to have a rhythm of their own, probably because the phonograph was not quite steady during the making of the records. These deficiencies could only be overcome by listening to the records frequently and by comparing all the records I had.

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[14] For a sketch of the development of melody, see Von Hornbostel III and Lachmann; here there are typical examples of successive stages of development.

[15] Williams III, p. 38.

[16] C.A.E., pp. 244—7 and 262—3.

[17] N.G. III, p. 309 (as a figure of the drum accompaniment to the dance).

[18] See p. 19 below.

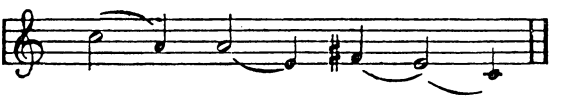
[19] *Globus* Vol. LVI, p. 123; Von Hornbostel III, p. 21.

[20] Eberlain, p. 641—2; Von Hornbostel II, p. 492 and examples of melody Nos. 4, 6, 30 and 31.

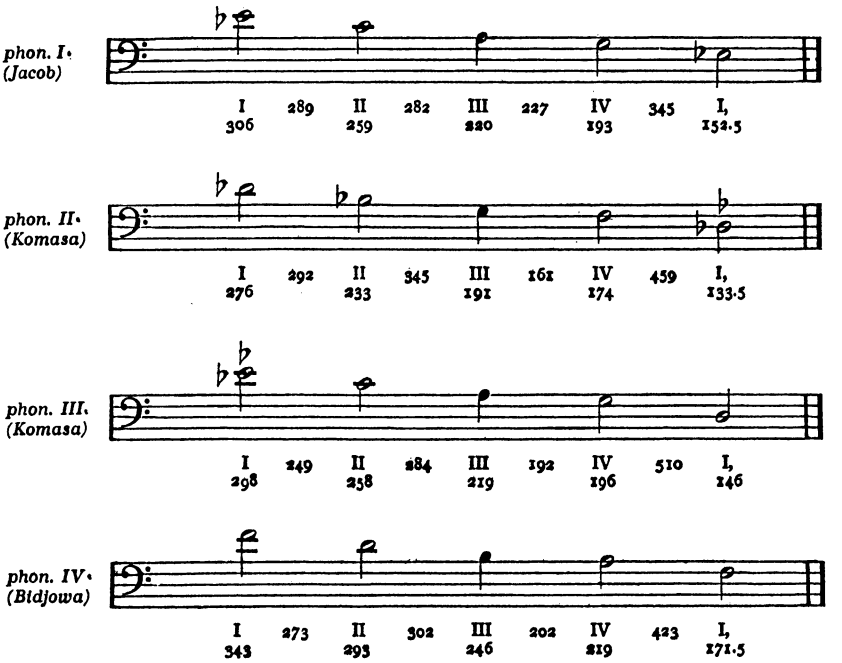
[21] In Javanese orchestral music they are heard especially in the *gambang-kayu* paraphrases. — For triplets of different values in Sundanese music, see Kunst I, Bijlage I and II. In West Java, they are also found in many gamelan-degung melodies. — On the island of Nias, generally, 6/8 time predominates in the songs and in the *doli-doli-* and *druri-dana* melodies. — The same can be said with regard to the tunes of some tribes in Flores.

Song a (Table I).

The form seems to be the most usual one. Sometimes small non-essential rhythmical changes occur, especially in the second part of the melody; they are the result of irregularities in the text. Schematically, the melodic form may be represented as:



The measuring of the scale tones produces the following:



Jacob and Komasa sing the lower octave tone slightly flat. Bidjowa sings it true; of the four singers, Bidjowa was evidently the one endowed with the best ear and in my opinion, also the one with the best voice.

Looking for the average of the intervals as sung, the four recordings give the following:

I 275¾ II 303¼ III 195½ IV 449½ I^1,

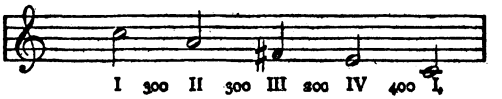
and if the true octave is made to close the series, as undoubtedly it was meant to do, the interval IV — I^1: 425½ C.

If phon. III, where Komasa seems to be rather off his usual form, is omitted, the averages are:

I $284^2/_3$ II $309^2/_3$ III $196^2/_3$ IV $429^1/_3$ I^1,

and with the correction of the octave: IV 409 I^1.

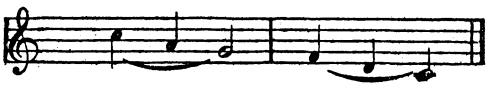
Without doing violence to this scale, it may therefore be represented as follows:



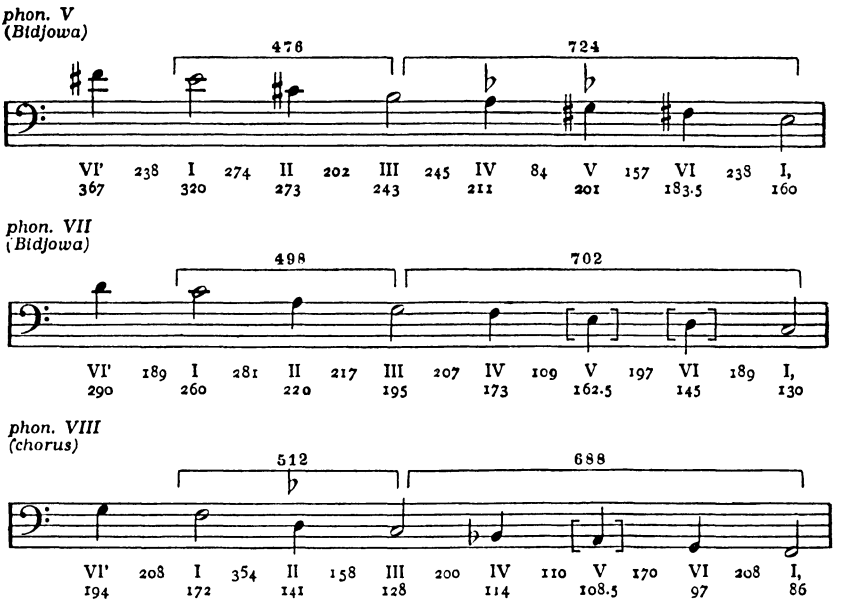
The range of the melody is *one octave.*

Song β: Entje Marariео [22] (Table I).

This song is rendered with a number of non-essential variations, which are caused by the text. Schematically, it may be represented as:



Measurements of the three recordings of this song show that the following scales are used:



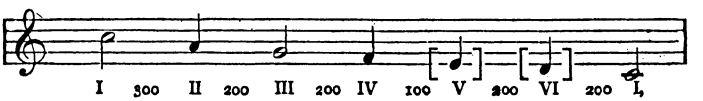
[22] Le Roux, pp. 507—8. The words tell of a bird hunter, Entje, who came across the sea and was murdered in the interior because of some love affair.

Here, there is an almost pure fourth and fifth, and in phon. VII they are in tune, 498 and 702 C, respectively. This is also the case in all three songs, with the octave.

The average intervals sung are:

I 303 II $192^1/_3$ III $217^1/_3$ IV $101^2/_3$ V $174^2/_3$ VI $211^2/_3$ I^1.

In European notation, the scale may be represented as follows:



The range of this melody does not exceed *one ninth.*

It should also be mentioned that in phon. VIII, the melody is always started by one singer: at K the others join in. The four performers do not sing in tune when singing in unison and their rhythm is also ragged: according to Western ideas, the performance is rather "untidy" [23] both as regards the rhythm and the melody. The long drawn out notes only are sung with marked uniformity.

This peculiarity is a well-known characteristic of primitive music. The framework of the fourths and fifths is filled in at a certain stage with one or two tones, the intonation of which is of minor importance.[24]

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[23] "Jeder singt, wie ihm der Schnabel gewachsen ist, ohne Rücksicht auf die Genauigkeit". (Schmidt-Ernsthausen, p. 269).

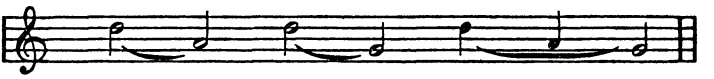
[24] Cf. Von Hornbostel VI, p. 7—9. — Professor Von Hornbostel kindly sent me some written observations bearing on the present work, of which I had sent him a first draft, among which were the following on the manner in which the distance between two framework tones — in this case a fourth or a fifth — is bridged: "Die einfachen Intervallverhältnisse, in denen ein grösseres Intervall durch einen unbetonten Zwischenton beim natürlichen Singen geteilt wird, sind Glieder der Reihe 12 : 12 : 7 : 5 : 2, d.h., die Centszahlen der Teilintervalle verhalten sich, ganz gleichgültig wie die absolute Grösse der Intervalle ist, wie im Masstab der konsonanten Intervalle Oktave —Oktave—Quint—Ganzton. Durch die Konsonanz eben wird unter den (kontinuierlich variablen, daher unendlich vielen) Distanzsystemen (absoluten Grössen) eines ausgezeichnet. Die Intervalle dieses ausgezeichneten Systems sind gegeben durch die Verhältnisreihe der Schwingungszahlen 1 : 2 : 4 : 6 : 8 : 9, die Interval-(Distanz-) Verhältnisse jedes beliebigen Systems aber durch die Reihe 1200 : 1200 : 702 : 498 : 204, oder angenähert, aber praktisch genau genug, durch 12 : 12 : 7 : 5 : 2.

Das Gesetz bestätigt sich auch an Ihren Messungen, in manchen Fällen sehr genau, so bei den Quartenteilungen nach 5 : 7.

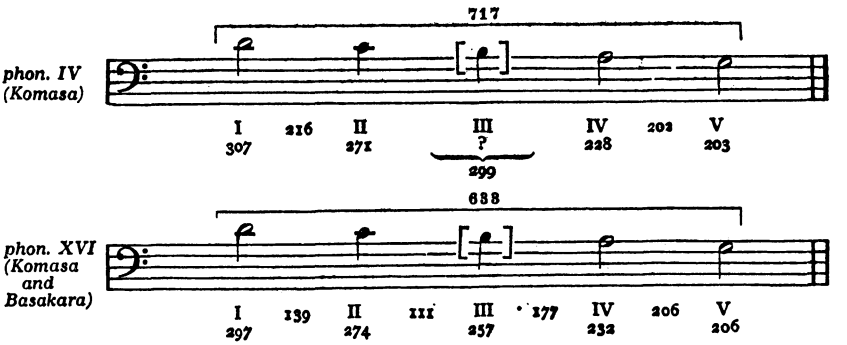
Phon. IV	gemessen	216	+ 299	= 515
	berechnet	215	+ 301	= 516
Phon. XVI	gemessen	288	+ 206	= 494

Song γ (Table I).

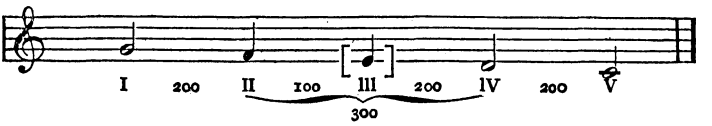
There are also variations of this song. The scheme of its form is as follows:



Measurement gives the following results:



The average of the intervals sung comes to:
I 177½ II 293½ IV 204 V,
so that the scale, as regards phon. IV, (after transposition to C) may be rendered as:



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berechnet 288 + 206 = 494
Phon. VII gemessen 281 + 217 = 498
berechnet 290½ + 207½ = 498

Die ersten beiden Beispiele zeigen, wie bei verschiedener, von der reinen abweichender Grösse der Quart, die Teilungsproportion doch erhalten bleibt. Freilich ist in diesen Fällen auch das eine Teilintervall konsonant (204), sie sind also nicht beweisend für das Distanzgesetz.

Phon. V gemessen 241 + 238 = 479
berechnet 239½ + 239½ = 479
und die Teilung nach 5 : 2 in
Phon. VIII gemessen 354 + 158 = 512
berechnet 365 + 146 = 511."

The range of the melody on phon. XVI is much smaller than that on phon. IV which is almost a pure fifth (717, instead of 702 C), but even then it gives the impression of extending over a full fifth.

B. Flute Music

Many kinds of flutes[25] are known from New Guinea as a whole but on the north coast of West New Guinea only two types are said to be in general use — apart from a small signal flute, used at Witriwai and Humboldt Bay,[26] and another one used by the Sabèri[27] (east of the Apauwar River), which has one end open and the other partly stopped by a perforated node; these latter types are exclusive to these areas. The two former types are described in great detail by Van der Sande.[28] One of them, of which there are a number of sizes,[29] is thin in relation to its length and is blown at the upper end (figs. 48—50), the lower end being closed by the node (the flute is "stopped"). As a consequence, besides the fundamental, only the *uneven* partials can be produced. The other type, of which there are also different forms (figs. 38—46) is wider and shorter and is also stopped at the lower end. Occasionally it has a round, oval or square hole in the centre, as a rule, nearer to the closed end than to the open one, so that the even partials could also be produced but for the fact that the great diameter of the tube would seem to preclude the production of more than one single tone.[30] These short thick flutes are much easier to play than the long thin ones.[31] These are so difficult to handle that no European can

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[25] See map.

[26] Schmeltz V, p. 243; Mus. Bat. Soc. No. 18059a; Van der Sande, pl. XXIX figs. 4 and 5. It is unnecessary to speak of these small signal flutes as a separate type; technically they are exactly the same as the longer flutes, which are blown at the end, and from which they are only distinguished by their shorter length, which varies from 6—8 cms., the long sacred flutes being sometimes as long as 1.70 m. There are also a number of transitional forms, which almost fill in the gap between the two extremes. For the sake of expediency these latter forms have been classed with the group of long flutes (on the map represented by the symbol ◪).

[27] Mus. Bat. Soc. No. 16361/2.

[28] N.G. III, p. 307.

[29] Cf. Wirz I, p. 75 note 55; V, p. 331 et seqq.

[30] This does however not always seem to be the theoretical fundamental. Van der Sande (pp. 313—4) gives in most cases a second tone, besides the fundamental.

[31] Cf. Joseph Schmidt II, pp. 53 and 56. He mentions two kinds of flutes used by the Nor-Papuans, on the islands off Dallmannhafen: one short kind, termed *female,* which is easy to play and a long type, termed *male,* the playing of which is very difficult.

draw a tone from them. My own efforts ended in ignominous failure. Only sturdy broad-chested Papuans in the prime of life can play them. Van der Sande [32] says that the blowing of these sacred instruments is so exhausting an exercise that playing them can only be kept up for a short time and even then the performers are covered with perspiration from their exertions.[33] "I have seldom seen a Papuan exerting himself more than in producing this sacred music", he writes. Evidently the French "sacré" does not have its double meaning for nothing!

With regard to the position of the body for blowing these flutes and the proper movement for playing them, Wirz goes into detail on this subject and he also explains the significance of these instruments — which must never be seen by a woman — in the social life.[34]

There are five recordings of flute music, Nos. XI—XV inclusive and of these, Nos. XI and XII (first and third fragments), XIII and XIV (first fragment) and XV, show marked similarity; the recordings were made at performances given by the same players using the same set of instruments: the long narrow vertical type. The middle part of phon. XII and also phon. XIV (second and third fragments) are different from the rest of the music on these recordings, not only in the tunes but also, in part at least, in the type of flute: a few of the short thick type with a lateral blowing-hole have been used.

The tones of this music have been measured as carefully and as accurately as possible to try to determine which series of partials are used; an attempt that failed, partly because of the untheoretical pitch of the partials. This discrepancy has already been mentioned in Van der Sande's report.[35]

For the music of the first of the flutes described by Van der Sande, he gives *C sharp* as the fundamental: for its harmonics, however, *A, C* and *E*. This refers to a stopped flute, so that in this case only uneven part-tones have to be considered. Starting from *C sharp* as the fundamental, the result is, however:

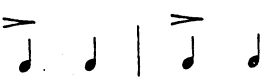
G sharp	*E' sharp*	*B'*	*D" sharp*	*G"*	
———	———	—	———	—	etc.
3	5	7	9	11	

[32] N.G. III, pp. 295—6.
[33] Cf. also Bink, p. 34, and Koning, p. 11.
[34] Cf. Wirz I, pp. 66—8, and V, p. 333.
[35] N.G. III, pp. 313—4.

Should *A*, *C* and *E* be looked upon as 7th, 9th and 11th part-tones, that are too low? Or should the possibility, advanced by Professor Von Hornbostel, be accepted, that the fundamental is not *C sharp* but *D*, so that *A*, *C* and *E* should be taken as 3rd, 7th and 9th partials? How, then, can this be reconciled with Van der Sande's remark that the blowing is done with such force that the 2nd or 3rd harmonic dominates the key-note? This would seem to indicate that there is no question of sounding the higher partials. It must, however, be remembered that the instruments are stopped, so that the terms 2nd and 3rd partials are to be understood as 3nd and 3rd of the *uneven* series, which means partials 2 and 5 from the theoretically complete series.

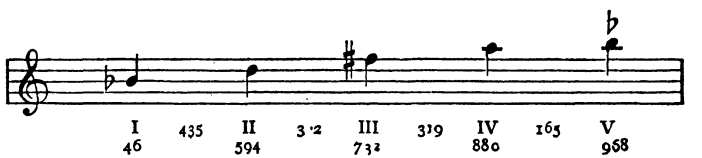
It may be assumed that part of the solution to these incongruities must be sought in the manner of the blowing. The performer on such a long thin flute does not touch the instrument with his lips: he holds the upper end of the flute with both hands, laying his thumbs along his cheeks and he blows into his hands towards the mouth-piece.[36] The air in the flute, which is vibrated by the blowing, is increased in volume by the amount of air in the hollow formed by the player's cupped hands. Be that as it may, the series of tones occurring in these five recordings appears to be fairly irregular.

It is not worth while making notations of this flute music. The instruments are generally blown in a regular rhythm, say, crochets or quavers, the tones being alternately stressed and unstressed:



Phons. XI and XII (first and third fragments), XIV (first fragment) and XV.

The following tones occur:



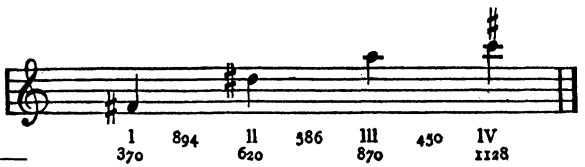
[36] ibid. p. 295 and plates 189, 191 and 192; Lorentz, pp. 152 and 153; Koning, p. 11: "The performer takes the mouthpiece of the flute between the balls of the hands, the thumb pointing upwards and in this manner puts the instrument to his mouth." — Le Roux, p. 484: "The flute is not put into the mouth, but the breath is blown through the tightly closed hands into the opening of the bamboo. Both thumbs are laid along the cheeks." — See also Wirz I, p. 66.

In phon. XI, however, it is impossible to establish the pitch of tone IV with certainty because of its transient character — it seems a trifle higher than is stated here, and tone V is missing altogether. Tone III is also very vague. Tones I and II predominate, especially the latter. At one moment one gets the impression that tones II and III are produced by the same instrument, at another, that III, IV and V go together. At least one of these suppositions must, however, be wrong, unless one assumes that in the recordings both flutes produced an identical tone, III, which is hardly possible. The other assumption, that only one flute is being played on this recording, must be rejected, because it is customary for two flutes to be played at the same time. Moreover, there is Mr. Le Roux' assurance that a recording was made of two instruments.

The development of the music on this record is the same as that on *phon. XII (first and third fragments)*. It starts in slow time on tone I, blown very softly. Then tones II and III are heard, the time gradually having become normal, viz., about 60 tones per minute,[37] and the sound strong, up to *ff*. Then follows a swifter part, with approximately 120 tones per minute. Here, only tones III, IV and V are used. There is then a return to the original time and to the softly breathed tone I and the loud II with its satellite III. The music then rises to a crescendo. Again, there is the swift second part with the higher tones and then again a return to the first part in the "normal" time.

Phon. XIII has, apparently, the same development as phons. XI and XII (first and third fragments), but it is not very clear in places. The same can be said of the beginning of *phons. XIV and XV*. With regard to the latter, tone II, sounding raw and harsh, predominates and is sometimes intoned a little higher than in the earlier recordings.

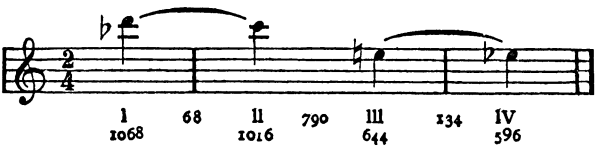
The middle part of phon. XII has an entirely different character. The four tones of which it is composed have a sweet soft organ-like sound and because they happen to form a true chord, viz., four tones of a ninth chord, which sounds familiar to Western ears, this part seems quite pleasant to a European:



[37] Cf. also Wirz I, p. 67.

The speed is also approximately 60 tones per minute.

Phon. XIV (second and third fragments). In this recording other parts can be distinguished besides the first short fragment already referred to. At first, there is a soft indefinable tangle of sounds, a melodious whispering in the higher tones: the playing is fast, approximately 240 tones per minute. After that there is a plaintive movement which is repeated several times (bird calls?) [38] beginning with a speed of 148 tones per minute increasing to roughly 196 and then slowing down again to 148. The tune is:



Mr. Le Roux states that as far as he recollects, these four notes were produced on four different flutes: two long ones and two short ones.

[38] See pp. 6—7 above.

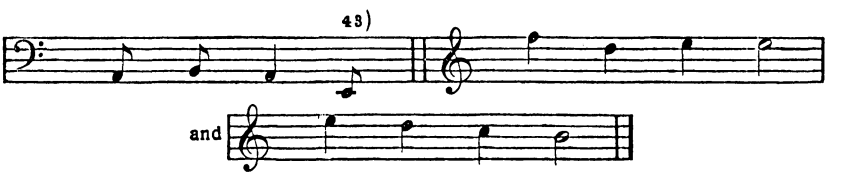
3. THE TRIBES OF THE NASSAU MTS.

(CENTRAL RANGE)

The Papuans of the Nassau Mts., though they barter goods with the tribes of the Van Rees Mts., not more than 150 kms. distant as the crow flies and with the tribes less than 50 kms. away on the lake plateau [39] who use the sacred flutes, do not themselves have any musical instrument other than the *jew's harp,* an instrument that seems to be found all over New Guinea.[40] A still more remarkable feature of these people is that, side by side with songs of a most primitive character, they have much more elaborate songs of an entirely different nature.

Jongejans [41] has provided some details about the singing of the Uringup, who inhabit the Swart Valley, and to these data, Wirz has added a number of his own observations which are to be found in his Monograph.[42]

The greater part of the melodic phrases hitherto collected are of this very primitive type and their range does not, as a rule, exceed a fourth. They are reminiscent of Dutch nursery rhymes and ditties. Wirz gives the following as examples of this type of melody:



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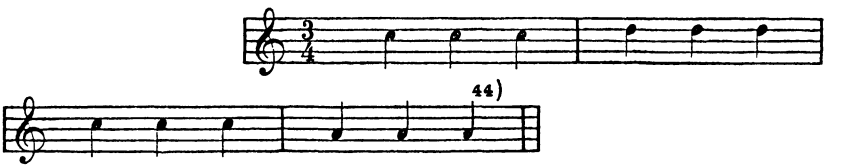
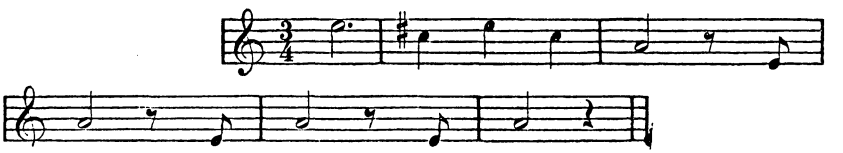
[39] Wirz II, pp. 5—6.
[40] See the map. Cf. also Wirz II, p. 120.
[41] Jongejans, p. 604.
[42] Wirz II, p. 113 et seqq.
[43] This melody is sung by a chorus, against which the 'precentor' sings a continuous C E C E.

and of a fourth, taken from Jongejans:



But Jongejans made a notation of yet another fragment which is quite different from all the others:



If one knew no better, one might take it for a military signal, an impression strengthened by a number of songs and fragments of songs which Mr. Le Roux and his assistant Mohammed Saleh brought back from the Awèmbiak and Dèm, tribes which are closely related to the Uringup. It is a pity that these new songs could only be taken down by ear and not recorded on a phonograph. The consequence is, that one has to be content with data acquired at second hand. Fortunately, the expedition's stay there lasted long enough for its members to learn to sing the fairly simple songs of these mountain tribes without making mistakes, and to commit them to memory. It is, however, a well-known fact that, when one has to rely on one's memory,[45] there is always a marked tendency to "correct" strange or unusual intervals and to make them agree with those familiar in one's own musical system.

Were there no other data on the music of the tribes living in the central range, there would be every reason to regard these songs, at least in the matter of details, with a certain amount of distrust. However, since music of a very similar nature has been recorded not only from these regions but also from elsewhere in New Guinea and the nearby countries, it is possible to test this music by comparing it with what has already been observed by others and (partly) described from recordings. The new material, however, on account of its *vitium originis,* is not suitable for the purpose of demonstrating characteristics that are peculiar to this music and which might distinguish it from

[44] The bars I have put in after each group of three notes; the author just left a space.

[45] Cf. Von Hornbostel VI, pp. 5 and 6.

that of other regions. In short, the new data, in so far as it is accordant with other Papuan music, is to be trusted, but where it shows characteristics unknown from elsewhere, it should be viewed with a certain amount of suspicion.

If the musical data brougt back by Mr. Le Roux from the Nassau Mts. do not, therefore, make it possible to arrive at definite conclusions, they do contain undoubtedly very useful indications as to the direction in which further research should be continued.

The notation of songs that I made from Mr. Le Roux' singing and whistling and from his assistant's playing on the violin — the rendering of the one bearing out that of the other in details — after they returned to Batavia, are to be found in Table II.

What is the origin of this "fanfared", this "flourished triad" music?

Ignorance of the music of the nearby tribes is a great obstacle to the solving of this problem. But failure to find a relationship in a certain direction is by no means conclusive evidence that it does not exist, though the few songs and fragments of songs and the other meagre information that has been collected from the northern regions, would not seem to point to the *probability* of finding any music there that is closely related. Neither is this to be expected from the western region which, like the western part of the north coast, is under a fairly strong Malay influence.[46]

With regard to the north, I have at my disposal some observations made by Van der Sande, as well as the songs of the Sarmi people (near Humboldt Bay) published by Lieutenant Gjellerup, A.M.C.[47] In part, the latter are unmistakably of the "tiled" type and therefore "Australian". An example is:

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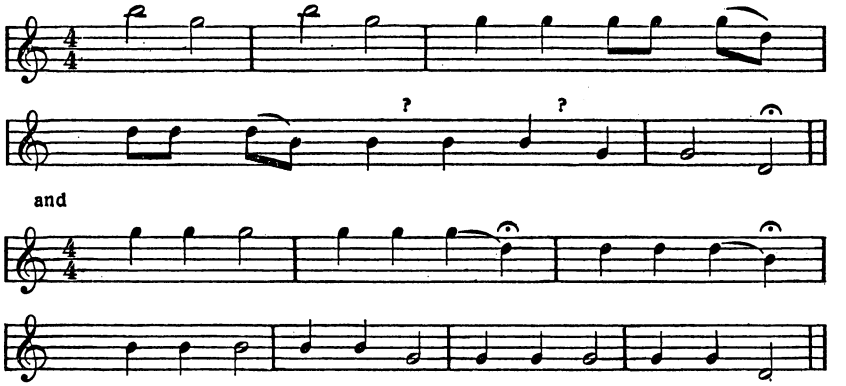
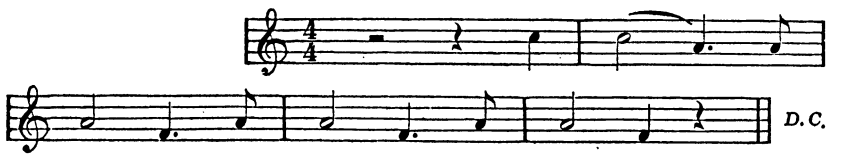
[46] Encyclopaedie van Ned. Indië, Vol. II, pp. 834/5. In this connection the Island of Misool, together with the islands and the coast *east* of Cape d'Urville are mentioned. This should certainly be *west* of that Cape, first because the only islands of any importance lie to the west of it, and secondly, because the influence of Tidore, which is meant here, could not very well be felt on the east side without being noticeable to a much greater degree on the west side. The Encyclopaedie mentions the following instruments from these regions: *rebab, rebana* (= *terbang*), gong, and *tifa* (the Malay drum). Valentijn mentions precisely the same instruments (Vol. I, pp. 151—2, 155, 156, 160) as being characteristic of the Moluccas, and especially of Ternate and Tidore. — The cylindrical drums (viz. fig. 20) of the coastal districts west of Cape d'Urville, also show very distinct Malay influence in the way the skin is fastened. See also the map.

According to Professor Von Hornbostel, some of the recordings from Misool, made by Tauern and transcribed by Herzog, which are now in the Phonogram Archives in Berlin, also show a distinct Malay influence.

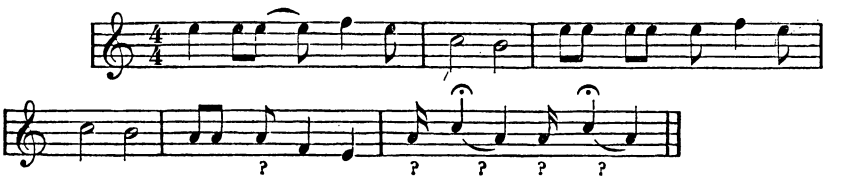
[47] Gjellerup II, pp. 42, 43, 48, 49 and 50.



The examples now given at the same time exemplify "triad" songs without, however, being "fanfared". A solitary one is a little further on the way to becoming "fanfared" music:



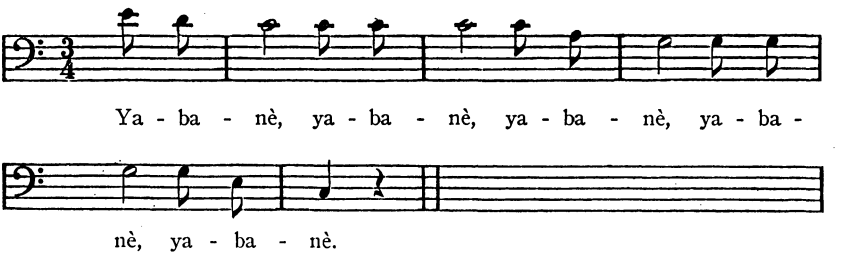
Among Gjellerup's songs, there are others which seem to display Malay influence, like the following rather melancholy but melodious little song:



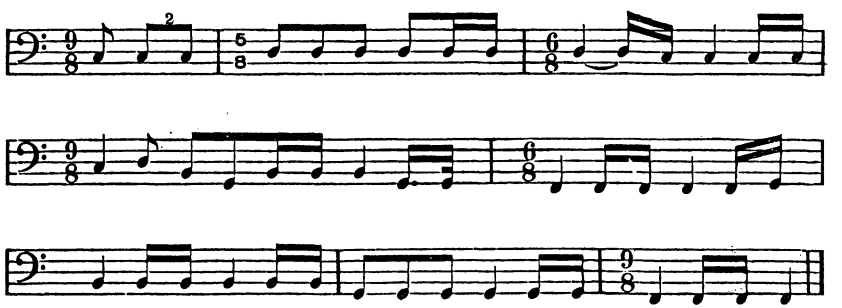
It would, however, be unwise to draw conclusions from this material in view of the way in which its reproduction was obtained, viz., "Lieutenant Kruyt was kind enough to note down the melodies as well as he could under the circumstances. We are also indebted to Mr. Bouvy for further elaborating (*sic*!) the material provided by Mr. Kruyt." Grateful as one is for the trouble these gentlemen took, it is plain that a notation produced in the manner mentioned does not constitute a very trustworthy basis for a hypothesis.

At the Ethnographical Exhibition held at Batavia in 1929, I had the opportunity of making recordings of the songs of various tribes

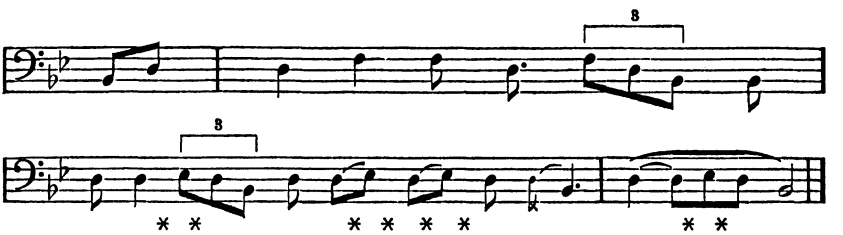
from the north, viz., from the Island of Yapèn; the Waropèn Coast; and Humboldt Bay. The songs from Yapèn showed a close affinity with the Kauwerawèt songs cited earlier: they are pure "tiled" music with all the characteristics I have mentioned:



The songs of the Humboldt Bay people were much more varied but as a whole they showed, nevertheless, the same signs of relationship and certainly no "fanfared" features. One example will suffice:



Some of the songs from the Waropèn Coast, on the contrary, would seem to have been subjected to Malay influence, a fact I am inclined to deduce from the "*pélog* character" of those of them in which semitone intervals often occur:



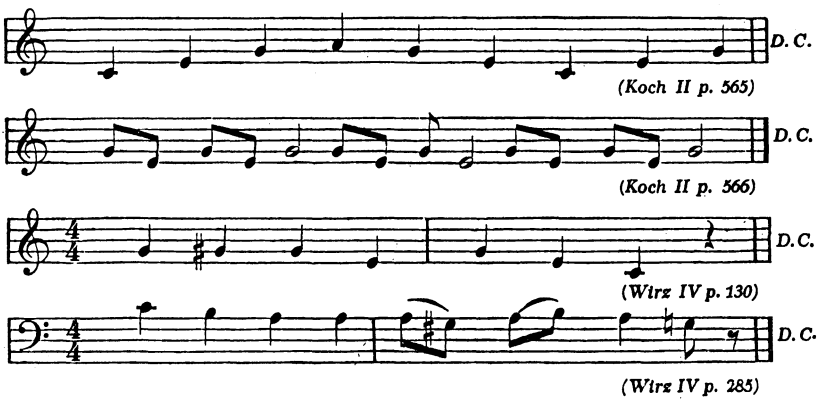
Other songs show a pronounced "triad" character. These again, however, are not "fanfared". If my memory does not play me false,

Photo P. Baron de Rautenfeld

II. The blowing conch as a signaling instrument: a Binandeli on the banks of the Mambare near the village of Sia.

not one of the songs I recorded exceeds the limit of one octave, with one remarkable exception: a festal song from Sarmi, the village where Gjellerup obtained his songs. This beautiful and varied melody extends over no less than one octave and a fourth and, therefore, has the same range as one of Mr. Le Roux' Awèmbiak songs (Table II song α).[48]

Even less has come to hand of the music of the tribes on the south coast. The songs published by Myers[49] of the peoples living on the islands in Torres Strait are "pure Australian", consequently their style is the same as that of the Kauwerawèt songs already referred to. The few fragments of the Marind-anim songs recorded by Koch[50] and Wirz[51] do indeed show a certain preference for the third and, occasionally, a triad, so that they might be classed in the type of the short Dèm songs given in Table II under $\varepsilon - \vartheta$ but they are, nevertheless, far removed from the lively fanfares of the songs given in the same Table under $\alpha - \delta$:



I also made a notation of a song sung by a Kaoh River (upper Digul) man who came to Bandung with Dr. de Rook:

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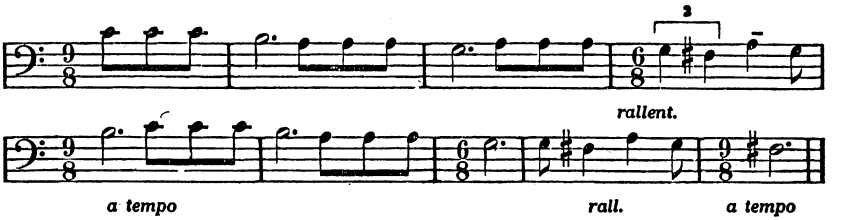
[48] At the time this work was completed the copies of the recordings under consideration had not yet reached me from Berlin, where Professor Von Hornbostel was kind enough to make arrangements for the preparation of matrices. I could therefore include only the melodies I noted down when recording them, and could only give a few particulars about the others (which, in general, have a more complicated form and therefore could not be noted down on first hearing). When these records are back in Java they will be transcribed and published as soon as possible.

[49] Myers, pp. 244—7, 262 and 263.

[50] Koch II, pp. 565 and 566.

[51] Wirz IV, pp. 130 and 285.



If, however, attention is turned to the east, a very different state of affairs appears.

In 1910, the Roman Catholic missionary Father Wilhelm Schmidt, S.V.D., well-known as an ethnologist, gave a lecture on the songs of the Karesau Papuans at the Congress of the International Association of Music held in Vienna. (Karesau is al small island, belonging to the Schouten Islands [52] off the coast of the former German part of New Guinea. Only a few miles separate this island from the mainland).

The characteristics of Karesau music as given by Father Schmidt [53] are:

I. *Subject matter*: 1. ritual songs; 2. popular songs.

II. *Form of the text*:
1. special linguistic forms: a) nasalization; b) duplication;
2. rhythm: alternation of stressed and unstressed syllables; as a rule a verse with three accents alternates with one of two accents;
3. parallelism: the initial words of two lines are the same; the end words are different;
4. interrupting the rhythm of the verses in singing by the insertion of a "stop-gap"-*o*. (Schmidt calls it: Flick-*o*).

III. *Execution:*
1. always to the accompaniment of drums or at least of knocking with the fingers;
2. repeated tremolo (with the root of the tongue), especially in long drawn out notes;
3. fioritura;
4. repeated transitional legato, by means of which the singer connects the end of one line with the beginning of the next without taking a new breath.

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[52] The islands north of Geelvink Bay are also called Schouten Islands, after the famous navigator.

[53] Schmidt II, pp. 297—8.

IV. *Tonal system and melodic from*:

1. the songs, formed of triads, very often exclusively so, are always of a ritual character;
2. in the others a pentatonic scale is used;
3. the course of the melody is generally in the descending line;
4. the melody always ends on the lower key-note, or, starting from this note, it leaps on to its higher octave.

V. *The origin*:

1. it would seem that the ritual hymns are handed down from generation to generation, or else they have been adopted from other tribes at the same time as the ceremonies;
2. folk songs are composed up to the present day.

Which of these characteristics are to be found in the songs brought back by Mr. Le Roux?

Some of them are found in the songs of the Kauwerawèt (Table I) as e.g.:

II sub 3: parallelism: e.g., mamàkànanè < kèrèkànanè;[54]
IV sub 2: the use of the pentatonic scale;
IV sub 3: the descending movement of the melody;
IV sub 4: the lower key-note as final note.

As with the Karesau music, these characteristics, apply to the folk-songs (I sub 2), which are still being composed (V sub 2); see p. 10 of this work.

With regard to the ritual songs of the Karesau (I sub 1); no equivalent is found in the music of the Mamberamo Papuans, nor in that of the population of the coast but curiously enough its equivalent *is* found in the songs of the central tribes, the latter (see Table II) being characterized by:

I sub 1 : their *ritual* use;
II sub 1b: *duplication*: song α: solu-solu, naga-naga, mina-mina;
song β: naga-naga, déga-déga;
song δ: waé-waé-waé-waé;
song ϑ: wé'u'wé-wé'u'wé, wie'o-wie'o;
II sub 3: *parallelism*: song β: naga-naga, déwi wowai, déga-déga duwa wowai;
song δ: yao awie o yéwé awie o;
song ε: uwa ie a uwa jo a;
song ζ: uwé a wé uwé a kwa;

[54] Le Roux, p. 308.

II sub 4: *interruption of the verse-rhythm by "stop-gap"-vowels* e.g.:
in song β: by o, a, o;
in song γ: by o, a, é.
Wirz also draws attention to this peculiarity.[55]

III sub 1: *accompaniment* of the singing by snapping or clicking of the fingers;

III sub 2: *tremolo* with the root of the tongue in the long drawn out notes;

III sub 4: *interlinking* of the lines of the text by peculiar sighs, produced by the sucking in of the breath;[56]

IV sub I: *the songs are built up of triads.*

As the central tribes have ritual chants as well as more simple profane songs one finds in the Nassau Mts. the singular phenomenon which might be termed "musical stratification". Myers found the same peculiarity in the music of the people of Murray Island in Torres Strait:[57] he distinguishes as many as three strata and according to what Father Schmidt remarks about the music of Karesau,[58] the same may be said of that island.

The texts, especially those of the ritual chants, are generally only half understood by the performers: they are full of obsolete, corrupted or distorted words.[59] Age is not necessarily the only factor contributing

[55] N.G. XVI. p. 116 (Wirz II): During the singing, the words are not pronounced in the usual way, but always end in a vowel. This may be seen as a first attempt towards introducing rhyme. The melody constitutes a second reason why the words always end in a vowel.

[56] While the singer shuts his eyes in extasy.

[57] Myers, pp. 255-6.

[58] As far as I know, nothing has yet come of the proposed publication by Father Schmidt of a great number of Karesau songs. A plan for it was mentioned in *Anthropos* Vol. II, p. 1030.

[59] The texts of the dance music of the coastal population also provide instances. Van der Sande says in this respect (N.G. III, p. 308): .. "It is a very remarkable fact that the language of the songs in the district of Seka and to the West as well as at Humboldt Bay is said to be an ancient language which is now no longer spoken and only imperfectly understood... Mac Farlane writes that the short sounds, sung in chorus, have no meaning; — perhaps the meaning has got lost, as has been suggested. Similar particulars were gathered by MacGregor, and by Schellong and Pöch in Kaiser Wilhemsland... The use of this old language enables the villagers who... visit other villages to join in the general song."

For East New Guinea it is indeed the same thing over again: "As was told by a French missionary from British New Guinea, the natives often do not understand their own traditional songs, as the language in the several

to any unintelligibility in a text: transmigration may easily have played a part, for shells, tobacco and stone axes were not the only things that were passed from tribe to tribe.[60]

Myers,[61] speaking about the songs of the people on Murray Island in Torres Strait says: "They show evidence of the great traffic in tunes, which may go on between the inhabitants of neighbouring islands, thus raising the general question as to how far the fundamental characteristics of the music of a given people are fixed or are modifiable, temporarily, or permanently, by the importation of foreign airs." Schmidt-Ernsthausen mentions songs from Rook Island that have been adopted by the Yabim, who live on New Guinea on the opposite coast (round Finschhafen), without their having the slightest understanding of them.[62] Guppy speaks of a melody, appropriated by the inhabitants of Treasury Island (Mono) from Duke of York Island [63] and Seligmann mentions songs that the Koita, from the Port Moresby Area, adopted from the Motu.[64]

The origin of the striking resemblance between the ritual chants of the Karesau Islanders and those of the pygmy tribes of the Nassau Mts. *might,* therefore, be found in the handing on of these songs from tribe to tribe. The distance bridged in this case is certainly considerable but it may be assumed that some of the tribes between these two extremes have the same kind of songs. The cultural development of the mountain tribes, at least, seems to be perfectly homogeneous.[65]

But the passing on of music from tribe to tribe is by no means the only manner in which it could have found its way from one district to another one remote from it. There are some other possibilities, for example, the inhabitants of the Nassau Mts., and of Karesau, may at one time or another have associated with each other when living close together, or it is possible that this "fanfared" music, which is found at present among tribes far removed from each other, points to the fact that at one time there was a particular civilization which

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districts has changed in the course of time. The same observation I made in Finschhafen..." (Schmidt-Ernsthausen p. 268). See also Reche, pp. 447-8, who quotes Pöch extensively, and also Pöch himself in Pöch I, pp. 232-3, and III, p. 610.

[60] See, for instance, Schmidt II, p. 298, with regard to Karesau and the adjacent regions.

[61] Myers, p. 238.

[62] Schmidt-Ernsthausen, p. 268.

[63] Guppy, p. 141.

[64] Seligmann II, p. 152.

[65] Wirz II, p. 4.

was spread over a wider area and that at a later period it was engulfed by waves of a newer culture. Expressed in geological terms, one might say that these scattered outcrops could be considered as having originated from a "diluvium", occurring here and there in a territory entirely covered otherwise by Melanesian and Australian "alluvial" deposits.

Before it can be decided which of these possibilities correspond to the reality, the following questions must be answered satisfactorily and conclusively:

a. are these "fanfared" songs known to occur among other tribes in or near New Guinea?
b. To which race or cultural agent must these "fanfared" songs be attributed?
c. Is it possible to find the cause for these songs being what they are and for their not being otherwise?

The answer to the first question can be given now and in the affirmative: the same kind of songs are found on Bougainville in the Solomon Islands, east of New Guinea. Proof of this is given in the examples in Table III as songs α and β: these have been taken from Von Hornbostel's "Bemerkungen über einige Lieder aus Bougainville".[66] These are songs of the Kongara, a mountain tribe, and were recorded in 1912/13 by the ethnologist E. Frizzi.[67] In addition, the same kind of melody is heard in some of the songs of the Yabim (Finschhafen) and in the magic songs of central New Ireland: songs γ [68] and δ [69] in Table III are examples of it.

Resemblance is not, however, to be found only in the songs, it also shows in the texts, which have the same peculiarities as the songs from Karesau and the Nassau Mts. Von Hornbostel, for example, mentions:

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[66] Von Hornbostel IV, p. 53 et seqq. The music of the N.-W. Solomons, especially in the coastal districts, is much richer and much more civilized than that of the Nassau Mts. It presents very remarkable instances of part singing, sometimes with rudimentary canon forms and also of the simultaneous performance of vocalists and orchestras consisting of panpipes. Whenever this part singing occurs in New Guinea, it is of a much more primitive nature; sometimes it occurs purely by accident because the songs, sung by a single performer, or by a chorus, overlap when the performers sing in turn (Koch II, p. 566; Pulle, p. 191; Rawling, p. 247-8; Van der Sande, p. 310; Williamson, p. 216; Wirz II, p. 114; Le Roux: verbal statements about the Awèmbiak and the Dèm tribes).

[67] Otherwise, most of the melodies of the N.-W. Solomons do not consist exclusively of triads (cf. Table III mel. α); but when scales with more tones are used, the third, fourth and fifth intervals also predominate.

[68] Taken from Schmidt-Ernsthausen, p. 270 song IV.

[69] Taken from Peekel I, p. 50. See also Abel I, p. 821.

a) duplication of words, b) the completion of the text of a melodic phrase by yodelling — therefore, by vocalizing — when the line is too short. He then points out some other idiosyncrasies that Father Schmidt does not mention but which are found in the songs Mr. Le Roux brought back from the Nassau Mts., viz., c) the rhythmic variability of polysyllables, and d) the appearance of end rhyme.[70]

As an example of the first he gives the word *nairoé,* of which sometimes the *i* is stressed, sometimes the *é,* and at other times the *o.* There is a parallel in the songs from the Nassau Mts., given in Table II, in the variable pronunciation of the word *ambagagé* which in text *α* is ambaga*gé,* but *am*bagagé (-o) in text *β.* In song *α, mi*na stands side by side with mi*n*a and in song *δ* there is a*j*é and a*j*é.

End rhyme is also found in the songs of the mountain tribes, at least in song *α*: *wowai - udjuwi - ragiwi.* In song *β,* the attempt at rhyme is more primitive, at least initially, for here it is made by the "stop-gap" *-o*: *wowai o a o - ambagagé o.* But the second rhyme of song *β* can be considered as a real one: *asiloé-naga-naga duwang waé.*

From the preceding, it may be concluded that if the occurrence of this "fanfared" music in the central range is to be attributed to migration, the first thing to be taken into consideration is an influence coming from the (north-)east. Before, however, giving a definite opinion on the probability of movement from that direction, or even on migration in general, it will be necessary first to examine other existing possibilities.

Von Hornbostel, with a wealth of material to draw on, has proved that these songs of the tribes of the central range, which in essentials show so striking a resemblance to those of the people of Bougainville, are *instrumental* airs.[71] He demonstrates, furthermore, that the songs of Bougainville probably owe their origin to the panpipes; these are found throughout the island where small orchestras are generally formed with them.

Does this mean that such songs, wherever they occur, were evolved from the technique of playing the panpipes? Or does it mean that wherever the panpipes are found in Austronesia, "fanfared" music will also be encountered? It means neither the one nor the other for, whereas the panpipes are found in many islands of Melanesia, Micronesia and

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[70] The texts of the coastal Papuans are said to have no end rhyme (Van der Sande, p. 308).

[71] Von Hornbostel II, pp. 468-9, 492-3, 499, and 503.

Polynesia[72] (figs. 58 and 59, and fig. 54), there are no traces of "fanfared" music, as far as is known, outside the islands in the N.-W. of the Solomon Islands and the nearby part of the Bismarck Archipelago. As far as New Guinea is concerned, excluding the few rare and degenerated specimens of panpipes from the Kaiserin Augusta River and the lower Markham River[73] (figs. 55 and 56) they are restricted to the south coast; from the d'Entrecasteaux Archipelago and Bentley Bay to Merauke[74, 75] (fig. 57). Fanfared music, on the other hand, is exclusive, as far is known, to Karesau and the central

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[72] Cf. Sachs III, p. 50.

[73] Behrmann, p. 195; Neuhaus, Vol. I, pp. 383-4 and fig. 306 a/b; Reche, p. 425; Werner, p. 56. The Kaiserin Augusta River has been from time immemorial the gateway through which successive civilizations and races have entered the country. "The results of researches concerning the characteristics of the living and of skulls, taken together, give the impression that a pygmoid race of people having dark skins, broad skuls, and plump and short statures, and perhaps consisting itself of different elements fused together, was overlaid by one or two other races, that are characterized by lighter colour, and a long, slender and taller stature... The immigrants seem to have settled mainly in the lower and middle regions." (Reche, pp. 56-7). And, according to Neuhaus, it is a fact that the Laé-Womba tribe, the people living on the banks of the lower Markham River, which know the panpipes are of Melanesian origin (Neuhaus, ibidem).

[74] d'Entrecasteaux Archipelago: De Clercq and Schmeltz, Table IV on back of p. 244; Bentley Bay: Finsch II, p. 122; IV, pp. 528-9; East Cape, South Cape, China Straits, Orangery Bay: De Clercq and Schmeltz as before; Naiabu (opposite Yule Island): d'Albertis, Vol. I, p. 395; Fly River, Kiwai, Daudai, Moatta: d'Albertis, Vol. I, opposite p. 305; Baglioni, pp. 264-5 and figs. 15, 16; Beaver III, p. 178; Chalmers, p. 120; De Clercq and Schmeltz, as before; Lachmann, p. 10 (Landtmann); Landtmann, pp. 45 (fig.) and 47; Thomson, p. 120 (fig.); Torres Strait: Haddon III, p. 282; Merauke: Koch II, p. 567; Wirz III, Vol. I, pp. 83-4 and Pl. XXV, fig. 1.

Further places where the panpipes (some 'raft-', some bundle pipes) are found in the neighbourhood of New Guinea:
Solomon Islands: Burger, p. 59; Buschan I, Vol. I, p. 90, fig. 118; II, Vol. II, p. 160, Table VIII, 170; Finsch IV, p. 532; Frizzi, p. 50; Gupy, pp. 141-2, 144-5; Von Hornbostel II, pp. 463-4, 472, 474, 488, 490-2, 497; Meyer and Parkinson, Vol. I, Pl. 29; Parkinson III, p. 237; Ribbe, pp. 65, 83-5, 87, 134; Sachs III, Table 4 figs. 27 and 30; Stephan and Graebner, pp. 129-131; New Ireland: Buschan II, Vol. II, pp. 126-7, 150; Finsch IV, pp. 528-9; Von Hornbostel I, p. 351 et seqq; Meyer, Vol. VIII, back of p. 1059 Table III, fig 18; Parkinson III, p. 145; Sachs III, Table 4, fig. 32; Schellong I, p. 83; New Hannover: Völkerkunde-Museum Berlin (Von Hornbostel); New Britain: Parkinson I, fig. 19 opp. p. 122; French Island: Völkerkunde-Museum Leipzig (Von Hornbostel); Admiralty Islands: Finch IV, p. 529; Graebner II, p. 33; Völkerkunde-Museum Vienna (Von Hornbostel).

[75] The panpipes mentioned in Schmidt-Ernsthausen's article on the music of the former German New Guinea (especially Finschhafen), and reproduced and described on pp. 272-3, is undoubtedly an instrument from the Bismarck

range. The area in which the panpipes are found and that in which fanfared music occurs are, therefore, by no means identical.

A melodic system founded on the phenomenon of partials (caused by overblowing) is not necessarily derived from the panpipes: the music made with other wind instruments, for example, the common bamboo flute, may also lead to this kind of melody, also through overblowing. It can be taken for granted, however, that such fanfared music can only arise in regions where wind instruments are played and wherever such instruments are used this type of melody may grow out of instrumental music without there being any influence from elsewhere.[76]

Flutes are known in Karesau [77] and, although the Awèmbiak and the Dèm do not use flutes, they are a part of the cultural possessions of the neighbouring tribes on the lake plateau.[78]

There is another strong argument against there being any connection between the panpipes and the fanfared music of the Karesau and the mountain tribes. The panpipes are the product of a highly developed civilization from eastern Asia [79] and in all probability did not appear in the southern Pacific until rather late and at the same time as the tribes that came from the mainland of Asia and migrated eastward.[80] In this manner did this instrument find its way to New Guinea, perhaps in a roundabout way through the islands east of New Guinea; but

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Archipelago. The number of pipes (14) and the careful way in which it is made, with the stepped bindings, so typical of New Ireland, are sufficient proof of this. Cf. Von Hornbostel I, the fig. opposite p. 352, and II, p. 464; Sachs I, p. 289b. This is not the only instrument the author places erroneously at Finschhafen, but which actually comes from the Bismarck Archipelago: the peculiar 'rubbing' instrument he also describes and of which he gives a picture (p. 273-4), is only known from New Ireland.

[76] Von Hornbostel has proved very convincingly that the alpine yodel has grown out of the vocal imitation of Alphorn melodies — that is to say, as a result of 'overblowing'.

[77] Schmidt I, p. 1039.

[78] Le Roux: verbal statements about the Turu tribes.

[79] Together with its remarkable series of tones derived from an old Chinese scalar system it has found its way as far as South America and central Africa. Cf. Von Hornbostel IIa, IIb, and VII.

[80] Cf. Sachs III, p. 49, etc. Professor Sachs classifies the simple form of the panpipes with his sixth, the 'Zweiklassen-Kultur'-stratum, which has spread over Melanesia, some parts of Polynesia, South- and Central America, and the S.-W. part of North America (Mexico, Pueblo, California), the 'double' form, which is not found in New Guinea, but occurs in the Solomon Islands (cf. Buschan I, Vol. I, p. 90, fig. 118; Frizzi, p. 50) he classifies with his 7th, the Polynesian-South-American stratum (Sachs III, p. 79); lastly, he places the bundle pipe in a still later stratum, viz. the Indonesian-Melanesian (Sachs III, p. 109).

it was always a foreign element there. One gets the impression that nowhere has it been assimilated and that up to the present day it has continued to be a degenerated alien. For this reason also, it is difficult to believe that it really can be the origin of the songs under discussion. As a further argument, it is all the more difficult to believe because, as has been pointed out already, in Karesau, as well as in the central range of New Guinea and in New Ireland, it is only the ritual chants that find expression in this melodic form, but nowhere in these regions do the panpipes fulfil the function of ritual or sacred instruments.[81]

This latter circumstance, however, does make the relationship with flute music much more probable, because flutes are generally used for ritual purposes. This is the case especially among the people of the lake plateau and of the north coast of West New Guinea, as well as those in the former German territories. Although it is possible that such fanfared music has arisen independently in different regions, here one is inclined to think of a certain connection, since it is found among peoples who are probably bound by the tie of a rather close ethnic relationship; tribes who have "a great common denominator", like the mountain people of Bougainville and the pygmy tribes of the Nassau Mts.

It is always unwise to draw conclusions about cultural relations from material which, as a rule, is inadequate. It is particularly dangerous to do so because there are so many gaps to be filled up. Graebner's wise words should still be a guide: "To point out similar phenomena in the different cultural areas of the world and to compare them with each other is always a laudable endeavour but any attempt to establish a closer connection between them, without further preparatory work, is more or less speculative. The explaining of one phenomenon by means of another, though it may sometimes lead intuitively to correct deductions, is conclusion by analogy for which there it not sufficient basis, for not only does the nature of the supposed link remain unexplained — and its elucidation is an important factor in the understanding and interpretation of the phenomena — but the present-day knowledge of the culture of most peoples is so superficial that the phenomena we are dealing with should not be less than identical, if we are to be certain that they are not in fact heterogeneous." [82]

Though one agrees fully with this point of view, it is no reason for

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[81] Cf. also Sachs III, p. 51.
[82] Graebner II, p. 28.

not going on trying to find such cultural links. The work should be done on the understanding that a critical attitude must be maintained towards results which are speculative and that no greater value should be attributed to them than they deserve. They must be taken simply as a working hypothesis, to be abandoned the moment facts are brought to light with which they do not accord.

Keeping this principle firmly in mind, I venture to answer my earlier question, viz., to which race or cultural agent must these fanfared songs be attributed? In answering it, I advance as an argument the possibility that these songs, which as I have already said have been found in the Nassau Mts., in central Bougainville, in New Ireland and on Karesau, are evidence of the continuance of a primeval substratum of culture common to the area, of a primary civilization which in most places has been superseded by younger cultural waves, which have overlaid it.

This ancient musical form, being part of those cultural possessions that all people preserve, viz., the old forms connected with religious life, has continued to exist side by side with different and younger music[83] — though as far as the people of the Nassau Mts. are concerned, without those wind instruments from the playing technique of which it originated. Assuming this to be the case, it explains the reason that, apart from an islet off the north coast of New Guinea, it was apparently only in the central mountains of the larger islands, New Guinea, New Ireland, and Bougainville, and perhaps also of New Britain, that the ancient form has been preserved to the present day: those regions being the best protected against the influx of foreign influences from overseas.

Would it be permissible to count this form among the cultural possessions that led Wirz, in his study of the pygmies of the Swart Valley, to make the following statement:[84] "It is certain, however, that here in central New Guinea there are clear traces of one of the oldest Melanesian and Australian cultural strata, a stratum termed negritic by Graebner in his 'Kulturkreis' theory."?

If it be acceptable to do so, this negritic civilization, although comparatively primitive, is on a higher level, from a musical standpoint, than the younger cultures by which it has been pushed aside. The fanfared songs, musically, are more advanced than the "tiled" music

[83] So Myers found in the islands of Torres Strait older ritual music side by side with unmistakably younger, more variable profane music.

[84] Wirz II, p. 7.

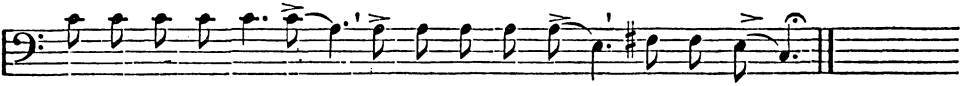
of the songs of the Australian aborigines and the majority of the other musical phenomena encountered so far in New Guinea.

It is then, that same cultural superiority by which the tribes of the central range, which have preserved the pygmy-negrito characteristics in some degree of purity, distinguish themselves in other respects also, in ethics, their attitude towards strangers, pig breeding, agriculture, from the peoples of the coastal and lowland districts, among whom the admixture of the Melanesian or the Australian race is much greater.

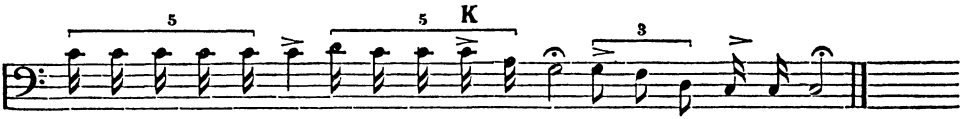
SONGS

TABLE I.

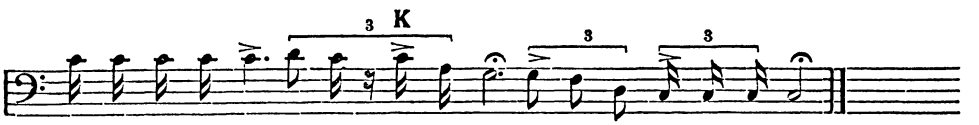
Song α. (Phons. I, II, III, and VI).



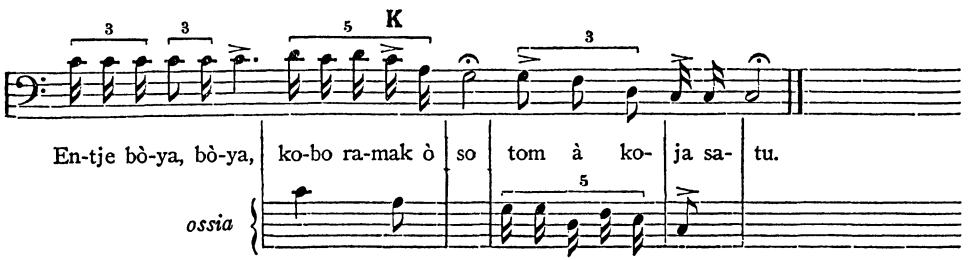
Song β. (Phons. V, VII, and VIII).



En-tje ma-rie-rie-bo pie-ra-wa-rie-nie-o màk a tie bie-bie-dau.



A-na-mau kie-tau kie-ta ta ra-mau sàb-a-ta bu-nu! kie-ta.



Song γ. (Phons. IV, and XVI).

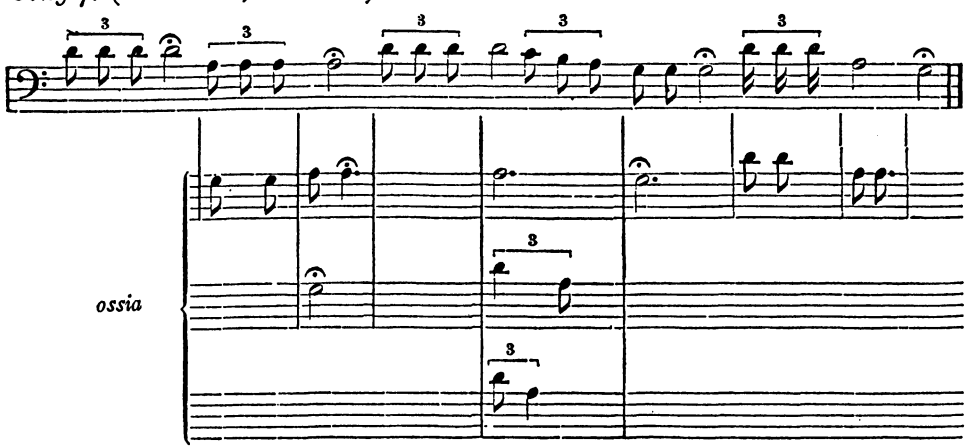
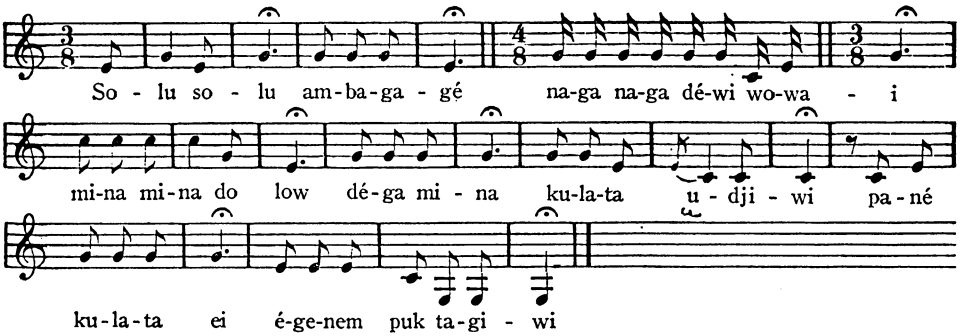
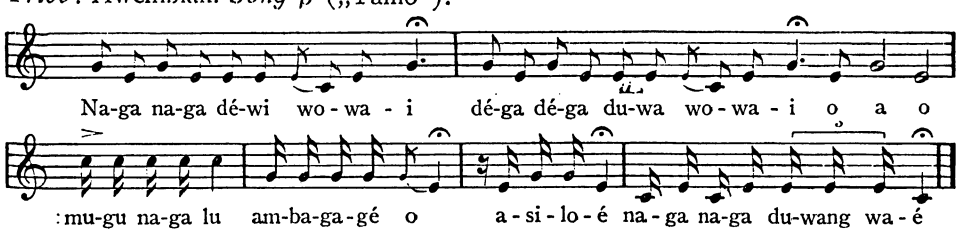


TABLE II.

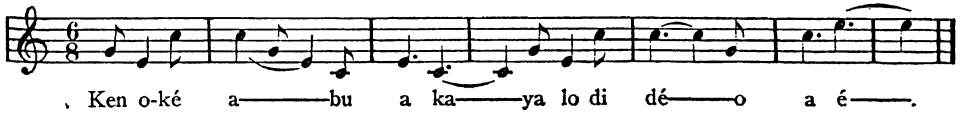
Tribe: Awèmbiak. *Song α* („Panizage").



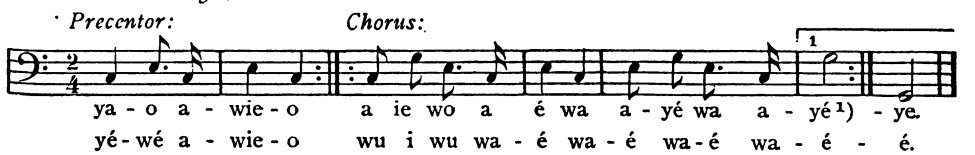
Tribe: Awèmbiak. *Song β* („Yamo").



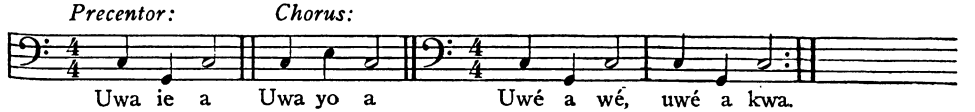
Tribe: Awèmbiak. Clan: Delosie, family group: Ndani. *Song γ*.



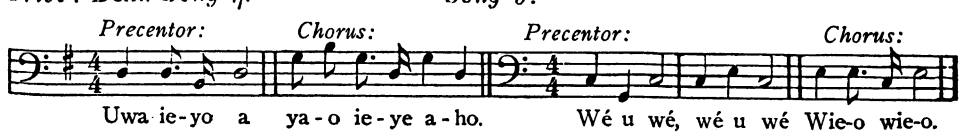
Tribe: Dèm. *Song δ*.



Tribe: Dèm. *Song ε*. *Song ζ*. („cradle-song").



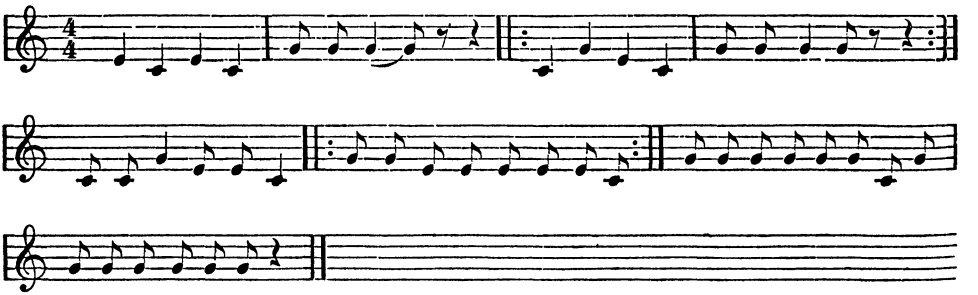
Tribe: Dèm. *Song η*. *Song ϑ*.



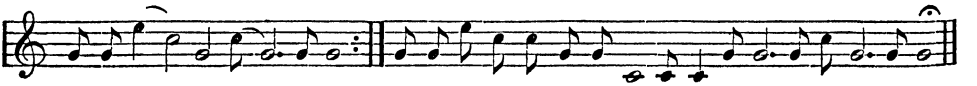
[1]) Ayé = ancestors.

TABLE III.

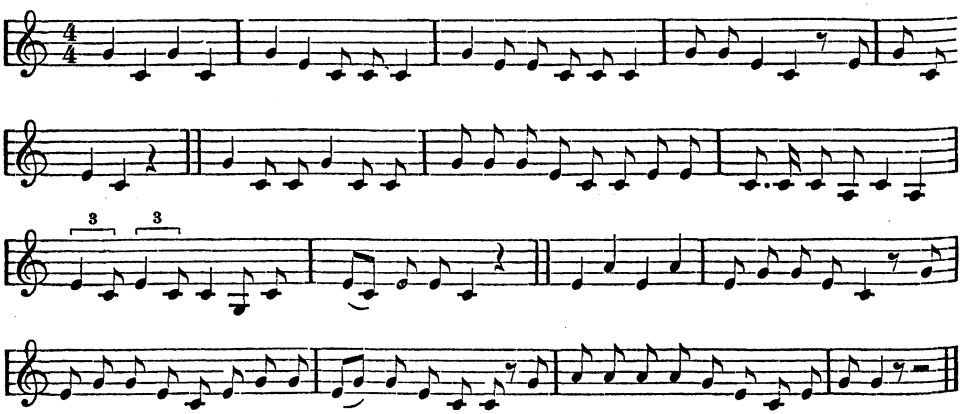
Tribe: Kongara (South Bougainville). *Song* α. [1])



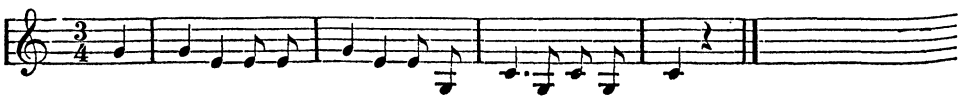
Tribe: Kongara. *Song* β. [2])



Tribe: Jabim (Finschhafen). *Song* γ. [3])



Central New Ireland. *Song* δ. [4])



[1]) Von Hornbostel IV p. 56 No. 7.
[2]) Ibid. p. 55 No. 5.
[3]) Schmidt-Ernsthausen p. 270 No. IV.
[4]) Peekel I p. 50.

LIST OF MUSICAL INSTRUMENTS AND GUIDE TO THE MAP.

Symbol (1st column): symbol used on the map.
No. (2d column): number of Sachs' cultural strata *).

Symbol	No.	Name of the instrument	Literature
		A. Idiophones.	
⊟	10	clicker ("Galipnuss Schnepper")	FINSCH IV 340 and Table XIX fig. 413; VON HORNBOSTEL II 484, 491; STEPHAN and GRAEBNER 123, 131, 173; WERNER 56.
ᔓ		scraper	SELIGMANN II 360 **).
◧	3	bamboo rasp (fig. 1)	HADDON III 270, fig. 226.
◨	3	rubbing instrument made of bones	WOLLASTON II 270 ***).
⋕		rattle made of a human skull	D'ALBERTIS Vol. II fig. 14 facing p. 378.
⋕	9	rattle made of split bamboo with a bundle of bamboo sticks inside it (fig. 2)	HADDON III 273, fig. 232.
⩛	9	other basket rattles	Berlin Mus. No. 10339; ROESICKE I.
┼	1	rattles made of dried fruits (figs. 3 and 4)	D'ALBERTIS Vol. I figs. 20 and 31 facing p. 305; BEAVER III 178; CHALMERS 120; DE CLERCQ and SCHMELTZ 104 and pl. XXVI fig. 7; Finsch IV 302, 544; FISCHER I 179; FUHRMANN 102; HADDON III 272/3; KRÄMER 53; LANDTMANN I 47; II 38; MACCLAY 322; Mus. Bat. Soc. Nos. 3147, 14780, 15860/3, and 18269; RECHE 424 and Table LXXXIV figs. 6 and 7; ROESICKE I; SCHMIDT-ERNSTHAUSEN 274; TAUERN 187; WERNER 56, 57, fig. 43 facing p. 62; WIRZ VII 47; VIII 413.

*) Compare p. 4 note 6.
**) "..... from time to time making a rattling noise by rubbing the spatulae against the neck of their gourds."
***) "The Tapiro rub bones together to make a squeaking noise."

Symbol	No.	Name of the instrument	Literature
×	1	rattles made of shells (fig. 5) rattles made of lobsters' pincers	BEAVER III 178; HADDON III 271/2; VAN DER SANDE 308 and pl. XVII fig. 1; SCHMELTZ I 243; SCHMIDT I 1035; WIRZ VII 47; VIII 413. Mus. Bat. Soc. Nos. 13663/4.
#	10	sistrum for catching sharks	DE CLERCQ and SCHMELTZ 104; FINSCH IV 302; FISCHER I 179; SACHS III 103; TAUERN 41.
⊖	10	bell made of a Conus shell; the tongue is usually a boar's tusk (fig. 6)	Mus. Bat. Soc. Nos. 7059, 12697; VAN DER SANDE 107 and Table XVII fig. 7; STEPHAN and GRAEBNER 131 and Table II/III figs. 18, 19, and 20.
		bell made of a fruit	KRÄMER 54; KRÄMER-BANNOW 202 (fig.); STEPHAN and GRAEBNER 131 and Table II/III figs. 21, 22, and 24.
♂	15	bronze bell with a china tongue	Mus. Bat. Soc. No. 14110.
♂	19	brass drum	Encycl. of N. I. Vol III 317b.
♂	20	gong	BURGER 30; VAN DISSEL I 917, II 1013, 1026; Encycl. of N. I. Vol. II 835b; FEUILLETAU DE BRUWN 107; GOUDSWAARD 56; VAN HILLE 620, 622; VAN HOEVELL I 84; MARTIN 169; VAN DER ROEST 9, 12; SACHSE 98.
▲	6	slit-drum, usually made of wood; sometimes also of bamboo (fig. 7) *)	BEHRMANN 165, 256, 280; BLACKWOOD 279; BRANDES 329; BURGER 59; BUSCHAN I Vol. I 112 (fig. 143); II Vol. II 104 and fig. 76 on p. 108, pp. 126/7, 150, 158, 170; DE CLERCQ and SCHMELTZ Table IV back of p. 244; DETZNER 186; EBERLEIN 635—642 and fig. facing p. 638; Encycl. of N. I. Vol. II 835a; FINSCH II 13 = 31 = 50, and pl. XIII fig. 1; FINSCH IV 537/9; FRIEDERICI I 101 et seqq., 206; II 129; FRIZZI 49/50; FUHRMANN 71; GRAEBNER I 299 et seqq.; GUPPY 143; HAGEN 190; VON HORNBOSTEL II 476, 491; KRÄMER 53, 54; KRÄMEA-BANNOW 49 (fig.), 50, 51, 205, 215 (fig.), 216, 217; KRIEGER 492/3; LUSCHAN II 492/7 and figs.

*) The red line on the map marks the limit of the slit-drum territory.

Symbol	No.	Name of the instrument	Literature
			31/5; MEYER Vol. VIII back of p. 1059, Table IV fig. 9; MEYER and PARKINSON Vol I pl. 16, 37, and 45; Vol. II pl. 11 and 13; NEUHAUS Vol. I 231 (fig. 141), 259 (fig. 175), 316/7, 327 (fig. 225), 386; PARKINSON I fig. 12 facing p. 122; II 35, 40; III 78/80, 141, 144, 192, 237, 279, 328; PEEKEL II fig. facing p. 1027; PÖCH I 230, 236; IV 9; RECHE 18, 440 et seqq., 469, 471, 473, 476, 478, figs. 459/464, Tables LXXXVI, LXXXVII and figs. 2 and 3 in Table LXXXVIII; RIBBE 32, 88/9, 121, 133/4, 137 (fig.); ROESICKE I; II 514; SACHS I 189a/b; III Table I fig. 2, Table 2 fig. 21; VAN DER SANDE 304/6; SCHELLONG I 82/3; SCHLAGINHAUFEN 35; SCHMIDT III 77, 78, 80 et seqq.; JOSEPH SCHMIDT I 707, 725; STEPHAN and GRAEBNER 129; VORMANN I 417; WERNER 56, 245, 257; WIRZ IV 91.
◫	3	hollow tree trunk, used as a substitute for the slit-drum mentioned previously	information from VON HORNBOSTEL about Seran, Upper-Purari, and Marinde-anim.
△	3	sounding block, ending in two points and with an oblong opening in the middle (fig. 8)	Exploration Report 330; Mus. Bat. Soc. No. 15932a; WASTERVAL 502; WIRZ I 67/8 and fig. 6 between pp. 2 and 3; V 335.
△	8	substitute for a drum, made of bamboo, with two incisions at one of the extremities (fig. 9)	FINSCH III 122; IV 529, 534; KRIEGER 169; MURRAY fig. facing p. 84 (?) and 100; PARKINSON I 128.
⊡	5	earth drum; a board laid over a pit in the earth and trodden on	FINSCH III 31; IV 527; GRAEBNER II 33; GUPPY 144 (fig.); VON HORNBOSTEL II 492.
□	10	xylophone with two keys ("thigh"- and "tree trunk"-xylophone) (fig. 10)	BAMLER 500, 501; BUSCHAN II Vol. II 126/7 and fig. 87 on p. 129; FINSCH III 28/9, 110; IV 534/5; KRÄMER-BANNOW 50 (fig.), 268; NEUHAUS Vol. I 385/6; PARKINSON I fig. 20 facing p. 20; III 80/1.
♀	7	dance staffs and dance spears (fig. 11)	CHALMERS 120; Exploration-report 31; FINSCH III 31; IV 526; FISCHER II Table XXXIII figs. 1 and 1a, III 134/8 and Table XXIII; VON HORNBOSTEL II 482; KOCH II 600 and pl. IX Nos. 457/8; RECHE

Symbol	No.	Name of the instrument	Literature
			420/4 and Table LXXXIV figs. 4 and 5, Table LXXXV figs. 1/7; RIBBE 88, 89 (fig.), SCHMELTZ VI 215 et seqq. and Table I—VI; SELIGMANN II 156; STEPHAN 30 (fig. 42) and 114 (fig. 96); STEPHAN and GRAEBNER I 120, 128; WIRZ VI 57 figs. 21 and 22.
♀	7	dance staffs with sliding human skull	Exploration Report 327.
◐	7	stamping drum (fig. 11a)	BEHRMANN 195, 226 (fig.), 227 (fig.), 228; FINSCH IV 526; DE KOCK 159 (?); KRÄMER 53; MACLAY 323; PARKINSON III 289.
◐	7	water stamping drum	BRANDES 329; ROESICKE I; II 514.
●	3	percussion sticks	BUSCHAN II Vol. II 126/7, 177; FINSCH IV 526/7; PARKINSON III 81, 141, 289; STEPHAN and GRAEBNER 131.
⊕	5	beating rod of bamboo (fig. 12)	NEUHAUS Vol. I 384/5 and fig. 307; ROESICKE I; J. HERNHER-CLÉMENT I 223.
○	3	bamboo clappers (fig. 13)	FINSCH III 28; IV 526; HADDON III 270/1 (fig. 228); SCHMIDT-ERNSTHAUSEN 274.
⊞		Nautilus shell beaten	FINSCH IV 134.
⊙		throwing block (thunder block) (fig. 14)	Exploration Report 330; Mus. Bat. Soc. Nos. 15933a/b, 18032; WASTERVAL 503, 505; WIRZ I 72 and fig. 7 between pp. 2 and 3; V 334.
⊠	10	Jew's harp, made of wood, bamboc, bark of a palm glagah, or root (figs. 15 and 16)	D'ALBERTIS Vol. I 395; BEAVER III 178; BIRO 58; BLACKWOOD 284; BUSCHAN II Vol. II 93 (pl. 60 fig. 8), 126/7; CHALMERS 120; DE CLERCQ and SCHMELTZ Table IV back of p. 244; Encycl. of N. I. Vol. II 835a/b; Vol. III 309a/b, 311a, 322a, 324a, 330b; FINSCH III 28, 122; IV 528, 529, 532; FRIZZI 50; GJELLERUP I 179; GOOSZEN 122; GUPPY 142; HADDON III 274/5; HAGEN 187; HELD 346; HOLMES 276; VON HORNBOSTEL II 491; J. J. S. 228; KEYSSER 25; LANDTMANN 47/8; LE ROUX (Kauwerawèt, Awèmbiak, Dèm; oral information); Mus. Bat. Soc. Nos. 6962, 14769a/b, 15149, 15620, 15215, 15928, 16215a/b, 16383, 16440, 16598, 19412a/c; PARKINSON I fig.

Symbol	No.	Name of the instrument	Literature
			13 facing p. 122; II 81/2; PULLE 190/1; RAWLING II 258/9, 274, REIBER 249; RIBBE 133; ROESINCKE I; II 514; SACHS III Table 8 fig. 59; SACHSE 98; VAN DER SANDE 303/4, 312 and pl. XXVIII figs. 12/4; SAVILLE 310; SCHELLONG I 82; SCHMELTZ V 242, 243; SCHMIDT-ERNSTHAUSEN 274; STEPHAN and GRAEBNER 129 and fig. 132; STROEVE App. B p. 3; VICEDOM and TISCHNER I 242; WILLIAMS IV 89, 90 (fig. 24a); WILLIAMSON 212/4 and pl. 20 facing p. 70, fig. 2; WIRZ I 67; II 120 and Table III fig. 11; III Vol. I 84 and Table XXV fig. 2; WIRZ VII 46; WOLLASTON II 270.
⊢	8	rubbing instrument, made of a block of wood with a smooth surface; it has two "undermined" parallel grooves, joined by a hole. The sound is produced by rubbing this block with the hand, which has previously been covered with resin or moistened with saliva (fig. 17)	BUSCHAN I Vol. 96 (fig. 125); II Vol. II 93 (pl. 60 fig. 3) and 150; FINSCH IV 542; KRÄMER 56/8 and Table 14 and 15a; KRÄMER-BANNOW 240 (fig.), 279; PARKINSON III 145 and 146 (fig.); SACHS III Table 9 fig. 80; SCHELLONG 83; SCHMIDT-ERNSTHAUSEN 274.
■	5	sand drum	WIRZ III Vol. I 80 and fig. 3.

Symbol	No.	Name of the instrument	Literature
		B. Membranophones.	
	13	drums in the shapes of vases, beakers or goblets (figs. 18, 19, and 20)	DE CLERCQ and SCHMELTZ 153/5 and pl. XXXIII Nos. 2, 4, 5, 6, 7, 8, 13, 14, 18; Exploration Report 329; VAN DER GOES 46 and pl. TT fig. 10; HELD 346; KOPSTEIN 50 (fig.); Mus. Bat. Soc. Nos. 6891, 7042/3, 18136; SACHS II 67 (fig. 44); Musicol. Archives Bandoeng; SCHMELTZ V 223; TILLEMA Vol. IV 306 (fig.).
		bark drum, covered with goatskin or bark	VAN DER GOES 125.
		cylindrical*) drum: wood, sometimes bamboo. In the western districts under Malay influence, which is apparent in the manner of covering the drum: a rattan hoop and ties, with or without pegs (figs. 21 and 22)	BEAVER III 178, 179, 180; BEHRMANN 226 (fig.); BUSCHAN II vol. II 91 et seqq.; Encycl. of N. I. vol. II 833a; ERDWEG 302 and fig. 202; Exploration Report 329; FINSCH III 171; IV 534/7; VAN DER GOES 181; HADDON I 375; III 279/281; KRIEGER 330/1; Mus. Bat. Soc. Nos. 3143, 3265a/b, 6891, 12903/4, 15311, 15495, 16007, 18138 (?); VAN DER SANDE 312, 313 and pl. XXVIII figs. 8/11; SELIGMANN II 386, 585, 588 and pl. LXIX facing p. 586; TAUERN 48, 75, 192; WIRZ VI 45 et seqq.
		two-legged drum (fig. 23)	Mus. Bat. Soc. No. 18033a.
		drum, about 8 feet in length, beaten with a wooden hammer	BEAVER I 413; III 208.
	10	hour-glass drum,*) symmetrical or assymmetrical, with the base cut off straight or ending in a fish's mouth; with or without a handle, and covered on one side with the skin of an iguana, varanus, kangaroo, buffalo, cassowary, or snake. The skin is fastened by means of rattan or	D'ALBERTIS Vol II 269 (fig.); BEAVER I 413, fig. facing p. 411; III 178/9, 208, pl. facing pp. 58 and 272; BEHRMANN 195, 227 (fig.); BLACKWOOD 282; BRANDES 275 (fig.), 311, 318 (fig.), 330 (fig.); BUSCHAN I Vol. I fig. facing p. 73, 79 (fig. 101), 103 (fig. 134), 108 (fig. 139); II Vol. II 91 et seqq., pl. 60 fig. 2, pp. 126/7, 150; DE CLERCQ and SCHMELTZ 151/6 and pl. XXXIII figs. 1, 3, 11, 12, and 20; COENEN pl. X No. 2 facing p. 20; VAN DISSEL I 956 fig. 10; EBERLEIN 635; Encycl. of N. I. Vol. II 835a/b; ERDWEG 303 and fig. 203; Exploration

*) Between the cylindrical and hour-glass shaped drums and between the cylindrical and the beaker- or goblet-shaped drums there are transitional forms, of which it is difficult to say, whether they should be classed with the one group, or with the other.

Symbol	No.	Name of the instrument	Literature
		stuck down with some kind of glue (figs. 24-27)	Report 329; FINSCH II p. 13 = 31 = 50 and pl. XIII figs. 2/4; III 29, 31, 122, 171, pl. XXI facing p. 142 fig. 1; IV 536, 537, 539; FISCHER III 130/3 and pl. XXI figs. 7/10, pl. XXII figs. 1/7; FRIEDERICI I 101 et seqq.; FUHRMANN 97/101; "Globus" XCII 20 et seqq.; VAN DER GOES 163 and pl. VV fig. 3; GOOSZEN 123; GRAEBNER II 42; "Graphic" 8 XI '30 p. 254; HADDON II 432 (fig.); III 278/281; HAGEN 185/6 and Table 43/5; HOLMES 91 (fig.), 275; HURLEY 172; KOCH I 391; II 598/600 and pl. IX Nos. 450/; DE KOCK 164; KRÄMER 52/4; LE ROUX 485; LANDTMANN 43 et seqq (with fig.), 452; LORENTZ fig. facing p. 44; LUSCHAN I Table XXXI figs. 5, 7, and 8; MURRAY fig. facing pp. 84, 92, and 100; Mus. Bat. Soc. Nos. 3196/7, 3243a/c, 3301, 6830, 6964, 6998, 10087, 10454, 13571/7, 13885, 14026, 14085/6, 14785, 14789, 14790/1, 14792a/b, 14793, 15310, 15313, 15930/1, 16276a/b, 16344, 16359, 16421, 18033b/c 18135, 18137, 18139; Musicol. Archives Bandoeng; NILLES 116; NEUHAUS Vol. I 389, 394/5, figs. 309, 315/6; NEWTON 147 and fig. facing p. 144; PARKINSON I fig. 21 facing p. 122; II 40; III 80; PÖCH I 231 (fig. 1), 234, 235 (fig. 2), Table I fig. 4; II 397 figs. 2/3; III 615 (fig. 1); PRATT 51 and fig. facing p. 40; RECHE 432/440, 478, figs. 447/458 and 475; REINHARDT Table 68 between pp. 480 and 481; SACHS III 111 and Table 10 figs. 85/6; VAN DER SANDE 304/6 and figs. 187, 188, and 190, pl. XXVIII figs. 1/7; SAVILLE 310, frontispiece and fig. facing p. 212; SCHELLONG I 82/3; SCHMELTZ I 163 and pl. XV fig. 5; III 209; V 223 and pl. XI fig. 6 and XV fig. 2; VI 214/5; SELIGMANN I pl. XXIV facing p. 332 fig. 1; II 360; SCHMIDT-ERNSTHAUSEN 271/2 and 273 fig. 1; JOSEPH SCHMIDT 725; SCHULTZE JENA Table XLIV fig. h; SELIGMANN II 161 and pl. XXIV facing p. 161; STEPHAN and GRAEBNER 8, 129 and Table I figs. 22/3; THILENIUS II 329b/330a and 331 fig. 7; VERTENTEN 154/5 and Table XVIII figs. 1/2; VORMANN II 908; WERNER 56, 275, fig. 50 facing p. 70; WILLIAMS I fig. be-

Symbol	No.	Name of the instrument	Literature
			tween pp. 42 and 43; WILLIAMS IV 7, 26, 86/7, 173, 232/3, 247, 303; WILLIAMSON 212/3 and pl. 75 facing p. 250 fig. 3; WIRZ III Vol. I 83/4, Table VI fig. 2 and Table XXV figs. 5 and 6; Vol. II Table XV; IV 23 et seqq., 26 et seqq, 60, 90, 106, 112, 117 et seqq., 121 et seqq., 128, 130, 131. 134, 149, 179, 275, 279, 308, 310, 313, 376, fig. 28 facing p. 96, 31 facing p. 97, 36 facing p. 128, 41 facing 145, 57 facing 193, 88 facing p. 288, and 101 facing p. 321; VI fig. 40; VII 45 et seqq. and Tables XVIII fig. 1-6, XXV fig. 2; WOLLASTON I 141, 142 and pl. facing p. 142 figs. 5/7.
□		drums (no details given, or insufficiently described, or only mentioned in general terms)	D'ALBERTIS Vol. I 395; BEAVER III 228; BINK 32; VAN BALEN 8; BAMLER 501, 511; BOREEL 234; BURGER 30; CHALMERS 120; DE CLERCQ and SCHMELTZ Table IV back of p. 244; VAN DISSEL I 971; II 1026; Encycl. of N. I. Vol. II 835a/b; Vol. III 307b/8a, 314b, 317b, 318a, 320a, 320b, 322a, 324, 327b, 328a/b, 331a, 332b, 333b, Exploration Report 329; FEUILLETAU DE BRUYN 40, 99, 107; FINSCH I 116; FRAZER 221, 226; "Globus" XCVIII 367; VAN DER GOES 46, 114; GOOSZEN 121/3, 125; GOUDSWAARD 56; VAN HOËVELL I 85; II 128; III 173; HORST 28, 34; HURLEY 148; J. J. S. 228; KEYSSER 25; KIRSCHBAUM 204; KRIEGER 424; MACLAY 323; MARTIN 169; PÖCH V 153; RAWLING I 247/8; II 59/61 and 281; ROESICKE II 514; SACHSE 96, 98; SCHMIDT I 1042, 1048, 1055; JOSEPH SCHMIDT I 707; II 49; SELIGMANN and MERSCH STRONG 229; STROEVE App. B p. 3; THOMSON 120; VORMANN I 411, 417; WASTERVAL 503, 504; WIRZ I 7, 67; V 268, 325.
⊙	17	rebana ("Rahmentrommel")	Encycl. of N. I. Vol. II 835a/b; SACHS II 64 (fig. 40) and 65; SACHSE 98; TAUERN 48, 75, 192.
▲	10	mirliton	GUPPY 142/3.

Symbol	No.	Name of the instrument	Literature
		C. Chordophones.	
▲	6	zither made of the nerve of a leaf of a sago palm ("Stammseitiger Musikbogen") (fig. 28)	FINSCH IV 542; NEUHAUS Vol. I 385, 386, fig. 308; RECHE 447; ROESICKE II 514; SCHLAGINHAUFEN 36.
		sago-zither, one-stringed	LANDTMANN II 48; WILLIAMS IV 89, 90 (fig. 24b).
●	6	musical bow, with one or two strings (fig. 29)	BEAVER III 178; BUSCHAN II Vol. II 126/7; FINSCH III 29/30, 112; IV 542; GUPPY 142; VON HORNBOSTEL II 491; LANDTMANN II 48; MEYER and PARKINSON Vol. II pl. 23 fig. 2; PARKINSON III 82; Ethnogr. Mus. Cologne No. 13761; WIRZ III Vol. I, 84; WIRZ VII 47.
■	18	bamboo idiochord, 3 strings ("Stammseitige Rohrenzither")	VAN HILLE 621.
	22	rebab	Encycl. of N. I. Vol. II 834b/5a.
		monochord (board with one chord and two bridges) (fig. 30)	BUSCHAN II Vol. 93 pl. 60 (fig. 6); FINSCH IV 542.

Symbol	No.	Name of the instrument	Literature
		D. Aerophones.	
♂	4	end-blown wooden trumpet (figs. 31 and 32)	CHINNERY 74 fig. 5; Exploration Report 330; FUHRMANN 96; HADDON IV 78; Mus. Bat. Soc. Nos. 14778a/b, 14779, 14781, 14794/7, 15314, 15712/3, 18281; Ethnogr. Museum Leiden, series 1482 No. 1; WILLIAMS IV 71, 87/8 (fig. 23), 140, 163, 211, 247; WOLLASTON II 143.
♂	9	side-blown wooden trumpet (fig. 33)	BEAVER II 23; BEHRMANN 347 (fig.); CHINNERY figs 1 and 2 facing p. 73; FINSCH IV 532; FUHRMANN 103; GJELLERUP I 179; LUSCHAN III 111 fig. 20; Mus. Bat. Soc. Nos. 18023b, 18062; NEUHAUS Vol. I 315, 384, fig. 215; RECHE 18, 430/2, figs. 442/6, Table LXXXVIII fig. 1; VAN DER SANDE pl. XXIX fig. 6; SCHLAGINHAUFEN 35/6 and fig. C2 and E2; SELIGMANN III 22 et seqq.
♂		wooden trumpet (no details given)	CHIGNELL 332; VAN EERDE 930; Encycl. of N. I. Vol. II 834a/b and 835b; Vol. III 300b; ROESICKE II 514.
♂	4	end-blown bamboo trumpet (fig. 34); sometimes it has a coconut as mouthpiece	BEAVER II 24; CHINNERY fig. 3 facing p. 73; Encycl. of N. I. Vol. II 835b; FINSCH IV 531, 534; FISHER III 133/4 and pl. XXII figs. 8/12; VON HORNBOSTEL II 490, 498; MACLAY 321/2; Mus. Bat. Soc. Nos. 16233, 16348, 16361/2; RECHE 426/7, fig. 435; RIBBE 134/5 (fig.); WOLLASTON I 143.
⊕		wooden "trombone"	Leiden No. 2987/2.
♂	7	trumpet made of a gourd (in New Britain, with three finger-holes)	FINSCH IV 325; HAGEN 189; MACLAY 321; WERNER 56.
♀	4	end-blown conch trumpet; generally, the instrument is made of a Triton shell (fig. 35)	FINSCH III 27, 122, 254; IV 134; Mus. Bat. Soc. Nos. 7044, 8957, 15929a/b, 16432b/e, VAN DER SANDE 307/8, 314, pl. XXIX fig. 24; WIRZ VII 47.
♀	7	side-blown conch trumpet, the instrument is sometimes made of a *Fusus* shell, but generally of a *Strombus* or *Cassis* (fig. 36)	BUSCHAN II Vol. II 158; CHINNERY 73 and fig. 4 facing p. 73, 74 fig. 6; DE CLERCQ and SCHMELTZ pl. XXXIX fig. 3; FINSCH IV 133; GUPPY 143; HADDON III 283 and fig. 248; HELD 346; LANDTMANN 47, 452; MACLAY 324; Mus. Bat. Soc. Nos. 3122, 3261, 6997, 8998, 16432a; NEUHAUS Vol. I

Symbol	No.	Name of the instrument	Literature
			314; VAN DER SANDE 307/8, 314, pl. XXIX fig. 22; SCHELLONG 82b; WERNER 57, 257, fig. 38, fig. 11 facing p. 57; WILLIAMS IV 26, 87, 140, 163, 211, 247.
♀		conch trumpet, (no details given, or with an incomplete description mentioned in general terms)	BEAVER III 178, 208; CHALMERS 120; Encycl. of N. I. Vol. II 834a/b, 835a, Vol. III 320b; Exploration Report 330; FISCHER III 129; VAN DER GOES 46, 125; GOOSZEN 122; GOUDSWAARD 56; HAGEN 190; VAN HASSELT 26; HOLMES 275; VON HORNBOSTEL II 484; KRIEGER 331; LEHNER 406, 408; NEUHAUS Vol. I 384; RIBBE 135; VAN DER ROEST 9, 11; SCHMELTZ I 243; SCHMIDT-ERNSTHAUSEN 274; STEPHAN and GRAEBNER 131; WILLIAMS III 38.
▲	7	ocarina, made of wood or of a small coconut (fig. 37)	FINSCH III 28, 254; IV 302, 325, Table XIX fig. 428; HADDON III 281/2; HAGEN 189; MACLAY 322; Mus. Bat. Soc. Nos. 3262, 13661; RECHE 428/30, fig. 441; VAN DER SANDE 306; SCHMELTZ I 163/4; III 209; V 224 and pl. XI fig. 9/10c; SELIGMANN and MERSH STRONG 229; TISCHNER 48; WERNER 56, pl. 38 facing p. 57 fig. 6; WIRZ III Vol. I 84 and Table XXV figs. 3/4.
△	9	buzzing nut	BUSCHAN II Vol. II 126/7; FINSCH IV 528; VON HORNBOSTEL II 483; SCHMELTZ IV 224; WIRZ VII 47 (fig. 2).
◨	9	transverse flute, closed at the upper end, open at the bottom, lateral blowing-hole (figs. 38-46)	D'ALBERTIS Vol. II pl. facing p. 378 fig. 18 (?); BEHRMANN 129, 195, 221; BINK 34; Encycl. of N. I. Vol. II 835a; Vol. III 322a (?); BLACKWOOD 282; Exploration Report 330; GJELLERUP I 179, 181/2 (?); J. J. S. 226; LACHMANN 12; LE ROUX 484/5; Mus. Bat. Soc. Nos. 3244a/b, 12908/9, 15567, 15568a/c, 15620, 15716, 15936a/b, 18023a/b, 18061a/b, 18117a/b; NILLES 115; NEUHAUS Vol. I 384; RECHE 349, 425/8, figs. 436/7; ROESICKE I (see LACHMANN); VAN DER SANDE 294/7, 306/7, 313/4, and pl. XXIX figs. 2, 6, 8, 9, 11, 13, 14, and 20; STROEVE App. B p. 3 (?); WILLIAMS IV 6/8, 88/9, 99, 180, 183, 185, 195/8, 206 and plata XXIV B; WIRZ V 331/5; VI 59 et seqq and fig. 129.

Symbol	No.	Name of the instrument	Literature
	9	flute, open on either side, with lateral blowing-hole in the middle (fig. 47)	DE CLERCQ and SCHMELTZ Table XXXIX No. 10, and p. 157; WIRZ III Vol. I 84.
	9	flute with lateral blowing-hole and one finger-hole	HAGEN 186.
		transverse flute with two finger-holes, combined with clapper	
		vertical flute, closed at the bottom, no finger-holes, blown at the upper end (figs. 48-50)	BINK 34; DE CLERCQ and SCHMELTZ 156/7; Encycl. of N. I. Vol. II 835a; Exploration Report 330; DETIGER 55; FINSCH IV 530; GJELLERUP 179, 181/2 (?); VAN DER GOES 100, 178/9; Graf. II; HOLMES 276; KRUYT 260; Leyden o.m. 128139, 40; LE ROUX 484/5 and oral information about the Boromesso, the Turu, and Batavia camps; LORENTZ 38/44, 152/3, 310; Mus. Bat. Soc. Nos. 7079a/b, 12905/7, 14023, 15714a/c, 15935, 15936c, 16066/7, 16068a/c, 16069, 16070, 16103/4, 16132/3, 16162, 16187, 16218, 16360, 18025h, 18059b, 18060a/i; VAN DER SANDE 295/6, 306/7, 313, figs. 189, 191, 192, and pl. XXIX figs. 1, 3, 7, 10, 12, 15/19, and 21; T.A.G. XXXII 663; WIRZ I 66/8, 70, 72, 73, 75/6, 78, 80; V 267, 324/5, 331/5, pl. XXXI fig. 27, VI fig. 98.
		vertical flute, closed at the bottom, two finger-hole; blown at the upper end	BAMLER 501 (?); FINSCH III 27; IV 530; SCHMIDT-ERNSTHAUSEN 272; HOLMES 276.
		vertical flute, closed at the bottom two finger-holes; blown at the upper end	BAMLER 501 (?); BUSCHAN II Vol. II 126/7; FINSCH III 27; IV 529, 530; PARKINSON I fig. 11 facing p. 122; III 81; SACHS III Table 8 fig. 6 (?); SCHMIDT-ERNSTHAUSEN 272 and 273 (fig. 3).
		vertical flute, the node pierced at the bottom, no finger-holes; blown at the upper end	Exploration Report 330; FINSCH IV 530 (?); Mus. Bat. Soc. Nos. 13874, 13876, 13877 (?), 16361/2, 16461; REIBER 248.
		vertical flute, the node pierced at the bottom two finger-holes; blown at the upper end	FINSCH IV 529, 530; HADDON III 283; HELD 346; SAVILLE 310; TISSOT 83 (pl. VI), 89; WILLIAMSON 212, 214/5; WIRZ VII 46 et seqq.

Symbol	No.	Name of the instrument	Literature
		vertical flute, open at the top, the node pierced at the bottom, three finger-holes; blown at the upper end	FINSCH IV 532; TISCHNER 50/1; NILLES 115; WIRZ VII 46 et seqq.
		vertical flute with a pierced node at either side, no finger-holes, and blown at the upper end	MACLAY 323; Mus. Bat. Soc. No. 13875.
		very short flute, closed at the bottom by a node, and blown at the upper end	Exploration Report 330; GOOSZEN 122; Mus. Bat. Gen. No. 18059a; VAN DER SANDE pl. XXIX figs. 4/5; SCHMELTZ V 243; WIRZ III Vol. I 83/4.
	3	double flute	BUSCHAN II Vol. II 127; FINSCH III 27; IV 530.
	11	nose flute (figs. 51-2)	FINSCH IV 528/9; FRIEDERICI I 104; LUSCHAN I 71 et seqq.; TISSOT 89, fig. facing p. 83, pl. VI.
		flute, open at the top, 4 finger-holes, blown at the top	VICEDOM/TISCHNER I 241/2.
		transverse flute, consisting of more than one internode, closed at the top, no finger-holes; lateral blowing-hole	Encycl. of N. I. Vol. III 331a; LACHMANN 12 (ROESICKE); RECHE 428, 429 (fig. 437).
	10	piston flute, blown at the top or at the side, no finger-holes	BAMLER 501; ERDWEG 295; KRIEGER 169; NEUHAUS Vol. I 384; SCHELLONG I 82; III SCHMIDT-ERNSTHAUSEN 272, 273 (fig. 2).
		water flute	BUSCHAN II Vol. II 92, 141; ERDWEG 295 and fig. 201; PARKINSON III 294/5.
	6	panpipes (single row) (figs. 54-57)	D'ALBERTIS Vol. I fig. facing p. 305, 395; BAGLIONI 264/5, figs. 15, 16, 19, and 20; BUSCHAN II Vol. II 127; Encycl. of N. I. Vol. II 835b; FINSCH III 122 and Table V fig. 4; IV 528/9, 530, 532; HADDON III 282; VON HORNBOSTEL I 351 et seqq.; II 474 and Table XIII fig. 150; KOCH II 567; LACHMANN 10 (LANDTMANN); LANDTMANN 45 (fig.) and 47; MEYER Vol. VIII Table III fig. 18 behind p. 1059;

Symbol	No.	Name of the instrument	Literature
			NILLES 116; NEUHAUS Vol. I 383, 384, figs. 306a/b; PARKINSON I fig. 19 facing p. 122; III 145, 237/8; RECHE 425; SACHS I 289b; III Table 4 figs. 30 and 32; SCHELLONG I 83; SCHMIDT-ERNSTHAUSEN 272 and 273 (fig. 4); STEPHAN and GRAEBNER 129, 130, 131; THOMSON 120 (fig.); WIRZ III Vol. I 84 and pl. XXV fig. 1; WIRZ VII 47.
	7	panpipes (double row) (fig. 58)	BUSCHAN I Vol. I 90 (fig. 118); II Vol. II 160, pl. VIII, 170; FRIZZI 50; GUPPY 141/5; VON HORNBOSTEL II 463 et seqq., 472 et seqq., 490, 491, 495, 497/8, Table XIII fig. 149; MEYER and PARKINSON Vol. I pl. 29; RIBBE 65 (compare 84), 83 (fig.), 48 (fig.), 85 (fig.), 87, 134; SACHS III Table 4 fig. 27.
		panpipes (no details given)	BEAVER III 178; CHALMERS 120; DE CLERCQ and SCHMELTZ Table IV behind p. 244; FINSCH III 28; GRAEBNER II 33; ROESICKE II 514; THURNWALD III Vol. I 282/3, 461, Vol. II 7/8; WERNER 56.
	10	panpipes (bundle form) (fig. 59)	BAGLIONI 264/5, fig. 18; BURGER 59, FINSCH IV 529; VON HORNBOSTEL II 474 et seqq. and Table XIII fig. 151.
		flutes (no details given, or insufficiently described or only mentioned in general terms)	D'ALBERTIS Vol. II fig. 18 facing p. 378; BEAVER III 178; BURGER 30; BUSCHAN II Vol. II 158; CHALMERS 120; DE CLERCQ and SCHMELTZ Table IV back of p. 244; VAN DISSEL II 1026; VAN EERDE 930; Exploration Report 329; Encycl. of N. I. Vol. II 835b; FINSCH III 171, 254; IV 528; FRASER 221, 226, 233, 252; GOOSZEN 122; HAGEN 186, 189; VAN HASSELT 126/7; HORST 26/7, 34, 149; J. J. S. 228; KEYSSER 25; KIRSCHBAUM 204; TEN KLOOSTER 13; KONING 10/11; KRIEGER 330/1, 424; LANDTMANN 47; LEHNER 405; MEYER and PARKINSON Vol. II pl. 23 fig. 1; NEUHAUS Vol. I 384; PARKINSON II 35; SCHMELTZ V 243; SCHMIDT I 1039; JOSEPH SCHMIDT II 53, 56, 60, 62; STEPHAN and GRAEBNER 131; TAUERN 48; THURNWALD I 12, 27; VORMANN I 419, 426/7; WASTERVAL 502, 505; WER-

Symbol	No.	Name of the instrument	Literature
			NER 56, 257; WIRZ V 352/3; VI 59 et seqq.
○		shawm, with one finger-hole	SCHELLONG I 82 *).
⊙	3	small shawm, made of a folded blade of grass ("Blättelinstrument") (fig. 60)	HADDON III 283; HOLMES 276; REIBER 248; SCHMIDT I 1041; STEPHAN and GRAEBNER 124/5, 131, 173.
●	10	shawm, made of a very thin bamboo, the upper end of which is split, and acts as a tongue ("Blasspaltrohr")	HADDON III 283.
⊖	9	slit blowing bamboo	FINSCH IV 529.
+	2	bullroarer (fig. 61)	BAMLER 494/8, 512; BEAVER III 185; BEHRMANN 195, 221; BUSCHAN II Vol. II 126/7, 141; DE CLERCQ and SCHMELTZ 238/9, 241, and Table IV back of p. 244; DETZNER 190/1; Exploration Report 330; FINSCH II Table V figs. 5/6; III 35, 65; FRAZER 243, 249, 250, 255, 260, 261, 263, 291, 301, 302; FRIEDERICI I 102; HADDON II 418, 420 (fig.), 421; III 275/8; IV .. ; HAGEN 188/9; HOLMES 82, 84 (fig.), 127; VON HORNBOSTEL II 483/4; HURLEY 270/1; KEYSSER 36; TEN KLOOSTER 13; KRÄMER 56; KRÄMER-BANNOW 269, 270; KRIEGER 168/9; LANDTMANN 75 et seqq., 403 et seqq.; LEHNER 406/7, 408, 409, 410/414; Mus. Bat. Soc. Nos. 16064a/b, 16065, 16102, 16131a/b, 17076, 18615a/b; NEUHAUS Vol. I 259 fig. 173h, 385; Vol. III 411 figs. 1/3, 412 figs. 5/9; "Nieuw Guinea X 226; PARKINSON III 82, 294, 301; PEEKEL II 1036 et seqq.; PÖCH III 616; RECHE 349/351, 426, figs. 384/5 and Table LXV fig. 1; SACHS I 341b; VAN DER SANDE 306; SCHELLONG I 82; II 145 et seqq.; SCHMELTZ II 12/20; STEPHAN and GRAEBNER 119, 131, and 119 fig. 124; THILENIUS II 332b;

*) "Von den beiden verschiedenen im Gebrauch befindlichen Flöten (sic!) ist die eine (*augagung*) nach dem Prinzip unseren Schalmeien construirt, mit nur einem Schalloch."

Symbol	No.	Name of the instrument	Literature
			WERNER 56; WILLIAMS II 165/171 and fig. facing p. 165; IV 89, 195; V passim; VI (XII p. 49); WINTHUIS p. 83 et seqq.; WIRZ IV 71, 141, 183, 283, 285 et seqq.; V 350, 351/, 352/3, 353; VII 90 vv., and Table XXII.
⫩		whip instrument (fig. 64)	HADDON III 274/5.
⫫		humming top	FINSCH IV 325; STEPHAN and GRAEBNER 112 fig. 118 No. 2.
⫳		top with humming "propellor"	HELD 347 with fig.

DESCRIPTION OF LINE DRAWINGS (figs. 1-62)

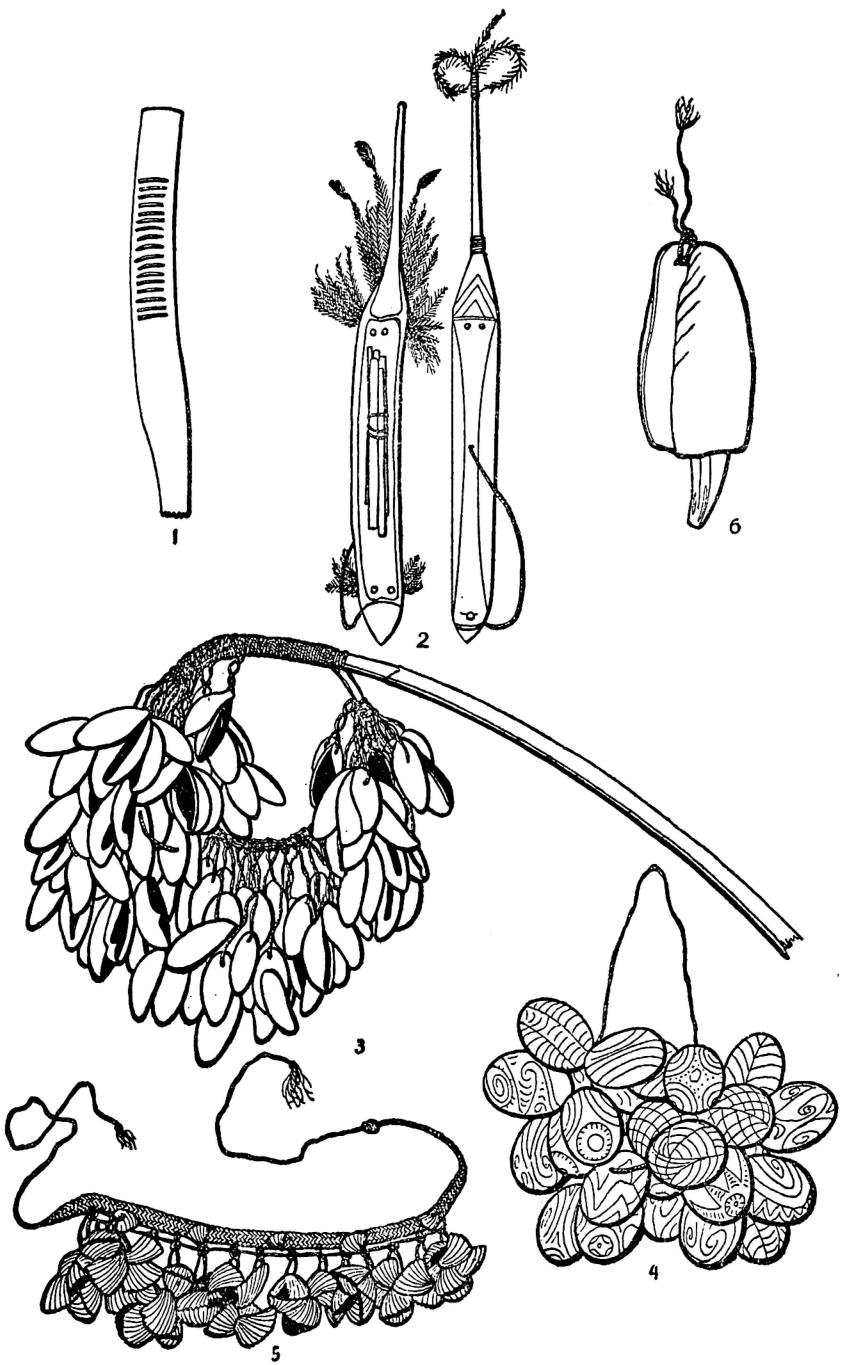
No.	Name of the instrument	Origin of the instrument
	A. Idiophones.	
1.	bamboo rasp (HADDON III p. 270 fig. 226)	Murray Island (Torres Strait)
2.	bamboo ratlle (HADDON III p. 273 fig. 232)	ibid.
3.	rattle made of dried fruits (Mus. Bat. Soc. No. 14780)	Miku (affluent of the Digul River)
4.	rattle made of dried fruits (Mus. Bat. Soc. No. 18269)	Lake Sentani
5.	rattle made of shells (VAN DER SANDE pl. XVII fig. 1)	Humboldt Bay
6.	bell made of a Conus shell; the tongue consists of a boar's tusk (Mus. Bat. Soc. No. 7059)	Humboldt Bay
7.	slit-drum (SACHS III pl. 2 fig. 21)	Sepik (Kais. Augusta) River
8.	sounding block (WIRZ I fig. 6 between pp. 2 and 3)	Humboldt Bay
9.	substitute for a drum, made of bamboo (MURRAY, fig. facing p. 100)	Port Moresby
10.	xylophone with two keys (BUSCHAN II Vol. II p. 129 fig. 87)	Gazelle Peninsula (Nw. Britain)
11.	dance staff (FISCHER II pl. XXXIII fig. 1)	Southern part of Princess Marianne Strait
11a.	stamping drum (BEHRMANN p. 227)	Sepik (Kais. Augusta) River
12.	beatingrod of bamboo (NEUHAUS Vol. I p. 385 fig. 307)	Lower Markham River
13.	bamboo clappers (HADDON III p. 271 fig. 228)	Murray Island (Torres Strait)
14.	throwing block (thunder block) (Mus. Bat. Soc. No. 18032)	Humboldt Bay
15.	Jew's harp made of bark of a palm (Mus. Bat. Soc. No. 15928)	Humboldt Bay
16.	Jew's harp made of bamboo (Mus. Bat. Soc. No. 16215)	Sarmi
17.	rubbing instrument (BUSCHAN II Vol. II p. 93 pl. 60 fig. 3)	northern New Ireland
	B. Membranophones	
18.	globes drum (Musicol. Archives Bandoeng)	Waropèn coast
19.	id. (Mus. Bat. Soc. No. 18136)	Yapèn

No.	Name of the instrument	Origin of the instrument
20.	transitional form between goblet and cylindrical drum (Mus. Bat. Soc. No. 6891)	Waropèn coast
21.	bamboo drum (Mus. Bat. Soc. No. 12904)	Humboldt Bay
22.	transitional form between hour-glass-shaped and cylindrical drum (ERDWEG p. 303 fig. 202)	Tumleo
23.	two-legged drum (Mus. Bat. Soc. No. 18033a)	Lake Sentani
24.	hour-glass drum ending in a fish's mouth (HADDON III p. 280 fig.)	Murray Island (Torres Strait)
25.	hour-glass drum (ERDWEG p. 303 fig. 203)	Tumleo
26.	id. (Mus. Bat. Soc. No. 13575)	Okaba (south N. G.)
27.	id. (Mus. Bat. Soc. No. 18135)	Humboldt Bay
	C. Chordophones.	
28.	zither, made of the nerve of a leaf of a sagopalm ("Stammseitiger Musikbogen") (NEUHAUS Vol. I p. 386 fig. 308)	Sepik (Kais. Augusta) River
29.	two-stringed musical bow (MEYER and PARKINSON Vol. II pl. 23 fig. 2)	Gazelle Peninsula
30.	monochord (BUSCHAN II Vol. II p. 93 pl. 60 fig. 6)	Neu-Lauenburg
	D. Aerophones.	
31.	end-blown wooden trumpet (Mus. Bat. Soc. No. 15712)	Arso
32.	id (Mus. Bat. Soc. No. 18281)	Lake Sentani
33.	side-blown (Mus. Bat. Soc. No. 18062)	Tobadi
34.	end-blown bamboo trumpet (Mus. Bat. Soc. No. 16362)	Sabèri
35.	end-blown conch trumpet (*Tritonium variegatum*) (Mus. Bat. Soc. No. 16432a)	Waropèn coast
36.	side-blown conch trumpet (*Strombus maximus*) (Mus. Bat. Soc. No. 16432)	ibid.
37.	ocarina, made of a small coconut (Mus. Bat. Soc. No. 13661)	south coast

No.	Name of the instrument	Origin of the instrument
38.	transverse flute, closed of at the top, open at the bottom (Mus. Bat. Soc. No. 3244a)	Humboldt Bay
39.	id. (Mus. Bat. Soc. No. 3244b)	ibid.
40.	id. (Mus. Bat. Soc. No. 15568a)	Beko
41.	id. (Mus. Bat. Soc. No. 15568c)	ibid.
42.	id. (Mus. Bat. Soc. No. 15716)	Arso
43.	id. (Mus. Bat. Soc. No. 15936a)	Waabe
44.	id. (Mus. Bat. Soc. No. 15936b)	ibid.
45.	id. (Mus. Bat. Soc. No. 18023a)	Tobadi
46.	id. (Mus. Bat. Soc. No. 18061a)	Kaptiau
47.	flute, open on either side, with lateral blowing-hole in the middle (DE CLERCQ and SCHMELTZ pl. XXXIX fig. 10)	north coast
48.	vertical, stopped no finger-holes, (Mus. Bat. Soc. No. 12906)	Nacheibe
49.	id. (Mus. Bat. Soc. No. 16066)	Udjang
50.	id. (Mus. Bat. Soc. No. 16132)	Mandé
51.	nose-flute (LUSCHAN I pl. XXXIII fig. 2)	New Britain
52.	id. (LUSCHAN I pl. XXXIII fig. 6)	ibid.
53.	piston-flute (SCHMIDT-ERNSTHAUSEN (p. 273 fig. 2)	Finschhafen
54.	pan-pipe (single row) (VON HORNBOSTEL I fig. facing p. 352)	New Ireland
55.	id. (NEUHAUS Vol. I p. 384 fig. 306a)	Sepik (Kais. Augusta) River
56.	id. (NEUHAUS Vol. I p. 384 fig. 306b)	ibid.
57.	id. (WIRZ III Vol. I pl. XXV fig. 1)	Merauke
58.	panpipes (double row) (BUSCHAN I Vol. I p. 90 fig. 118)	Buka (Solomon Islands)
59.	bundle flute (VON HORNBOSTEL II pl. XIII)	Bougainville (Solomon Islands)
60.	shawm, made of a folded blade of grass ("Blättel-Instrument") (STEPHAN and GRAEBNER p. 124)	New Ireland
61.	bullroarer (Mus. Bat. Soc. No. 18615a)	
62.	whip instrument (cracking whip) (HADDON III p. 274 fig. 234)	Mer (Torres Strait)

north coast

north coast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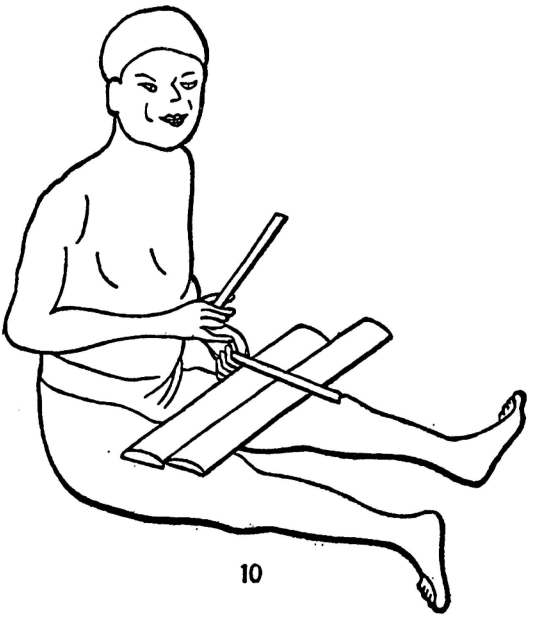

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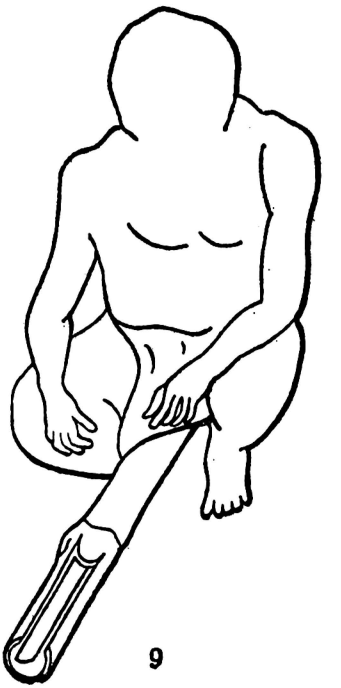

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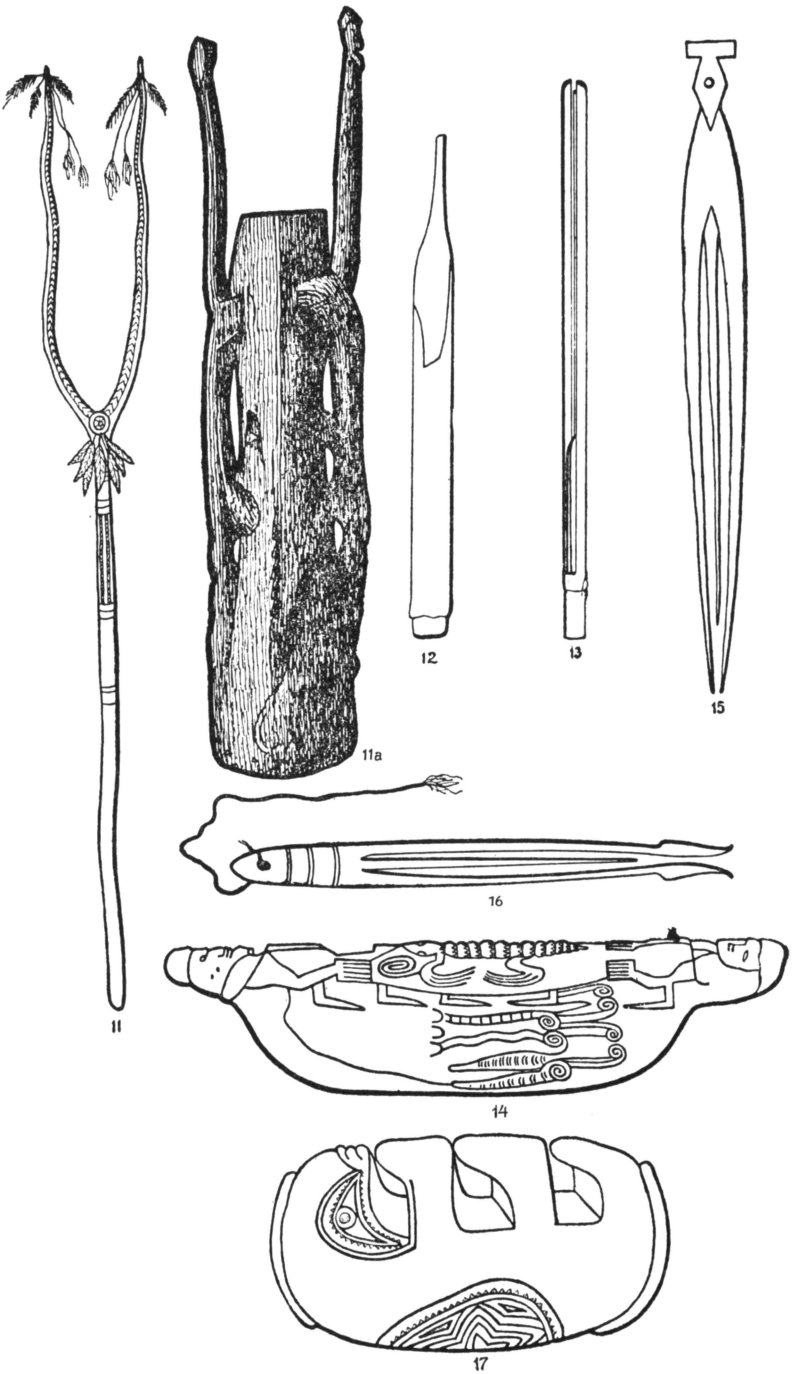
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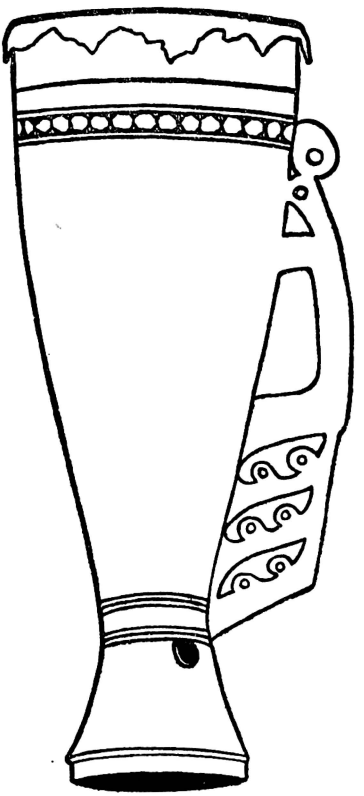

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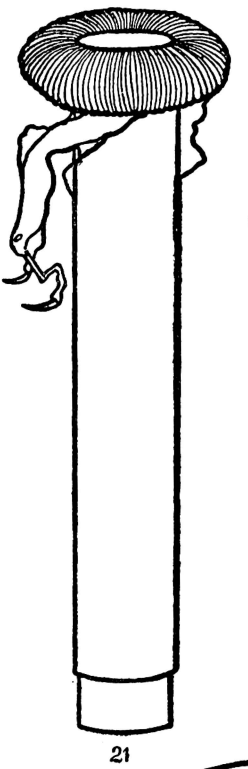

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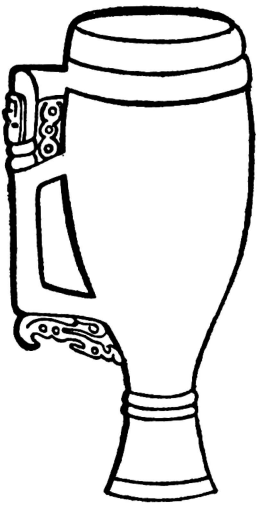

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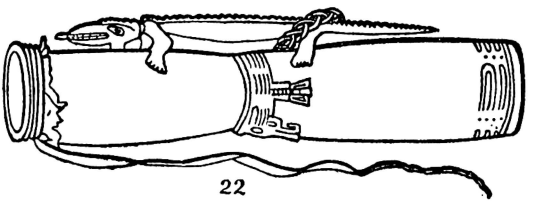

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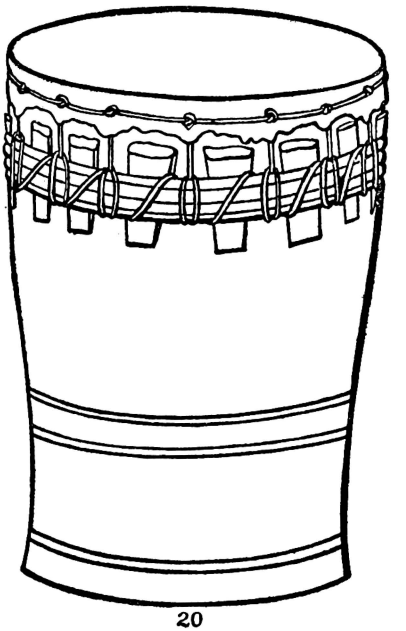

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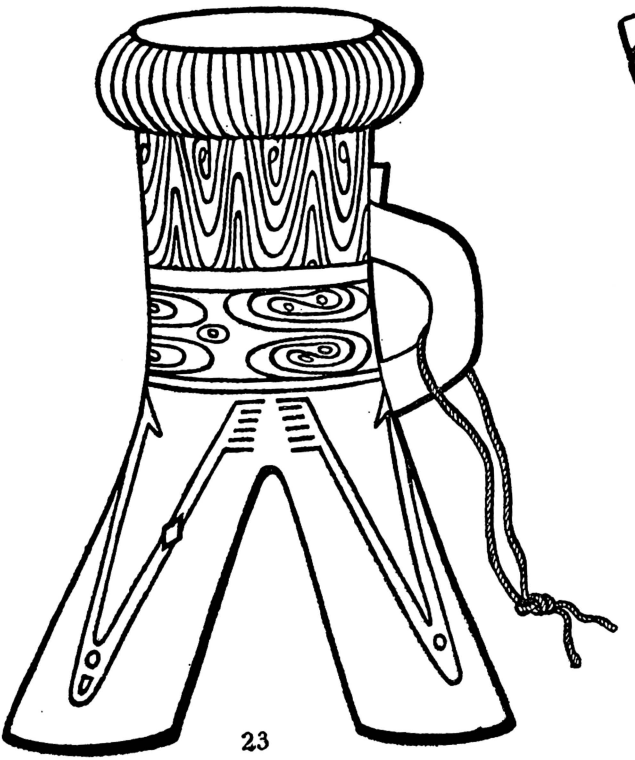

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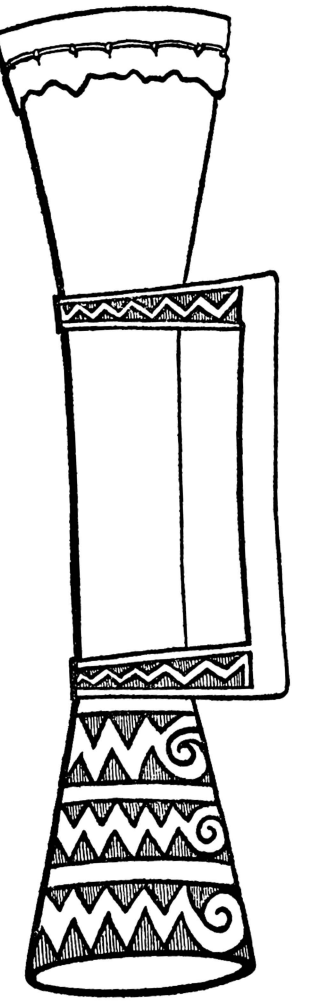

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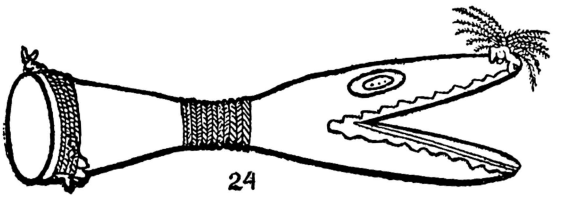

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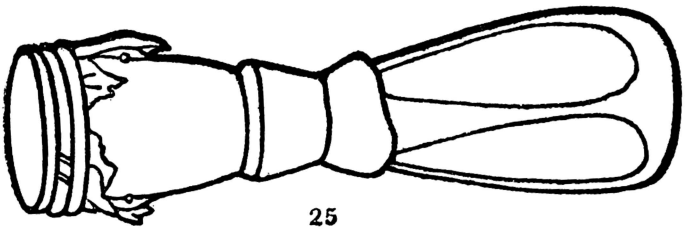

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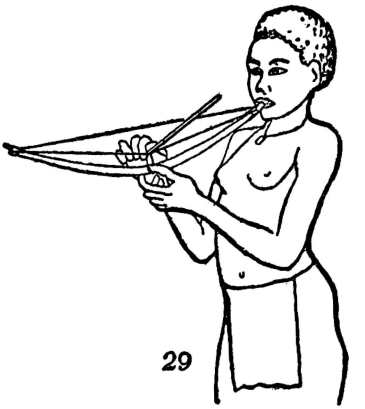

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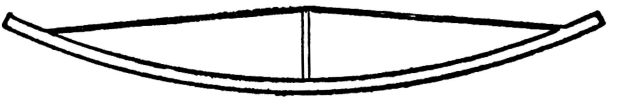

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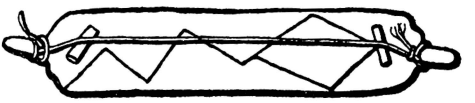

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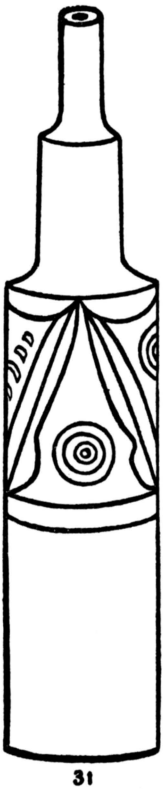

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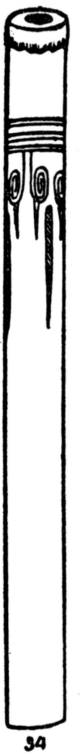

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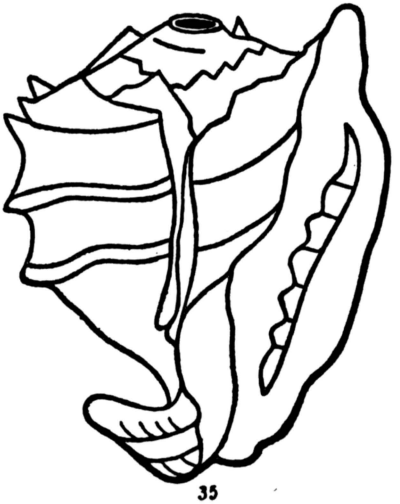

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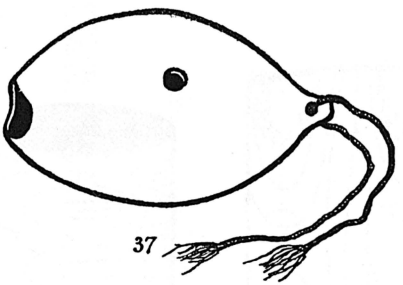

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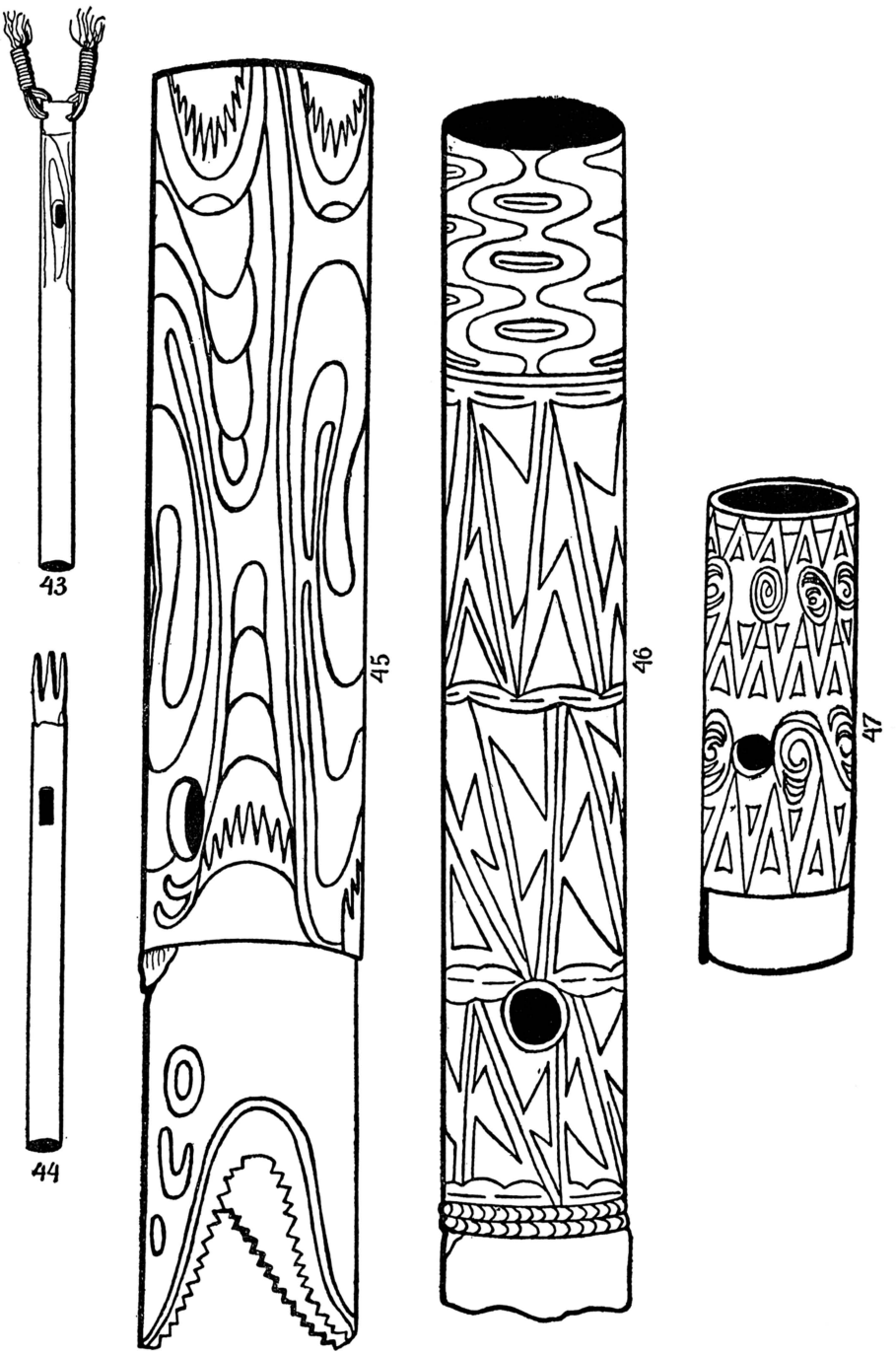
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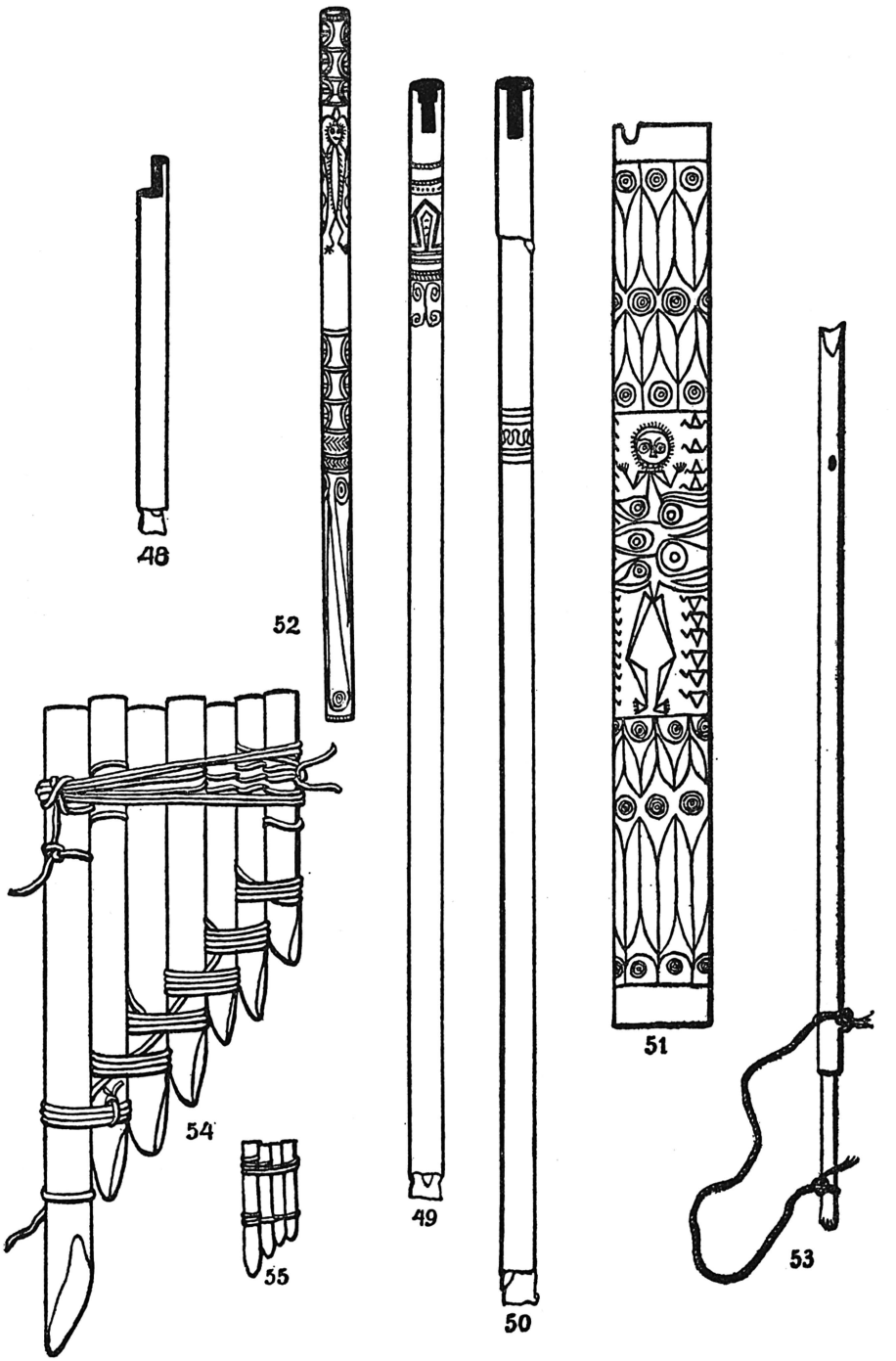
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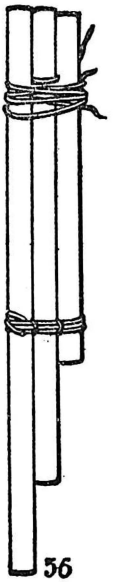

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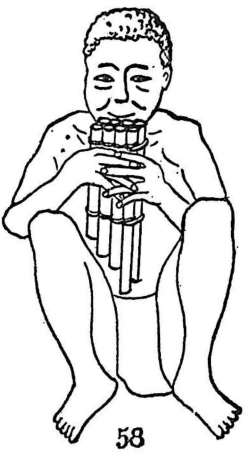

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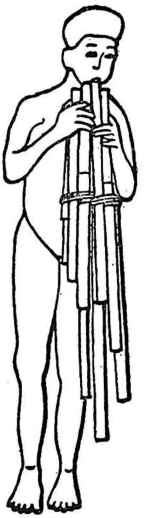

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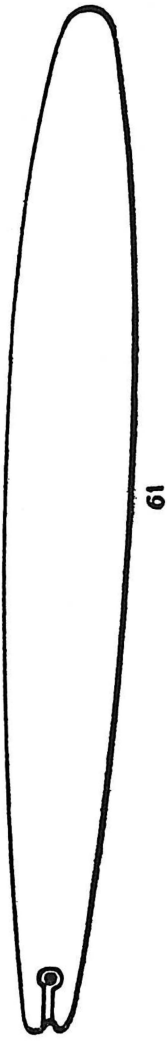

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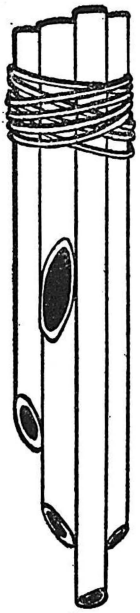

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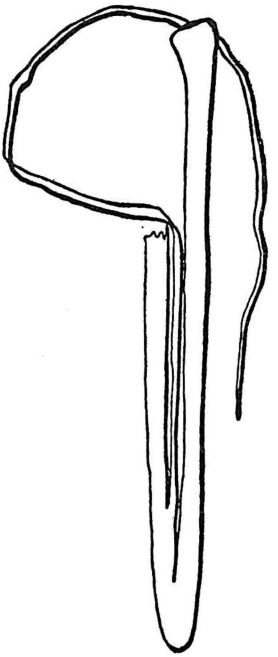

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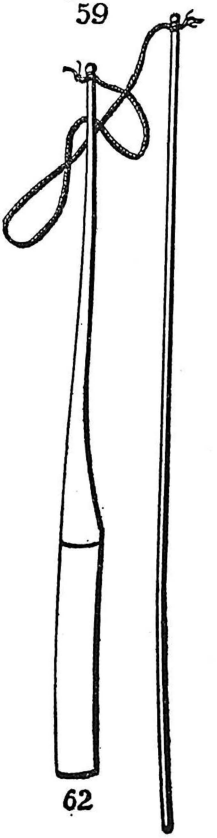

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II

SONGS OF NORTH NEW GUINEA

second edition

first edition:
Songs of North New Guinea
Oudheidkundige Dienst in Ned.Indië
Musicologisch Onderzoek II
uitgegeven door het Koninklijk
Bataviaasch Genootschap van Kunsten
en Wetenschappen 1931

During the Fourth Pacific Science Congress, held at Batavia in 1929, the Royal Batavia Society organized an ethnographical exhibition at which there were, among others, representatives from some of the tribes of the north coast of West New Guinea. There were some families from Serui, the principal village of Yapèn, that narrow and long island which partly closes Geelvink Bay, the large bay in the north of West New Guinea, making an inland sea of it. Also present were some people from the Waropèn Coast, i.e., the east coast of Geelvink Bay, and men and women from Hollandia (now Sukarnopura) and Sarmi, villages on the shores of Humboldt Bay in the extreme eastern part of West New Guinea.

It was due to the kindness of the Board of Directors of the Royal Batavia Society and of its curator, Mr. Ch. Le Roux, that recordings were made of the songs and instrumental music of all the tribes that were represented, including these Papuans.

Recently, my book *A Study on Papuan Music* has been published [1] and because the recording of the songs of these Papuans have been partly used there I have thought it best for the transcriptions of those songs to be published first.

In this work I have not tried to measure intervals. In these songs, which are often rather long, the intonation of the different tones is no more constant than in unaccompanied Western songs. The character of the intervals, however, is so extraordinarily "Western", differing only slightly from the European diatonic intervals, that I have no hesitation in offering the transcriptions, in staff notation, as being a true approximation of the original.

The form of Papuan music and its different types have been discussed in *A Study on Papuan Music* and I think, therefore, that the songs given here require only brief comment.

A marked preference for second and third intervals should be noted in these songs — as in nearly all primitive vocal music. Nos. I and VI consist exclusively of seconds; No. XIII has minor and major thirds only; Nos. II, III, VII, IX, X, XI, XII and XIV use seconds and

[1] Publication V of the Netherlands East Indies Committee for Scientific Research, Batavia 1931. [= SPM, see the second edition in part I of this work].

major and/or minor thirds alternately. Of the remaining six songs, No. XV displays seconds and thirds, as well as a fourth; Nos. V and XVI, a fifth; No. VIII a fourth and a fifth; Nos. IV and XVII only have more variety of intervals. No. IV, besides having seconds and thirds, has the diminished fourth and the seventh; No. XVII, which in other respects, too, forms a class on its own, has the diminished and the pure fourth, the fifth, the minor and the major seventh and once, even a minor tenth. This last interval, however, and also the seventh in song IV, is not so much a melodic interval as a result of the lively beginning of a new phrase. Apart from this, the second and third elements always prevail.

The range and the division of the octave in the various songs are shown in the table at the end of this work.

* * *

A. Nos. I—III of the five songs from Yapèn, (Nos. I—V), with their pure Australian "tiled" melody, are very primitive. For comparison, I have included among the examples a song, No. XIX, from central Australia taken from recordings made by Dr. E. Harold Davies, D. Mus., on different expeditions which were under the auspices of the Board of Anthropological Research of the University of Adelaide and financed by the Rockefeller Foundation.[2]

I feel a Malay influence in the more developed songs: such semitone intervals, used melodically, as occur in these songs are seldom found in the music of the coastal tribes living further to the east [3] and in those of the people of the central range,[4] but they are very common in Malayo-Polynesian music. Nos. III and IV have a range of a tenth; for primitive songs this is a rather large one.

B. The Waropèn songs Nos. VI and VII, the only songs in this collection sung by a woman, with their limited range of a second and a

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[2] Recorded under Nos. PRX 9—11 by Columbia Graphophone Austr. Ltd. These records, besides containing a large number of songs, also have a lecture about Australian aboriginal song by Dr. Davies. He also draws attention to the fact that these melodies use just the same intervals as Western music, though these natives have developed their culture secluded from the rest of the world.

[3] Three examples are given by K. Gjellerup (*Tijdschr. Bat. Gen.* LVII, 1916, pp. 42, 43 and 49), but their notation would not seem to be quite reliable, see SPM § 3 [= pp. 18—34 in this work].

[4] One example is given by Wirz (*Nova Guinea* XVI, p. 115, the 3rd fragment).

fifth, respectively, are more primitive than Nos. VIII—XI. These again, seem to show Malay influence which, as far as the Waropèn Coast and Yapèn are concerned, has I think come from Tidore which dominated the coastal population of West New Guinea as far as Humboldt Bay for a considerable time.

Song No. VI has a one-step pattern and No. VII is built up from a major and a minor third, whereas Nos. VIII—XI display a backbone of a more or less solid fourth (No. VIII) or fifth. No. XI, in its second phrase, has a charming alternation of the major and the minor third (F/A besides F/A♭).

C. The songs from Humboldt Bay (Nos. XII—XVII), between them, display much difference in development. Songs XII and XIII are very simple; Nos. XIV and XVI, with a tonal range of a sixth, and No. XV, with one of an octave are, rhythmically, on a higher level. The finest song of the series, however, is No. XVII with its remarkable tonal range of no less than one octave + a fourth, and 8 degrees within the octave.

A comparison between song No. XVI and one of Dr. Davies' Australian songs (see No. XVIII) will show the close relationship between Papuan and Australian music. The Humboldt Bay song can be regarded as the plagal counterpart of the Australian song. If the various tone degrees used in these Humboldt Bay songs are put together in scalar succession, semi-tone intervals will frequently be seen (see the Table). *These, however, are never used melodically.*

* * *

I was unable to note down the texts of these songs, with the exception of Nos. I and III which consist of a monotonous repetition of the same word, let alone translate them because the time at my disposal was too short (12 days and seventeen different tribes) and in addition, I was totally ignorant of the languages in which they were sung. The singers did not understand Malay and it was only with difficulty and considerable loss of time that I even succeeded in telling them what I wanted them to do.

The subject matter of these songs is unknown to me and neither do I know on what occasions they would be sung. Songs XIV and XVII are the only ones about which I was able to get any information. No. XIV, *Ahabra,* is sung by the family of a girl when she is given

in marriage, and is addressed to the bridegroom. In it the groom is told that he can take the girl as his wife as soon as he has paid the price for her. No. XVII is a festal song.

The recordings are clear on the whole. The songs are generally repeated several times, the repetitions having melodic and rhythmic variations, though these are usually small. Where these are of some importance, as in Nos. IV, IX, X and XIV, I have inserted more than one strophe.

The manner of singing is careless and rough to Western ears, the voices being coarse and untrained, yet some of these songs, and the performance of them, have their charm, for example, Nos. XI and XVII, especially the latter. The song called *Tinguam,* with its unequal periods, its repeated vigorous beginnings, its lively figures and its climaxes, uncommon in Papuan music, is a free light-hearted festal song. Another peculiarity is the changing of the principal tones and therefore of basic intervals: at first they consist of the sequence A—G—E—C♯,[5] then (after the double bar) of the octave D^1—D which is divided alternately into a fifth and a fourth and a fourth and a fifth, depending on whether the A or the G comes to the fore as a "framework tone". To Western ears, this change gives the impression of a change of tonality, viz., from D to G.

It is not yet possible to draw *definite* conclusions with regard to the cultural influences that Papuan songs may show, for not enough songs have been recorded. The view that Papuan "tiled" melody is Australian is based upon the fact that in the area surrounding New Guinea, only the songs of the Australian aborigines and those of the people living on the islands in Torres Strait frequently have this melodic form.[6]

In *A Study on Papuan Music* I ventured to attribute the peculiar "fanfared" music to a very old culture, probably of Negrito origin, supporting my opinion with certain arguments. In those songs from the west of West New Guinea in which semi-tone intervals are used melodically, I am inclined to assume a Malayo-Polynesian influence. I have, not yet, however, succeeded in associating the Melanesian

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[5] The tritone — like in this case the interval G—C♯ plays an important part in the music (and also the vocal music) of the Austronesian archipelago, not only in the Negrito-influenced east (besides New Guinea also, e.g., in Flores), but also in the "Indonesian" west (e.g. Nias).

[6] I refer again to the records of Columbia Graphophone Austr. Ltd., and also to Myers, in the *Reports of the Cambridge Anthropological Expedition to Torres Strait* Vol. IV, pp. 238—269, and to Von Hornbostel, 'Melodie und Skala', *Jahrbuch der Musikbibliothek Peters* Vol. XIX (1913) p. 11 et seq.

element, which is undoubtedly present in the songs of East New Guinea, particularly in the former German part, with certain definite characteristics. The necessary data are still lacking. Perhaps Dr. Kolinski, who is studying the recordings from New Guinea that are in the Berlin Phonogram Archives, will be successful in defining the Melanesian element in Papuan music. These recordings, of which there are 500 or more, were made chiefly in the former German part of New Guinea.

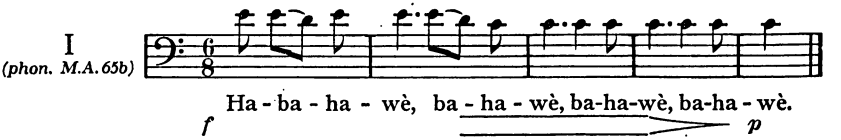
The principal thing to be done now is to increase the material before the spread of civilization makes it impossible for recordings to be made of genuine autochthonous songs. This is the only way that musicology will be able to contribute to a wider and reliable knowledge of the races and the cultures of which the Papuans and their civilization are the product.

Bandung, January 1931.

A. YAPÈN (village of Serui)

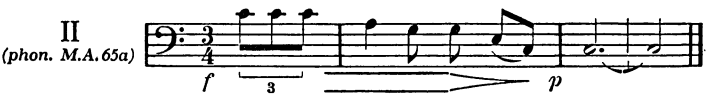
....., sung by Kamasepadai.

I (phon. M.A. 65b)



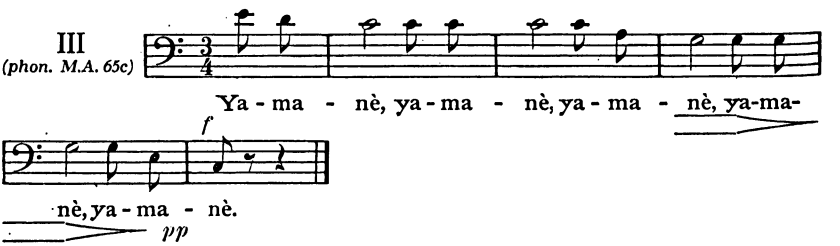
....., **sung by id.**

II (phon. M.A. 65a)



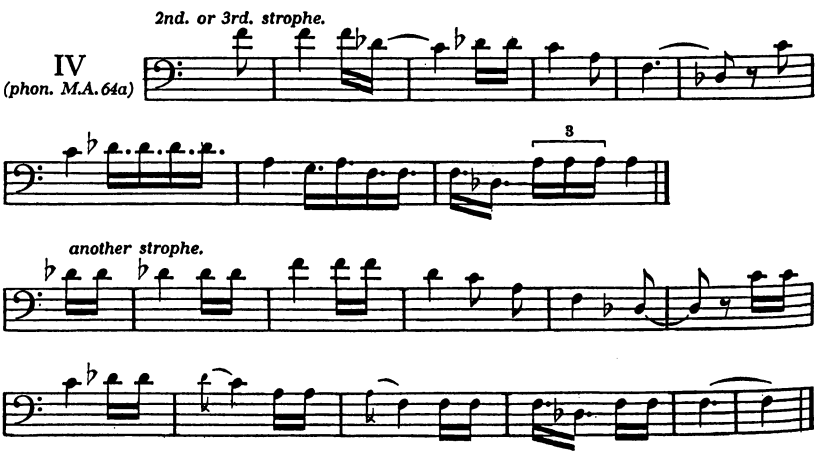
....., **sung by id.**

III (phon. M.A. 65c)



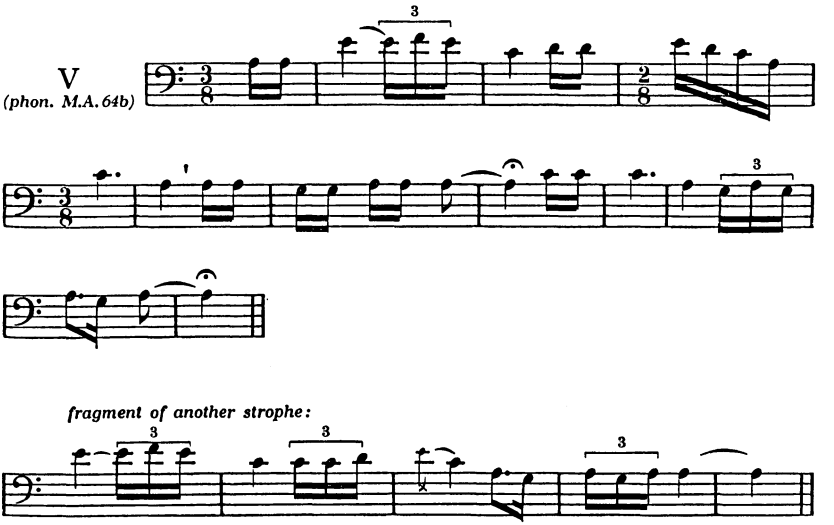
Song called KAJOBI, sung by Aitai.

IV (phon. M.A. 64a)



Song called AMI, sung by Aitai.

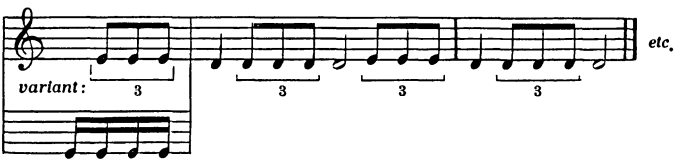
V
(phon. M.A. 64b)



B. WAROPÈN COAST

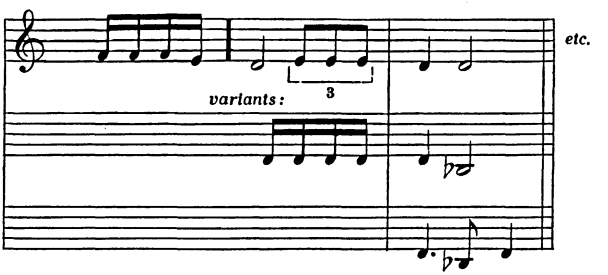
Song called MUNA, sung by a woman.

VI.
(phon. M.A. 60a)



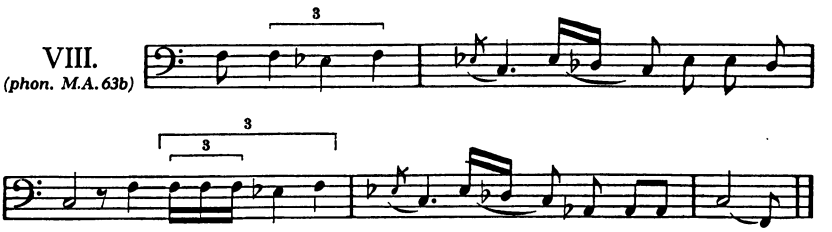
Song called URÉRÉ, sung by a woman.

VII.
(phon. M.A. 60b)



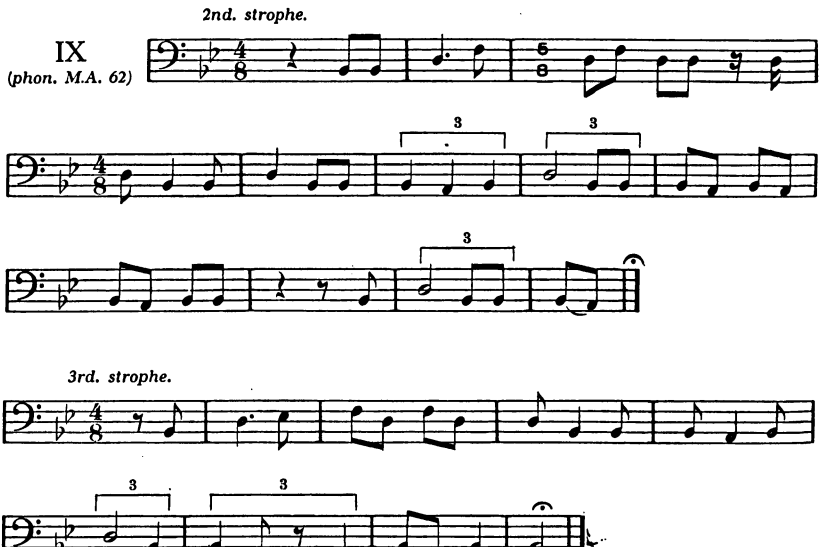
Song called MUNABAI, sung by Aidiri.

VIII.
(phon. M.A. 63b)

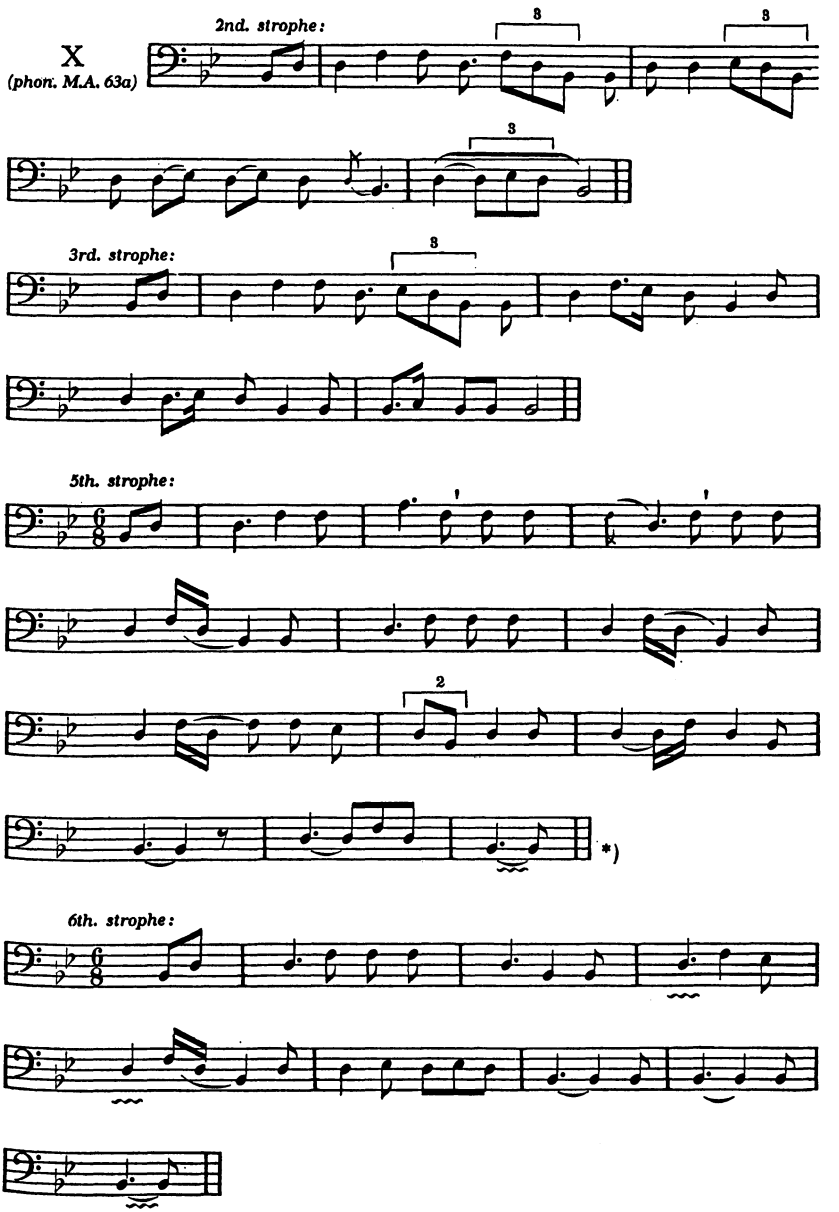


Song called RANO, sung by Sindusi.

IX
(phon. M.A. 62)



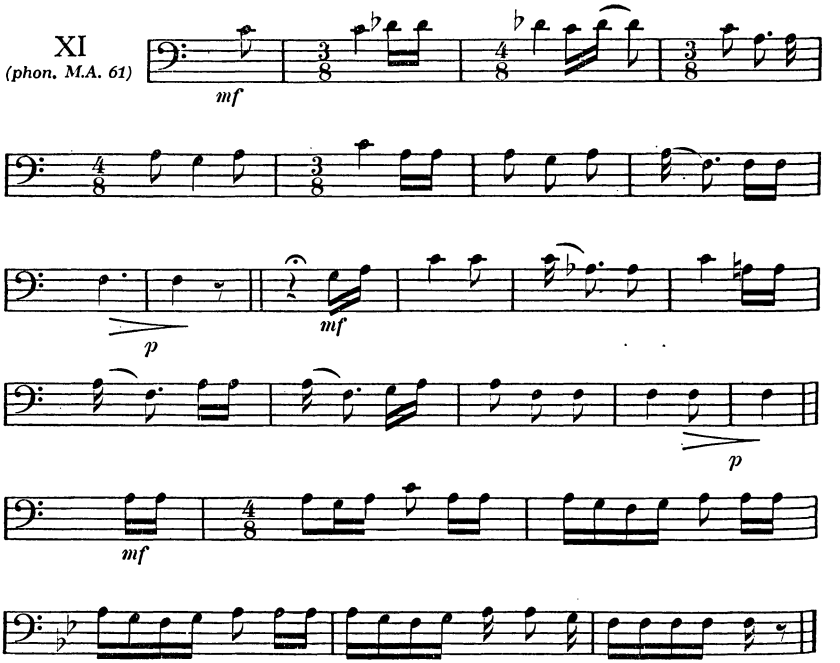
Song called SAIRA, sung by Aidiri.



*) The sign ~ indicates an oscillation of tone in downward direction.

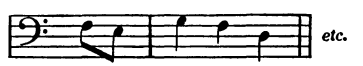
Song called MUNABAI, sung by Sindusi.

XI
(phon. M.A. 61)



Song called WAREPU, sung by id.

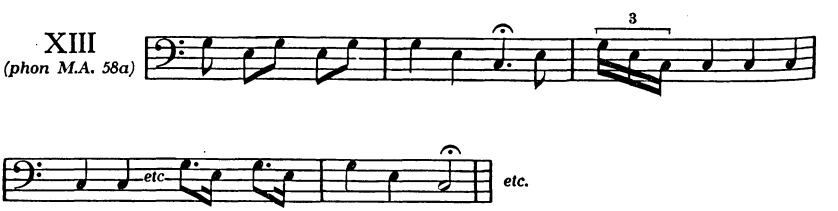
XII
(phon M.A. 58b)



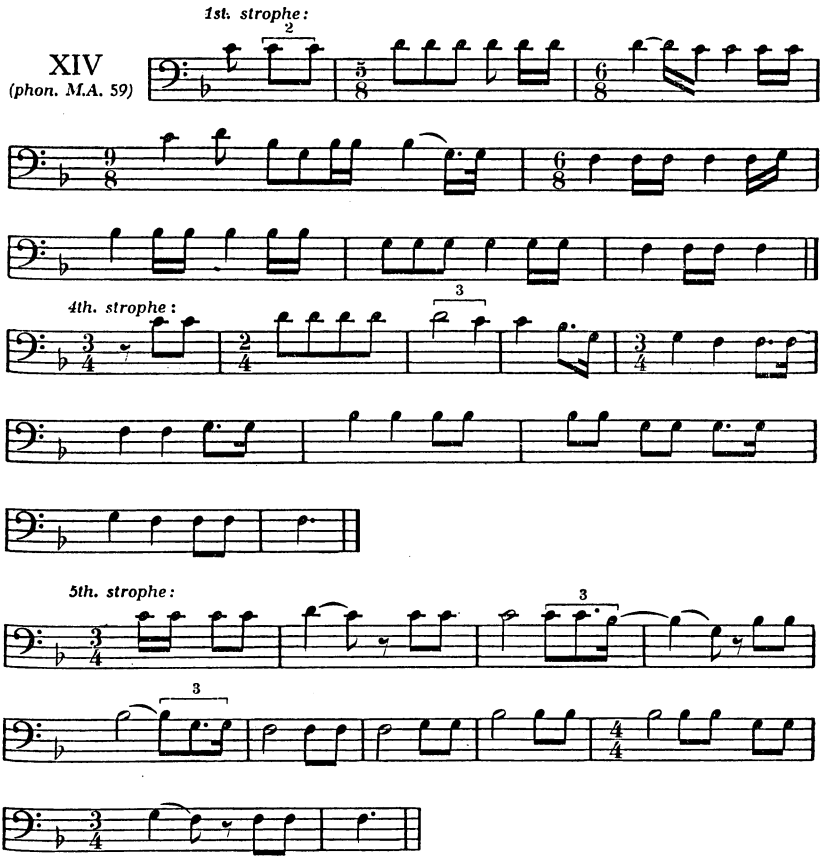
C. HUMBOLDT BAY

Song called SESANDO, sung by Johan, the head of the village (Hollandia)

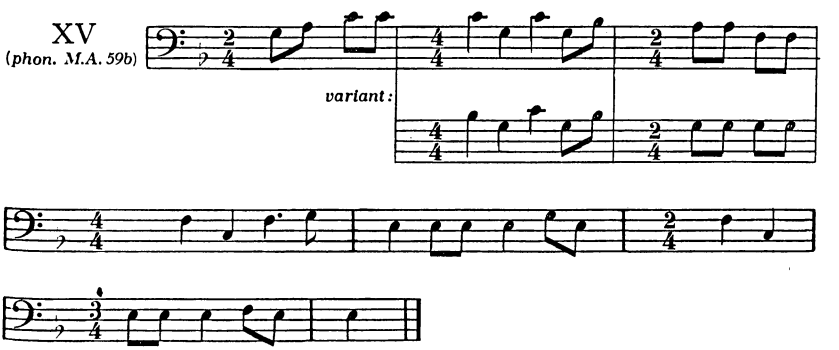
XIII
(phon M.A. 58a)



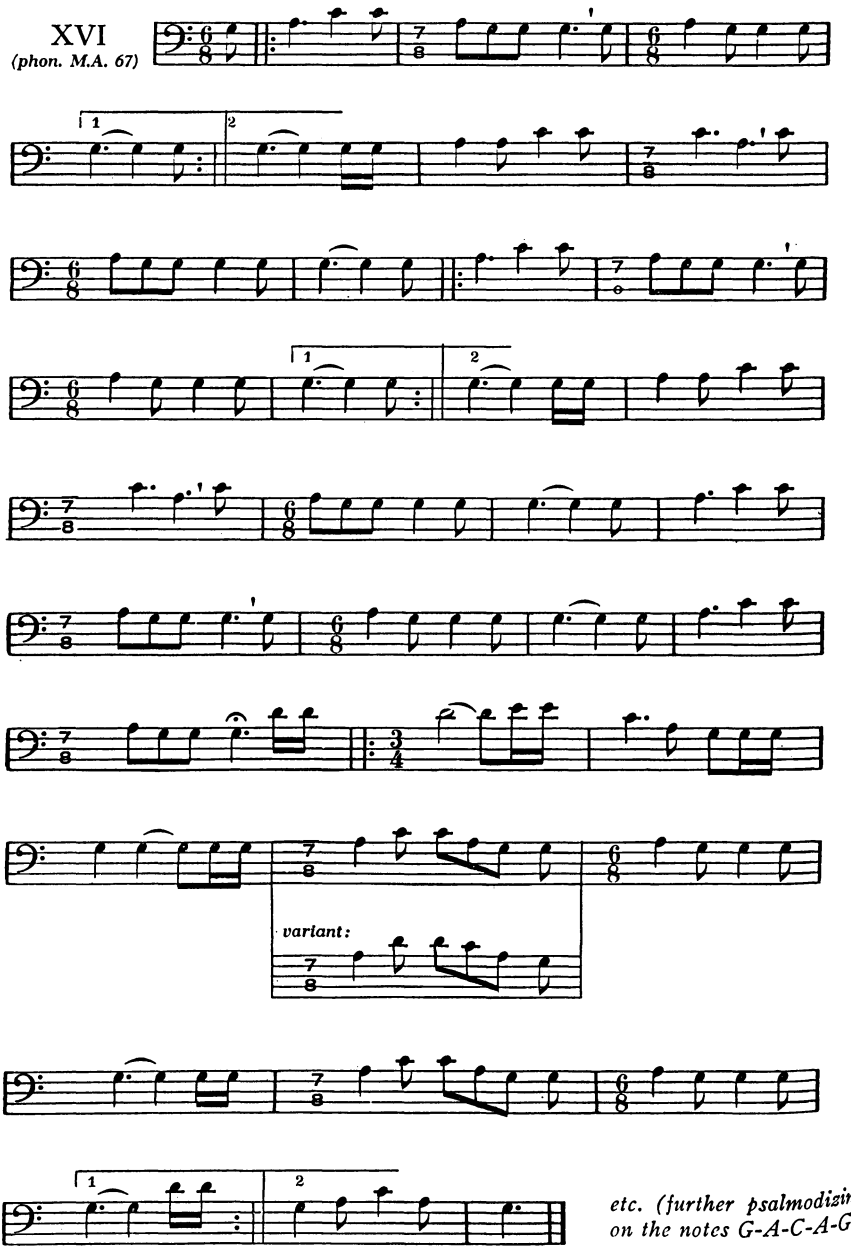
Song called ORAKABOAI, sung by Poreo.



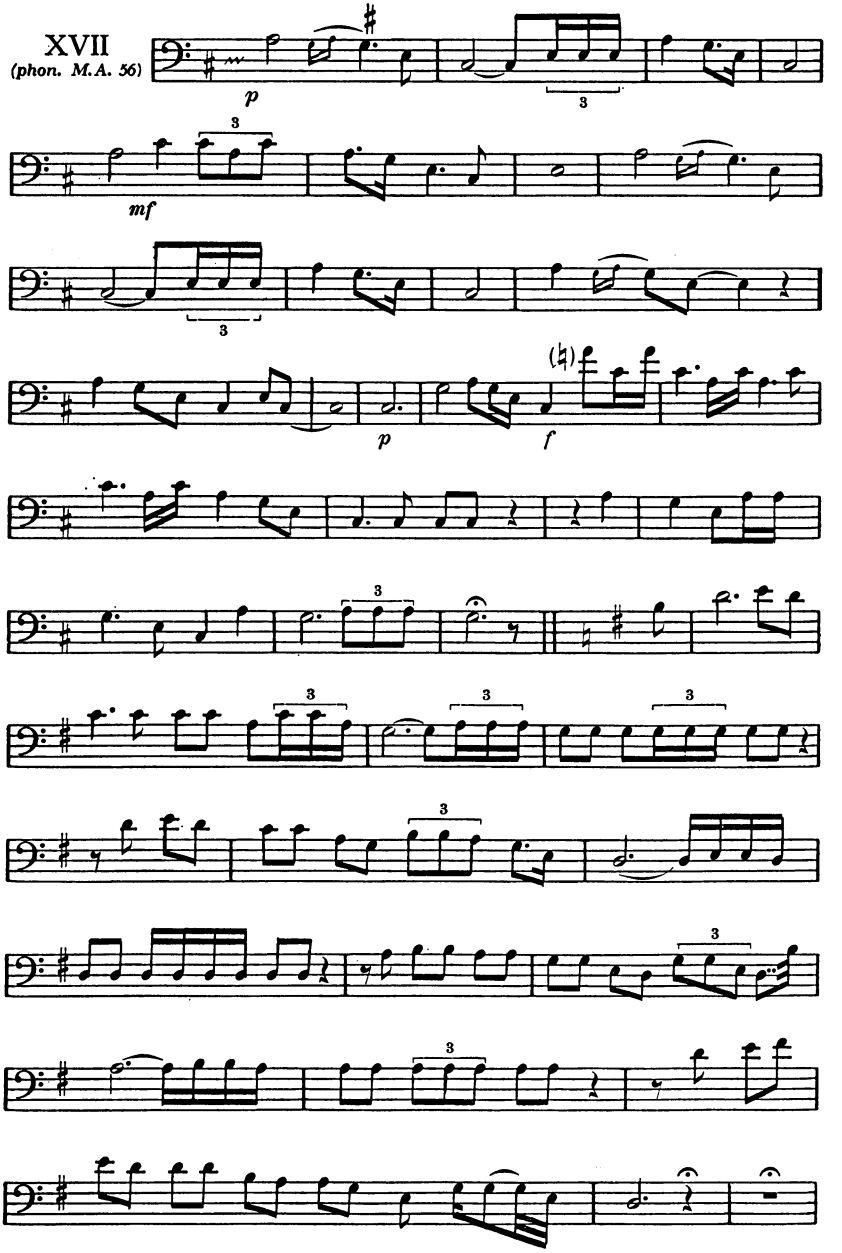
Song called AHABRA, sung by Poreo.

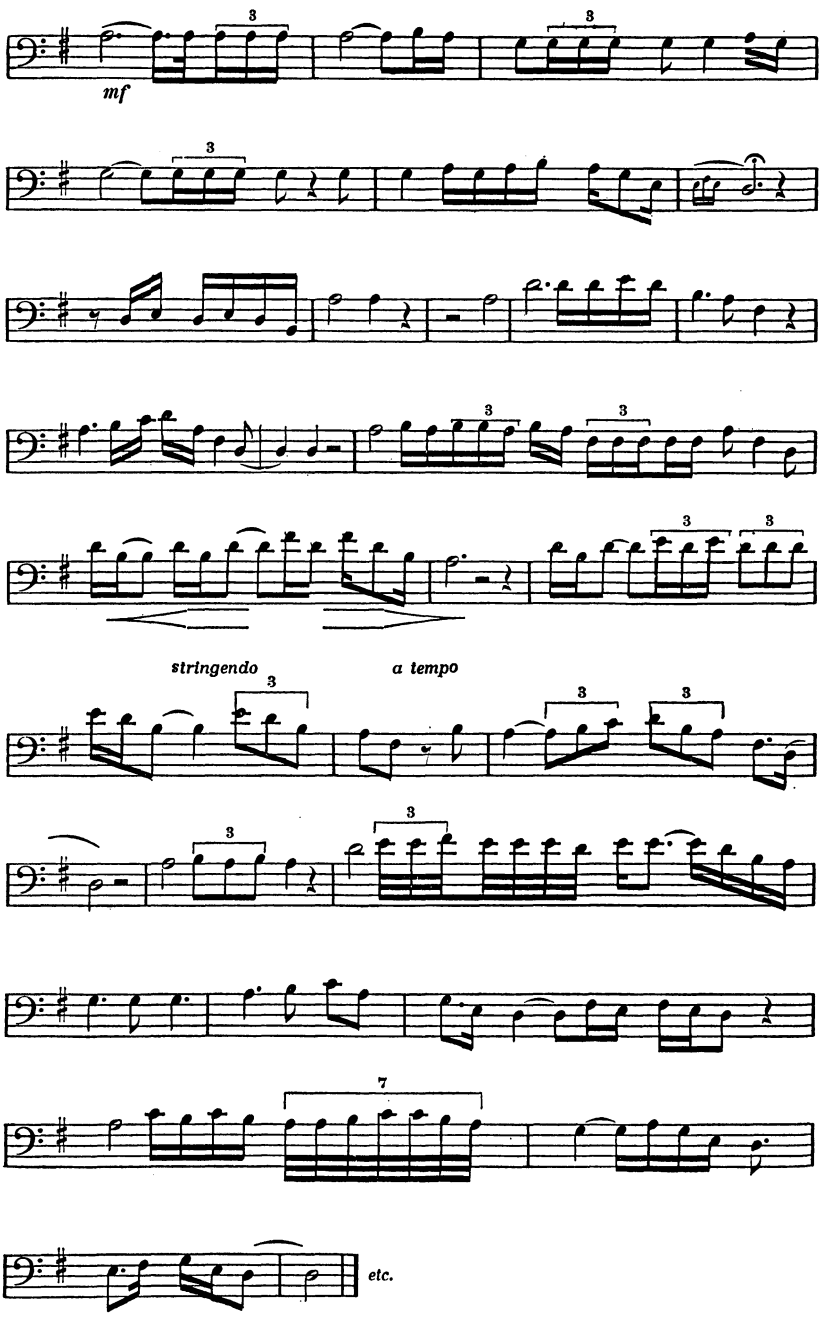


Song called MANDÉ, sung by Simon, the head of the village (Hollandia).



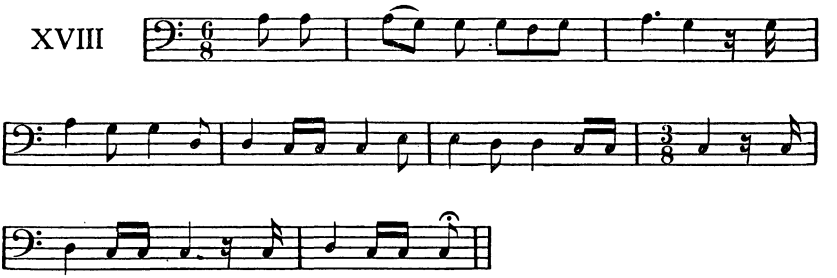
Song called TINGUAN, sung by Imona (village of Sarmi).




mf
stringendo
a tempo
etc.

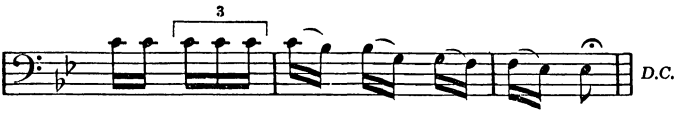
Song from South Australia. *)

XVIII



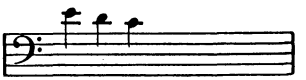
Song from Central Australia. **)

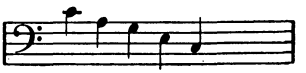
XIX

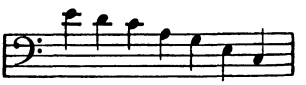


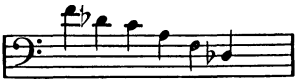
*) See p. 85.
**) See p. 84.

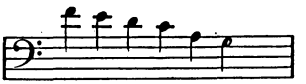
RANGE AND SCALES OF MELODIES I — XIX.

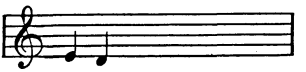
I 

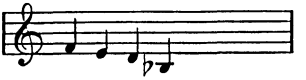
II 

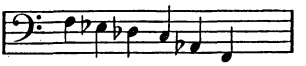
III 

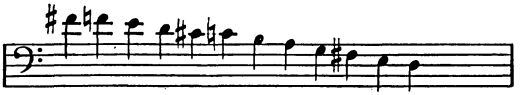
IV 

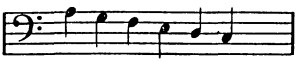
V 

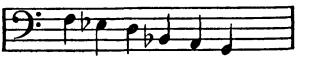
VI 

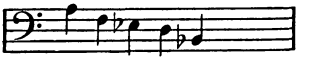
VII 

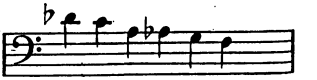
VIII 

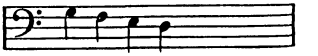
XVII 

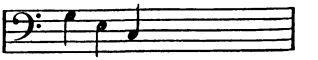
XVIII 

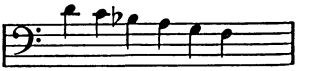
IX 

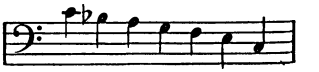
X 

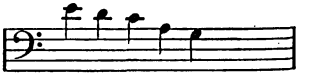
XI 

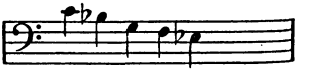
XII 

XIII 

XIV 

XV 

XVI 

XIX 

III

THE NATIVE MUSIC OF WESTERN NEW GUINEA

second edition

translated from the Dutch by
JEUNE SCOTT-KEMBALL

original title:
De Inheemse muziek in Westelijk Nieuw-Guinea
Koninklijke Vereeniging Indisch Instituut Mededeling No. XCIII, Afdeling Culturele en Physische Anthropologie No. 38. Uitgave van het Indisch Instituut 1950

also published in:
C. C. F. M. LE ROUX, *De Bergpapoea's van Nieuw-Guinea en hun woongebied,*
Vol. II, Bijlage II, Leiden 1950

1. HISTORY OF MUSICOLOGICAL RESEARCH

The ethnographical material collected during the Dutch-American New Guinea Expedition was brought back to Holland in 1926 by Mr. Le Roux, the expedition's ethnologist and topographer. Among this material there were 14 phonograms on which had been recorded the songs and the flute music of the Takutamesso, or Kauwerawèt, a tribe living on the banks of the Mamberamo River at the point where this majestic waterway, having cut a way through the Van Rees Mts., takes a new lease of life. There was also the information gathered by Mr. Le Roux and his assistant, Mohammed Saleh, about the songs of the Awèmbiak and the Dèm, two pygmy tribes inhabiting the northern mountains of the central range.

These 14 phonograms were given to me at that time to study and the notations of the songs and an analysis of them, as well as a comparison between them and the meagre data obtained by previous researchers, are to be found in my book "A Study on Papuan Music".[1]

Although these recordings were valuable in themselves, the information about the songs of the Awèmbiak and the Dèm was even more so because, with the exception of a few fragments obtained in 1921 by Jongejans, a Government official, nothing was known about the music of the tribes living in the central range. It was perhaps less reliable than recordings would have been but, due to an unfortunate conjunction of circumstances, it had not been possible for Mr. Le Roux to record the songs of the Awèmbiak and the Dèm. I had, therefore, to rely upon the musical sense and the good ear of Mr. Le Roux and his assistant both of whom performed for me some of the songs they had heard numberless times; the former sang them and the latter played them on the violin. There was a degree of correspondence between the songs as they were sung and played such as to suggest that, in general, they were accurate, despite the fact that they had

[1] 5th publication of the Indisch Comité voor Wetenschappelijke Onderzoekingen (The Netherlands East Indies Committee for Scientific Research), 1931, hereinafter referred to as SPM. I would suggest that my readers go through this small book before starting to read the work presented here because, in many respects, the latter is only supplementary to the former. [See the second edition of SPM in part I of this work. *Ed.*]

been rendered at second hand, had been subjected to an alien psyche, and had been reproduced by people whose ears were unaccustomed to this type of music.

At that time, I formulated the following opinion regarding what one could and could not expect to deduce from this material: "Since music of a very similar nature has been recorded not only from these regions [2] but also from elsewhere in New Guinea and the nearby countries, it is possible to test this music by comparing it with what has already been observed by others and (partly) described from recordings. The new material, however, on account of its *vitium originis,* is not suitable for the purpose of demonstrating characteristics that are peculiar to this music and which might distinguish it from that of other areas. In short, the new data, in so far as it is accordant with other Papuan music, is to be trusted, but where it shows characteristics unknown from elsewhere, it should be viewed with a certain amount of suspicion." [3]

In 1929, when the Royal Batavia Society of Arts and Sciences celebrated its 150th anniversary, there was a memorable gathering at Batavia (now Djakarta) of groups of the peoples from the whole of the Indonesian Archipelago. Among them were Papuans from the Waropèn Coast, from the island of Yapèn (Geelvink Bay) and from Hollandia (now Sukarnopura), the seat of Government lying further to the east. I was fortunate in being able to make a number of recordings of the singing of these Papuans. The result of these labours was published in 1931.[4]

This musicological data on West New Guinea (Irian Barat) was all that was available until a short time ago and presented the following picture:

I. In the central range, the vocal music is typical of that of pygmies, viz.: ornamented triads, a form to which I have already given the classificatory term *'fanfare melody'*. The carrier of this musical form is probably the negritic element in this race of mountain dwellers.

A closely related melodic form, besides being known form the island of Karesau, off the eastern part of the north coast; [5] from the vicinity

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[2] Jongejans I

[3] SPM, pp. 26-27 [pp. 19-20 above].

[4] *Songs of North New Guinea.* Musicologisch Onderzoek II (Oudheidkundige Dienst in Ned.-Indië), Batavia 1931. [See the second edition published in part II of this work. *Ed.*]

[5] P. W. Schmidt, 'Über Musik und Gesänge der Karesau-Papua's', *Handl. Kongress der Intern. Musikgesellschaft,* Wien 1910, p. 297, et seqq.

of Finschhafen [6] (north-east coast of East New Guinea); and from Kiwai,[7] has now been confirmed among other pygmy tribes living on islands off the east coast of East New Guinea, viz., those living in: the centre of New Ireland; [8] the southern part of Bougainville (the *Kongara*); [9] and the eastern part of New Britain (the *Baining,* Gazelle Peninsula).[10] It is also known among some pygmy tribes of central Africa,[11] and among the Hottentots of South Africa. In a less pure form, it is known to the negritic *Semang* of Malaya and the negritic *Aeta* of the Philippines,[12] as well as to the *Nagé* and *Ngada,* small tribes in west Flores, and the *Manggarai* [13] among whom the form is identical with that of the mountain Papuans. One distinctive characteristic of the people of west Flores, particularly the *Ngada* and the *Manggarai,* is the negroid type of hair — which a great percentage of the people of these tribes have — and another, especially in the *Ngada,* is a darkness of skin that is striking.[14]

Instinctively one asks oneself whether this similarity of musical expression can be used as an argument for the common origin — disputed in many respects — of the groups of negrito peoples that are distributed over such a huge area.[15]

II. The music of the inhabitants of the Van Rees Mts. is quite

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[6] V. Schmidt-Ernsthausen, 'Über die Musik der Eingeborenen von Deutsch Neu-Guinea', *Vierteljahrschrift für Musikwissenchaft* VI (1890), p. 268, et seqq.

[7] M. Schneider, 'Übertragungen einiger phonografisch aufgenommener Diri', *Nova Guinea* XVI (1934), pp. 486-488.

[8] P. G. Peekel, *Religion und Zauberei auf dem mittleren Neu-Mecklenburg,* Münster 1910, p. 50.

[9] E. M. von Hornbostel, 'Bemerkungen über einige Lieder aus Bougainville (aus dem Phonogramm-Archiv des Psychologischen Institut der Universität Berlin)', *Baessler Archiv,* Beiheft VI, Anhang (1914), pp. 55-56.

[10] Cf. Herbert Huebner, *Die Musik im Bismarck-Archipel,* Berlin 1938, p. 59, et seqq.

[11] Cf. some of the Bambuti songs recorded by the Denis-Roosevelt Expedition in the north-east region of the Congo (*Dark Rapture,* plate 3).

[12] Cf. Werner Danckert, 'Musikwissenschaft und Kulturkreislehre', *Anthropos* XXXII (1937), p. 10.

[13] Cf. P. Heerkens, *Flores, de Manggarai,* Uden 1930, p. 125 et seqq., and my *Music in Flores,* pp. 88 and 105, et seqq.

[14] With regard to the possibility that fanfare melody is the original form of musical expression of all pygmies, see Herbert Huebner, *Die Musik im Bismarck-Archipel,* p. 107, et seqq.

[15] With regard to this question see W. Nippold, *Rassen- und Kulturgeschichte der Negrito-Völker südost-Asiens,* Leipzig 1936, and Walter Kaudern, 'Note on the Geographical Distribution of the Pygmies and their possible Affinities', *Ethnologiska Studier* IX (1939), pp. 151-175.

different from that known in the central range. The songs of the people of the Van Rees Mts. have a range of an octave at most or, though rarely, a ninth and consist of a continual repetition, always from high to low, in which nuclear tones, usually placed a fourth and a fifth apart, can be distinguished. The space between these notes is repeatedly filled in with one or two other tones having a pitch which is less stable. In that part of the world in which New Guinea lies, this type of melodic form which, in relation to the note picture it produces, I have classified by the term *'tiled melody'* (Von Hornbostel [16] speaks of 'Treppen-melos'), is also found here and there on the island of Yapèn; [17] among the inhabitants of some of the islands in Torres Strait; [18] and among the people of Beagle Bay in north-west Australia.[19]

It would seem, therefore, that the melodic form of Kauwerawèt music is typical of the music of a people who, without doubt, emigrated from Asia to Australia — where the majority of them finally settled — by way of New Guinea and Torres Strait.

III. The melodic form of the music of the people of the north coast of West New Guinea has no characteristics by which it can be given a classification that will hold good: west of Cape d'Urville it seems to show Indonesian influence (among other things, intervals of the order of a semi-tone), and east of that cape, is presumed to contain Melanesian elements.[20]

IV. It was only a short time ago that anything became known about the songs of the inhabitants of the Waropèn Coast (the east coast of Geelvink Bay) and their musical instruments. This was due to the work of Professor G. J. Held [21] who, during his sojourn in West New Guinea as a linguist in the employ of the Government, had the

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[16] In his review of W. König-Beyer's 'Völkerkunde im Lichte vergleichender Musikwissenschaft' in *Baessler Archiv* 1932, p. 56.

[17] My *Songs of North New Guinea,* Mel. A. II and III., p. 7 [p. 88 above].

[18] Charles S. Myers, Music, *Report of the Cambridge Anthropological Expedition to Torres Straits,* Vol. IV (1912), p. 238, et seqq.

[19] In a written communication from Professor Von Hornbostel.

[20] This assumption has wellnigh become a certainty after the publication of Vol. I of Marius Schneider's *Geschichte der Mehrstimmigkeit,* Berlin 1934. The melodies from the coast that are given in it, particularly, are in the same style as those of the coastal part of West New Guinea and also display relationship with some melodies known from the more eastern purely Melanesian regions. Cf. Herbert Huebner, *Die Musik im Bismarck-Archipel.*

[21] *Papoea's van Waropen,* Leiden 1947; English translation: *The Papuas of Waropen,* The Hague 1957. [In the quotations following below, page references are given to both the Dutch and the English edition of the book. *Ed.*]

opportunity of recording the songs sung by the Waropèn: these recordings were made on an Excelsior Phonograph placed at his disposal by the Städtliche Phonogramm-Archiv in Berlin. They reached Berlin but it is not known whether they survived the war. They had not, however, been transcribed so that, as far as the nature of the material on them is concerned, there is only his published work to go by. I therefore take the liberty of quoting the relevant passages from his book:

"The songs of which the subject matter consists of myths can be divided into songs that are sung by men, which are called *rano,* and songs sung by women, of which those sung at a marriage or a birth are called *ratara* and those sung at death feasts (by men also) are called *muna.* Though a *rano,* a *ratara* and a *muna* are each sung in a different style, they all deal with myths.

The following songs come in the *rano* category:

soitirano: sung while a bridal pair are rowed about, and when a new canoe is rowed for the first time;

ghomindano: sung during a raid to obtain slaves, and also at the feast held after the raiders have returned home;

amairano: morning song; sung at initiation feasts;

damadorano: sung in the house of the initiate during initiation feasts;

nuarano: songs about trading; sung especially in canoes;

ramasasiri: special songs; usually sung in a foreign language and only during journeys by canoe;

ratisara: love songs; sung in a canoe and in the house.

The last three types of song are also sung by Christians when they travel by canoe. In Napan, I was assured that the long *muna* of Kai is unknown there. In Kai the *ratisara* is sung when someone dies: the Kai ritual for the dead is not known in Napan either.

A *rano* is sung as a kind of canon. In the construction of a *rano,* the term *euo* = base, foot, is used: this should probably be understood to be the first part of the first strophe with which one of the groups starts the singing.[22] One would expect an *uri* = top, to go with the

[22] The Numfoor likewise distinguish between *rwuri,* head, *randak,* beginning, or *widom,* top, over against *fuwar,* trunk; see F. J. F. van Hasselt, *Noemfoorsch woordenboek.* See also F. W. Hartweg, 'Das Lied von Manseren Mangundi', in *Zeitschrift für Eingeborenen-Sprachen,* XXIII, p. 47. The inhabitants of the Tobriand Islands distinguish in their sacred formulas between 1) *u'ula,* foot of a tree, trunk, basis, origin; 2) *tapwana,* body; 3)*dogina,* crown, end. See B. Malinowski, *Argonauts of the Western Pacific,* p. 433. [Note by Held.]

euo but inquiries about it were fruitless." (pp. 259/260; pp. 268/269).

Further on, he says of the rowing songs:

"People who have travelled by canoe know from experience that the paddlers only put their backs into rowing when they are singing. At the hottest time of the day, when the canoe drifts idly on the shimmering water, its sail hanging limply, they sit there gasping for breath. When, however, the sea is rough and the cane-tied joints creak under the force of the waves, the paddlers sing against the wind at the top of their voices. And at nightfall, when the journey is ended and the crew enter their village, the melodious rowing songs ring out triumphantly as the paddlers, using a short chopping stroke (*kikawaro*= they chop) splash up the water with their paddles whilst numerous people, full of interest, watch the oncoming vessel.

"The rowing songs, *rano,* are sung in canon style. First, one man sings the song, the men at the back of the canoe then take up the first strophe and when they have sung a part of the song, the men in the front come in with the beginning of the song. For each group of singers there is thus a series of pauses throughout the singing of the song. The informants compared this manner of singing to a kind of chase in which each party tries to urge on the other to overtake it. The idea probably is that the language of myths in which these songs are couched, drives the canoe onwards." (p. 328; p. 338).

"The most important instrument is the drum, *siwa,* imported mainly form the Haarlem Islands and the Moor Islands the population of which islands have acquired considerable skill in wood-working. It is said that the Waropèn are also experienced in this craft, but no proof of this assertion has been forthcoming.

"The drums are shaped like beakers, except the *siwabuino,* the half-drum, which is often played by women and which does indeed resemble a half-sized *siwa.* For the dancing, the drums must be tuned to two pitches and to achieve this the skins on the drums have to be tightened repeatedly over a small fire and have to have tiny balls of resin stuck onto them. Apparently, the Waropèn demand a high standard of sound from their drums. They give individual names to many of their drums and they can recognize them at a distance by their sound.

"The skin of the iguana, *moiwa,* which abounds here, is used for the drumheads. The skin is scraped clean while it is still fresh, stretched over a frame made of laths and dried in the sun. When a man wants to renew the skin on his drum, he first smears the rim with the sticky parings of the fruit of the mangrove. The skin is then made pliable by

wetting it, pulled taut over the gummy rim and bound tightly with a piece of cane. After that, the skin is thoroughly dried in the sun to fix it firmly to the drumhead and the strip of cane is then removed.

"Other instruments used are gongs, *mauno,* of various kinds and a shell trumpet, *buro,* which is a conch shell in the conical end of which a hole has been bored. The jew's harp, *tungge,* is also known: perhaps it originated inland. And there is a flute which, in contrast to the modern bamboo flute imported for the schools, has only two holes. As far as was known, this was not a borrowing from other tribes. A simple melody can be played on this instrument." (pp. 345/346; 355/356).

Finally, on pp. 346/347; 356/357, Held mentions "a wooden propellor which is turned by pulling a piece of string that runs through a round nut." This instrument is called *mbumbu.*

V. In 1929, Wirz wrote a detailed description of the singing of the inhabitants of the south coast, but he had not been able to make any recordings and the number of fragments of songs he noted down by ear was small and one does not, therefore, know what value to attribute to them.

Since 1931, as far as I know, little more has been published on Papuan music and as far as West New Guinea is concerned, nothing at all apart from a few details about the Kanum-anim (Kanum-irébe) and the surrounding tribes [23] and on the technique of playing the ceremonial flutes of the north coast.[24] [25]

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[23] Hans Nevermann, 'Die Kanum-irebe und ihre Nachbarn', in *Zeitschrift für Ethnologie,* Vol. 71 (1939). p. 1, et seqq.

[24] Walter Graf, 'Zur Spieltechnik und Spielweise von Zeremonialflöten von der Nordküste Neuguineas', *Archiv für Völkerkunde,* II (1947), p. 87, et seqq. Many curious peculiarities about these sacred flutes were recorded in the 'Verslag van de Expeditie naar Centraal Nieuw-Guinea (1939-1940)' which was under the leadership of J. P. K. van Eechoud. (See his *Etnografie van de Kaowerawédj,* 's-Gravenhage, 1962, pp. 83-89.)

[25] The following can be cited as far as East New Guinea is concerned:

a. for the Sepik region, the east coast of the former German New Guinea and the island of Kiwai, in the estuary of the Fly: 29 transcriptions of recordings of which 5 were made by Thurnwald, 22 by Neuhaus and 2 by Landtman, published in Vol. I of Marius Schneider's *Geschichte der Mehrstimmigkeit,* Berlin 1934;

b. for the south coast region: pp. 45-48 of P. Wirz' 'Beiträge zur Ethnographie des Papua-Golfes, Britisch New Guinea', *Abhandl. und Berichte der Museen für Tierk. und Völkerk. zu Dresden,* Vol. XIX (1934); F. E. Williams, 'Bull-roarers in the Papuan Gulf', *Anthrop. Report* No. 7, Port Moresby, 1936; and some details in id., 'Natives of Lake Kutubu, Papua', *Oceania* Vol. XI, XII (1940-41);

In 1932, I did, however, have a chance during an official tour — of a non-musicological nature — of the eastern part of the Indonesian Archipelago to make a few recordings of the songs of the Papuans of the islands of Waigéo, MEs.[26] 19 and 20, and of those of the people living in the vicinty of Sorong (the most westerly point of West New Guinea), MEs. 17 and 18. In addition, thanks to the collaboration of Father Verschueren, at whose disposal I had been able to place a recording phonograph, fine recordings of a number of Marind-, Yé-

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c. for Kiwai and its environs: some details in G. Landtman, *Ethonographical Collection from Kiwai-district of British New Guinea,* Helsingfors 1933, and M. Schneider in P. Wirz, 'Die Gemeinde der Gogodára', *Nova Guinea* XVI (1934), p. 485, et seqq.;

d. for Unungé, a district in the central range: six melodies taken down by ear by Father Dupeyrat and published by Madame J. Herscher-Clément in 'Notes musicologiques', *La Revue Musicale* No. 173 (1937), p. 223, and in 'Quelques mots sur la musique indigène en Nouvelle-Guinee', *L'Ethographie* No. 35/36, p. 51, et seqq.;

e. for the region round Dallmann-hafen (on the north-east coast): J. Schmidt, 'Die Ethnographie der Nor-Papua', *Anthropos* XXVIII (1933), p. 330, et seqq. (a treatise on drum rhythms and their meaning);

f. for Karkar (Dampier Island), one of the two large islands lying off the north-east coast: Hubert Hubers, 'Kleine musikethnologische Beiträge von der Insel Karkar in Neu-Guinea', *Anthropos* XXXVII (1942-45), p. 122, et seqq.;

g. for the north and north-east coast as a whole: Walter Graf, *Die musikwissenschaftlichen Phonogramme Rudolf Pöchs von der Nordküste Neuguineas,* Wien 1950;

h. for the central range: G. F. Vicedom und H. Tischner, *Die Mbowamb. Die Kultur der Hagenberg-Stämme im östlichen Zentral-Neuguinea,* 1943-48, p. 241.

i. for the whole of East New Guinea: Walter Graf, 'Einige Bemerkungen zur Schlitztrommel-Verständigung in Neu-Guinea', *Anthropos* XLV (1950), p. 861, et seqq.;

j. for some tribes on the north-east coast and the offshore islands: Dieter Christensen, *Die Musik der Kate und Sialum,* Dissertation Berlin, 1957;

k. for the whole of New Guinea and the whole Pacific: Hans Fischer, *Schallgeräte in Ozeanien,* Baden-Baden, 1958.

Of the data contained in these publications, one can place absolute faith in those given in a, b, c, e, f, g, h, i, j, and k. In respect of d, one would do well to be wary. To judge from the notation, the melodies given there are very complicated. The notation was made by ear and not from recordings, and one knows how easy it is, how it is almost inevitable, for the subjective ideas and habits of hearing of the investigator to influence such a notation. There is also the possibility that this indigenous song can have undergone some Europeanization. The fact that one of these melodies has a text in which the words *very naici, very goudou* occur, sounds which undoubtedly were originally English, suggests, in my opinion, that one should not place too much faith in these songs being original.

[26] Musical Examples: henceforth abbreviated to ME. or MEs.

and Kanum-anim songs, MEs. 21 to 58, were made from the neighbourhood of Merauke in the extreme south-east of West New Guinea. A collection of 24 Marind-anim songs, MEs. 59 to 82, from the same region has also been sent to me by Mr. A. Soukotta, a policeman who was stationed in the area, who had taken the songs down by ear.

Now that the most recent expedition (1939), so successfully led by Mr. Le Roux, into the hitherto unexplored part of the central range, has at last furnished recordings (MEs. 1 tot 11) of the music of the mountain tribes as well as songs (MEs. 12 to 16) of the coastal tribes at *Uta* (south-west coast), I think this is a good opportunity to make the songs he collected, together with the material that has now become so rich and varied and which is still unpublished, accessible to those studying comparative musicology. In this way, Mr. Le Roux' material will show itself to better advantage and its proper relationship to the vocal and instrumental expressions of other peoples of New Guinea will be seen.

2. THE CENTRAL RANGE

First, the music of the mountain Papuans. The recordings made by Mr. Le Roux among these pygmies consist of:

19 phonograms on which are recorded songs of the Èkari (Nos. 1-16 and x, y, and z);
3 phonograms on which are recorded songs of the Moni (a, b, c);
5 phonograms on which are recorded songs of the Simori (A, B, C, D, and 1*);
2 phonograms on which are recorded songs of the Ndani (d and o).

It is difficult to define the principal differences between the vocal accomplishment of these mountain tribes. That four of these songs of the Simori have a character different from those of the other tribes on this series of recordings can, it seems to me, be attributed exclusively to their subject matter: they consist of howls of joy, war cries (phon. A), songs for round dances and songs sung on the march (phon. B), and incantations (phons. C and D).

The rest of these songs, with the exception of those on phon. z. = ME. 5, are identical in character: they belong in the category of fanfare melody. These recordings are further proof that both Mr. Le Roux and Mohammed Saleh had a good ear and good memories, because the songs of the Awèmbiak and the Dèm, which they had

previously sung and played for me, display exactly the same characteristics.[27]

In one respect only do their memories appear to have failed them and that is in the rhythm. Perhaps it would be better to say that in the field of music they were influenced, understandably, by their acquired habits. The rhythm of the songs of these mountain Papuans is rather more complex and arbitrary than would be presumed to be the case from the songs Mr. Le Roux and Mohammed Saleh sang and played for me. The form is synthetic. There is hardly ever any equality of metre, i.e., accents do not fall at regular intervals, and the rhythm is adapted to a text which, seen from the viewpoint of Western metrical form, is metrically irregular. It will be understood, therefore, that to give a representation of the songs which is as close as possible to the rhythm, results in a varied note picture in which triplets, notes of brief duration and in different groupings are a frequent occurrence.

To the Western ear, these songs are otherwise so markedly of the same type that it is not worthwhile reproducing them all *in extenso*. A characteristic typical of all of them is the fanfare structure. All these songs are built up with major triads or with fragments of them, the exceptions being one Ékari song, phon. z = ME. 5 (mentioned previously which, as a consequence, gives the impression of being a borrowing from elsewhere and two cases of a single 'passing note': a sixth (phon. d, ME. 9), Ndani tribe, and a fourth (phon. a, ME. 6), Moni tribe.

On closer examination it appears, however, that all these melodies, which are triadic can, nevertheless, be divided into two groups. The great majority, all the recordings made by the last expedition, have the key-note of the major triads as their melodic central point. By contrast, in some of the melodies reproduced in SPM — similarly, all major thirds —, the melodic central point is not the key-note, but the fourth below it: consequently, the 'dominant' (phons. α and η). When this range is taken into consideration, these latter melodies, and also δ, ε, ζ, and ϑ could be termed plagal. This also applies to a large part of the songs collected most recently (phons. 3, 5, 7, 10-13, 15 and 16) which, although they are built upon the key-notes as the tonal centre, nevertheless, make extensive use of the lower fourth.

As in the melodies α and γ in SPM the greatest number of tone steps, five, are to be heard on phon. 4; the melodies on phons. 1, 8,

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[27] SPM, Melodies Table II.

d and o, in common with SPM β, δ and η, have four; those on phons. 3, 5, 6, 7, 9-13, 15, 16, a, c, x and I*, as SPM ε and ϑ, have three; while those on phons. 2, 14 and b, like SPM ζ, have two.

The following Table shows which steps have been used. All the scales have been transposed to C:

Table I

					e			
c					c	c		
g	g				g	g	g	
e	e	e	e		e	e	e	e
c	c	c	c	c	c	c	c	c
			g	g		g	g	g
								e
1	6	2	3	ζ	4	α	δ	η
8	9	14	5			γ		
d	*a*	*b*	*7*					
o	*c*		10					
β	*x*		11					
	I*		12					
			13					
			15					
			16					
			ε					
			ϑ					

Listening to these songs one gets the impression that a genuine dwarf is singing them. The singing is lively, like that of excited youths. The chest voice is not used and the result is that even the singing of adult males sounds rather like that of boys whose voices have not broken.

Those songs of which the words have been written down deal with things in the world of nature: with various kinds of birds, a frog, a kind of small snail; with inanimate objects, a stone; with natural phenomena, the wind, the rain and the mist; with a tree and a kind of grass; a river (the Ėdĕrĕ), a region (Débé); Mt. Weyland (Koborè); with the earth in general, and with people from the world of the spirits.

These songs contain some excellent examples of those characteristics of the fanfare form [28] enumerated by Father Schmidt,[29] particularly of duplication, e.g.:

nimeru-nimeru (phon. 6)
yongonao-yongonao (phon. 6)
lapi-lapi (phon. 15)
laki-laki (phon. 15)

and of parallelism, sometimes leading to rhyme:

wuwarèrè-wayarèrè (phon. 1)
kinaporé-uwaporé (phon. 1)
énèymaki-dinèymàki (phon. 6)
kàkàdomàki-pàpadomàki (phon. 8)
màkibàràmo-màkiburani (phon. 12)
wédiwò-wémiyò (phon. 14)

Although, in general, the recordings are fairly clear, it is not possible, except in a few cases, to understand the words, even with the written text to hand. Consequently, the written words cannot be matched to their respective songs.

Mr. Le Roux did not translate the texts he wrote down, perhaps this may not have been possible in any case for the majority of the words. In fact, Dr. J. V. de Bruijn, a Government official, who made a journey in 1939 lasting from July 29th to August 7th to the source of the Èdĕrĕ (or Élĕgĕbu) River — the same river from which a song of praise was recorded by Mr. Le Roux on phon. 1. (ME. 1) —, says of the songs of the Ékari: "Only in a few cases do the words have any meaning. The singing is merely a string of sonorous syllables." [30]

Dr. De Bruijn further observes that singing is always combined with a dance and that there is one type of dance that has an introductory song, and another without one. As far as I know, the only other author who is rather detailed about the songs of these pygmies, especially the people of the Swart Valley, is Wirz.[31] He gives a few motifs which, strangely enough, do not display the fanfare characteristics; [32]

[28] Cf. also SPM, p. 33, et seqq. [= pp. 24, et seqq., above].
[29] P. W. Schmidt, 'Ueber Musik und Gesänge der Karesau-Papuas', p. 297, et seqq.
[30] *Tijdschrift Nieuw-Guinea,* Vol. V (1940-41), p. 63. A few texts are on pp. 15 and 63.
[31] P. Wirz, 'Anthropologische und Ethnologische Ergebnisse der Zentral-Neu Guinea-Expedition 1921-1922', *Nova Guinea* XVI (1924), p. 133, et seqq.
[32] *ibidem*; they are also included in SPM, p. 25 [= p. 18 above].

he also gives the texts of a number of songs. With the exception of a few words Wirz, too, could give no translation of them but he is of the opinion that these songs do have a meaning. He says: "During the singing (*dawé*) every word is repeated several times with variation of the final syllables, so that the words become unintelligible to anybody who does not already know them. But from the few I could understand, it would appear that they are far from meaningless; apparently they relate to the deceased." [33]

These remarks refer particularly to the *dawé gumgum*-song of mourning. He also mentions other kinds of songs: the *wōn-wōn,* an antiphonal song sung by a leader and a chorus (in unison), and the *jawa* and the *wowo,* which are almost the same as the *wōn-wōn* but are sung at a slower tempo.

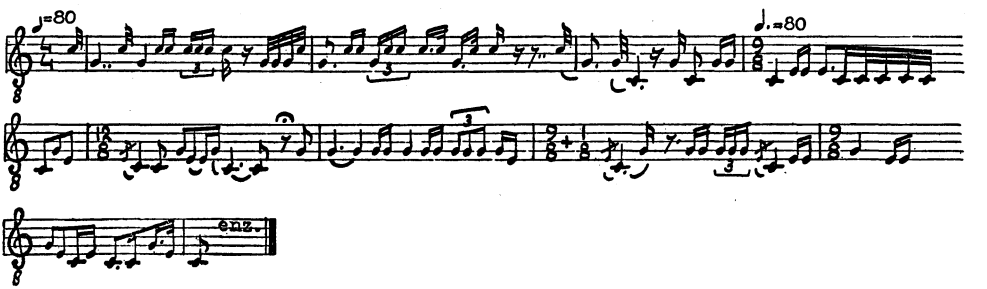
I shall now give the complete series of Mr. Le Roux' songs of the mountain people. Of some, there is both the text and the melody, of some, the text only, and of others, the melody only.

ÈKARI (= KAPAUKU)

1. *Wuwarèrè wayarèrè*: song about the river (*onè*) Èděrě.

Wuwarèrè wayarèrè èděraya womayda kibimoda iyarèmakay kinaporé uwaporé idimakeyé wuwarèrè wayarèrè.

ME. 1.



2. *Mukàmaka*: song about *piya*-wood-tree.

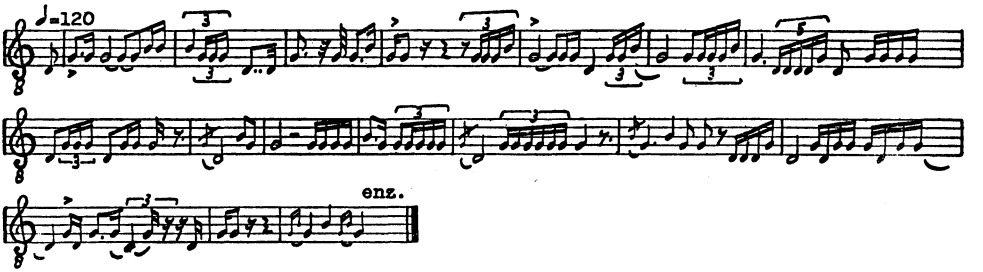
Iyéna piya mukàmaka émoyuwé déyé mukàmaka
Iyedari piya yaweypeya iyena bero mukamaka.

3. *Wori wòwò*: song about a bird.

Wori wòwò piya karoka ukénéré dokiné kapauku syokka awéta duka méré péka badiyé wori wòwò.

[33] Cf. also SPM, pp. 33 and 36 [= pp. 24 and 26 above] in the matter of these 'stop-gap-vowels' (Schmidt: 'Flick-Vokale').

ME. 2.



4. *Yàmà mòra mòrò*: song about a snail, *gaba.*

   Udi kabo yobiyayma piyamo moro yaramo udi kabo yabiyayma kanabana yàmàmòramòrò.

5. *Dorà*: song about the frog.

   Dorayé doroworo rvpuri éwara yabiyaymay épi doréyé doroworo.

6. *Wiyay*: song about a bird (a small parakeet).

   Iyooo wiyay nimeru nimeru watoraa porokeboo kitiritay yongonao yongonao yakaka éneymaki dineymaki yawapéyée wiyay nimeru nimeru.

7. *Rodi ròbò ròbò*: song about a kind of grass, *tuwa.*

   Rodi ròbò ròbò kupituru ywwiyagina édagagi yawina tahé rodi ròbò ròbò.

8. *Kàkàdomàki- pàpàdomàki*: song about the region (*maki*) of Débé.

   Iyaaydorée amaopée débéwo kodo takarinoo iyaymonaw imowaow idatonée kiyaa amokétéwiyée kàkàdonàki pàpàdomàki.

9. *Wuyée*: song about the wind, *boo.*

   Wuyeé woréboowowo makidimi odégéyagamée makidimi meya wuyee woreboowowo.

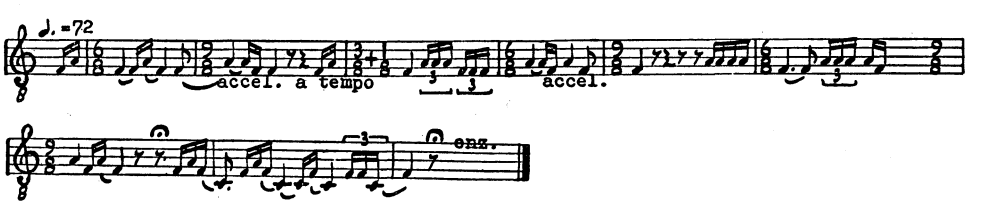
10. *Éwuwò*: song about a spirit, *ènéyà.*

    Déeréwo yotay morapa akiya nota mito oropakoya éwuwò.

11. *Woréboowòwò*: song about the wind.

    Wosaboo namuwéekamécya woréboowòwò.

ME. 3.



12. *Màkibàràmò*: song about the soil, *maki.*

Màkib àràmo màkibunari awinoro marabarakobi màki bàràmò.

13. *Yongonau mòrò*: song about a stone, *mòrò.*

Yokonaw mòrò toméno mòrò ketemòrò wiatiki mòrò.

14. *Wéediwò*: song about the rain, *édi.*

Wota paoto tayawi wéeydéwò éemiya idaya paato badiyawiyée wéediwò wéemio.

15. *Yàbay*: song about the mist.

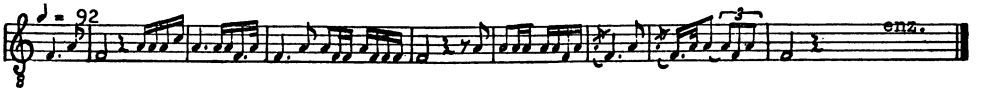
Yàbay lapi lapi mudiméyda miyuymi laki laki yàbay.

16. *Aniyakkaniyo niyo*: song about a spirit that eats children.

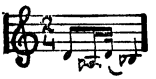
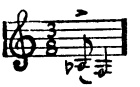
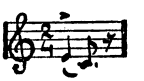
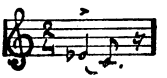
Miyoya ninaka owowruwto énayukunée karamiyotay abaydimo moo été mumay.

x. *Ugwa,* sung by Énéyaripodé of the village of Waigétéy.

ME. 4.



y. Song, name unknown, sung by Énéyaripodé. The melody consists of the frequent repetition of small motifs. First comes the motif:


then:

followed by:

and finally:


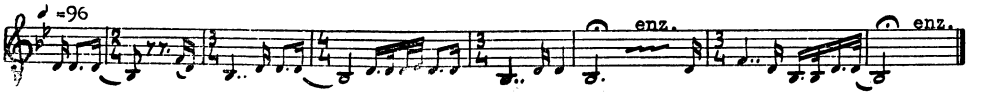
z. Song, name unknown. This song has a character totally different from that of the preceding songs. It may well be that it does not belong to the original repertoire of the Èkari but is a borrowing from a coastal Papuan tribe, probably one of the south coast tribes.

ME. 5.

MONI

a. *Ébégiewa*: sung by Dabiamé of the village of Masiga.

ME. 6.

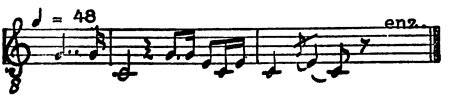


b. Kadio-kadia: sung by the same man.

ME. 7.

c. Yoré mèyo wayè: sung by the same man.

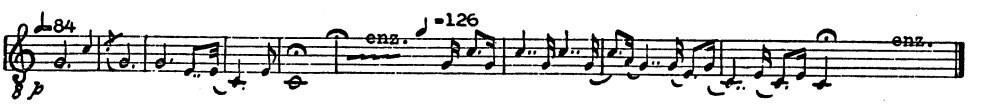
ME. 8.



NDANI

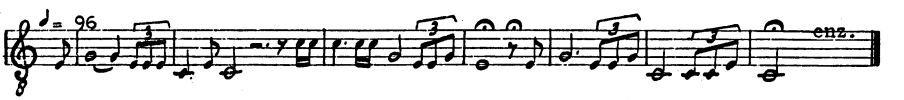
d. Song, name unknown: sung by a man of the Migani-Hitalipa clan.

ME. 9.



o. Song, name unknown: sung by the same man.

ME. 10.



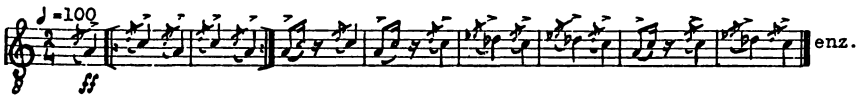
SIMORI

A. Yu: cry of joy; a war cry: shouted at feasts and also for amusement. This cry is made up of sounds of which no notation can be made. The sounds might be mistaken for the screeching of parrots or the screaming of apes.

B. Wani: sung at pig feasts as a song of welcome; when there is dancing in the village; and when people make a journey together. The singing consists of very loud sounds uttered regularly at a moderate tempo and always preceded by a grace-note. This note

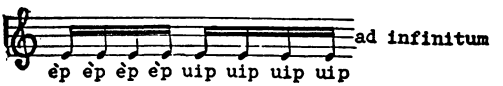
is at one time a minor third higher or lower than the tone following, at another, a minor or major second higher.

ME. 11.



C. Kamu: sung to drive away sickness or spirits. The melody consists of a recitative in a monotone in E flat with many triplets with an upbeat, the final note of the recitative rising to a fourth higher, i.e., A flat.

D. Pota: incantation recited in a monotone; the sounds *ep* and *up* are repeated in an explosive manner by the mourner.



I. Kaboraborèrè*: song about Mt. Weyland (*koborè*).

Donotéy témokokéy kaboraborèrè makay notay motmoké kapauku yokka katéytimiwèrè koboraboréré.

The singing of these pygmies is closer to ours than, for example, that of the mongoloid races. For that matter, the same can be said of almost all Papuan songs and for those of the inhabitants of some of the Moluccas and the Lesser Sunda Islands (Flores!). This fact also struck Dr. Bijlmer during his expedition to the central range, he writes: "Sometimes people gather voluntarily in order to sing. The leader sings a very melodious tune and the people join in humming. Once, I also heard a woman crooning to herself and I must say that it was far from discordant. Is it not remarkable that the musical sense of the black races is so much closer to our own than is that of the yellow races? The singing of negroes is also to our taste, whereas the music of the Japanese and the Chinese is absolutely abominable to the average person who does not have the special knowledge required to analyze music. I was able to convince myself of this at a gala in Tokio." [34]

Rawling also remarks upon the singing of the Tapiro pygmies:

[34] H. J. T. Bijlmer, 'Aan de grens der beschaving. Reisherinneringen aan de Papoea's van Z. W. Nieuw-Guinea', *Tijdschr. Kon. Ned. Aardrk. Gen.* XLX (1933); pp. 246-7.

"We were considerably surprised by the richness and variety of the singing and chanting, the entire audience joining in the chorus in addition to supplying a deep-toned hum maintained during the solo." [35]

Genuine Indonesian music is also more foreign to us Europeans than the music of New Guinea, if only because the intervals of most Indonesian scales are different from those used in the West, whereas, the tone intervals produced by the negroid peoples (negritos, negroes, Melanesians) are usually identical with ours or, at least, they are so closely related that the deviation is generally not perceptible to the untutored Westerner and is, therefore, almost negligible in transcription.[36]

A few further details about the songs of the mountain Papuans and about the death chants of the Migani, one of the pygmy tribes to the east of Lake Paniai, are given by Lloyd Rhys in his book, "Jungle Pimpernel".[37] He does not give any information about their music but he does give the text of one of the songs, with a translation (by Dr. De Bruyn): I give the song in its entirety:

"E Kumba, ara dolapanuanda,	Oh, darling, I love you so dearly,
e meureu lienggio.	I am mad with sorrow.
Andigo ama kendorama,	It was I who fed you at my breast,
nua nu doroma.	Drink again now.
Hi hi, yi yi.	(Crying) Hi hi, yi yi.
Ma unundia deno	Why do you sleep now:
paita paite, kumbae	Wake, my darling,
paita paite	Wake up, wake up,
ara dolapanuanda.	I love you so dearly."

As far as is known, the only musical instrument used by the pygmies of that part of the central range lying in West New Guinea, is the jew's harp.[38] The Awèmbiak know it as *kwabagé*;[39] the Èkari = Kapauku, as *kaido*;[40] the Dzyŏnggunau, a clan of the Moni, as *bigigi*;

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[35] C. G. Rawling, 'Exploration in Dutch New Guinea', *Geograph. Journal,* Vol. XXXVIII (1911), p. 247.

[36] For the nature and extent of these deviations in a specific case, cf. SPM p. 10, et seqq. [= p. 8 above] and especially p. 11, note 24.

[37] London 1947.

[38] Cf., among others, Wirz, 'Anthr. und Ethn. Ergebnisse der Zentral-Neu-Guinea Exp.', *Nova Guinea* XVI (1924), p. 10.

[39] Tr. Inst. Nos. 514/233-6; 1024/74-5.

[40] Tr. Inst. Nos. 1298/99 a-b, 1298/100 a-b. The Kapauku, as we do, speak of the 'legs' (*muta*) and the 'tongue' (*èta*) of a jew's harp (Van Eechoud).

the Uhunduni, as *pikol*; and the Uringup, as *longwik*. The instrument is made of bamboo and the frame, as always in West New Guinea, is not closed (see pls. 6*a* to *d*).[41]

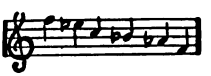
Some of the mountain tribes living in East New Guinea also use panpipes which consist of eight reeds, four being open and four closed [42] but these are not known to have reached the people living in that part of the central range lying in West New Guinea.[43]

3. THE SOUTH-WEST COAST

In addition to the recordings of the songs of the pygmies of the central range, Mr. Le Roux' expedition also brought back recordings made in the vicinity of Uta, the expedition's point of departure on the south coast. Five recordings, MEs. 12 to 16, were made there. These songs from the coast are quite different in character from those of the mountain Papuans: there is no fanfare melody at all. Here, there is a melodic structure in which when considered as a whole, the ears seem to detect an affinity with that of the inhabitants of Geelvink Bay. Comparison need only be made with the various transcripts of songs of the Waropèn Coast and the island of Yapèn given in "Songs of North New Guinea". The quality of the voices in these songs from Uta is exceedingly unpleasant to European ears.

UTA

I. *Wayamsur*: a rowing song; an anhemitonic/pentatonic melody with a range of a closed octave and the tone steps:



This melody, in $^{12}/_{8}$ time, which extends over three bars, is certainly not without grace.

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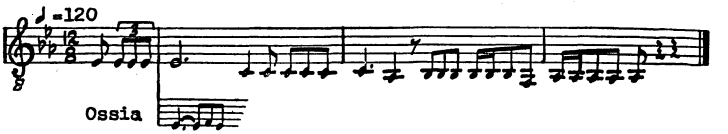
[41] Cf. also: Le Roux, *De Bergpapoea's van Nieuw-Guinea en hun woongebied,* Vol. II, pp. 582-584.

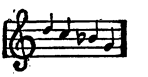
[42] J. C. Hides, *Papuan Wonderland,* 1936, pp. 93 and 204.

[43] There are, however, still some blank spaces on the map of New Guinea, particularly in the central range, so that surprises are not excluded even though the culture of these pygmy tribes appears to be homogeneous.

ME. 12.

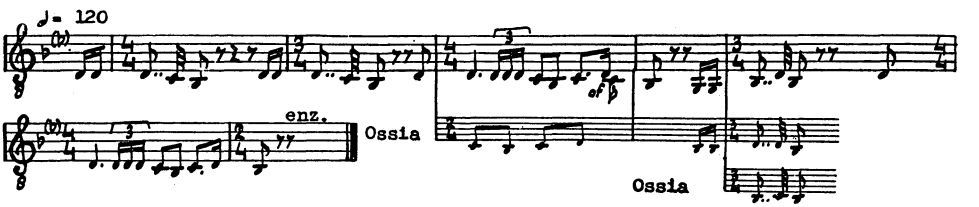


Wayamsuru maó aaa wayataway wayamsuru maó.

II. *Koropowéyau*: also a rowing song; an anhemitonic/tetratonic melody with a range of a fifth and the tone steps: 

This song consists of three short phrases which are usually sung a few times alternately and without a pause.

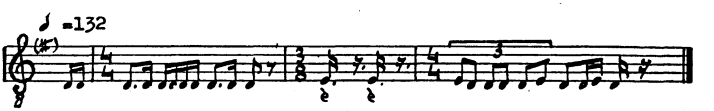
ME. 13.

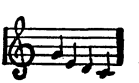


Syiké nama koropowéyau.

III. *Kukuyaté kawaya.* I do not know to what category of song this one belongs. Apparently, it is a type of song called *tau.* Range: a major second. Scale: one step scale.

ME. 14.



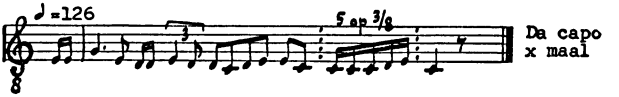
IV. *Mbaké*: an anhemitonic/tetratonic melody with a range of a fifth and the tone steps: 

Tamo opokakorauo
tani kaporauo
uruki makéra
opokopokomomè ramara.

In the strophe now following, ME. 15, the group of notes placed between the dotted vertical lines is often so much extended that it

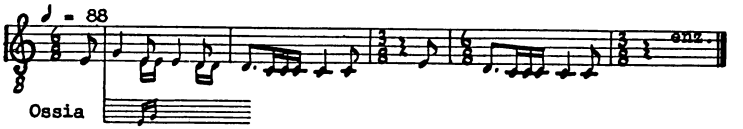
becomes a succession of notes of such small time values that it is impossible to distinguish them.

ME. 15.



V. *Aydomée*: a song also said to be of the *tau* type. Range: a fifth. Tone steps: the same as ME. 15.

ME. 16.



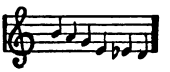
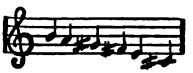
Aydomée aydomomomo

A melody closely related to that on phon. IV.

4. THE WESTERN PART OF THE VOGELKOP

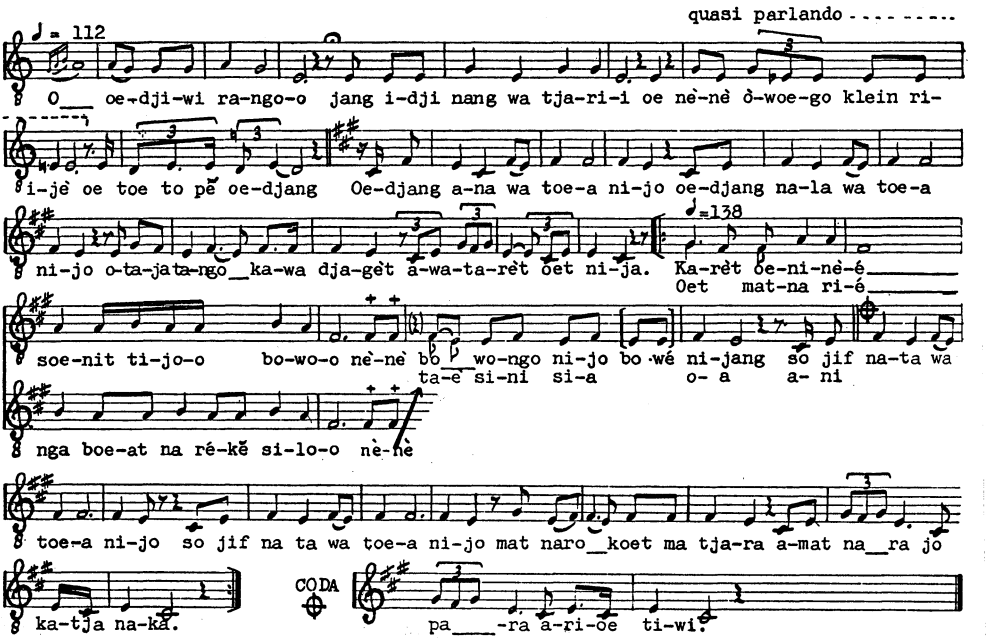
The limited amount of the music of the inhabitants of the Vogelkop, at least of those in the most western portion of it, i.e., the people living on the small island of Manooi, off Sorong, that I was able to record when I spent a few hours there in 1932, is unmistakable evidence of a development of a higher musical sensitivity, and since it is the Radja Empat Islands that are under discussion, a development that can probably be ascribed to Indonesian influence.

MANOOI

Phon. K 307[1] is a recording made on Manooi of the *Bawaar,* a song used to lull small children to sleep. This type of cradle song creates a sense of tranquility that can be appreciated even by Western ears. It seems to consist of two parts; the range of the first half is a major sixth:  that of the second a minor seventh:  . Both parts are, therefore, constructed on a hemi-

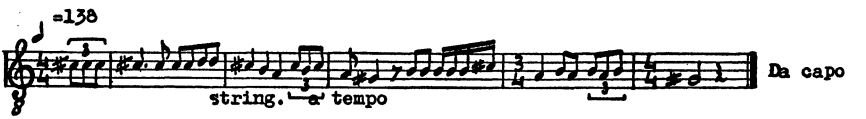
tonic/hexatonic scale. The clarity of this recording was so exceptional that I could take down the words.

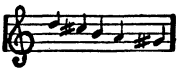
ME. 17.



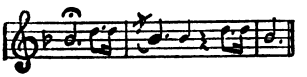
The song, *Atnaniet* (phon. K 307II), in agreement with its use as a rowing song, is of a more vigorous character. The following phrase, ME. 18, is repeated many times in the recording with, time and again, small changes which are apparently related to the rhythmical peculiarities of the text of the song.

ME. 18.

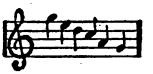


Range: a tritone. Scale:  therefore, hemitonic/pentatonic.

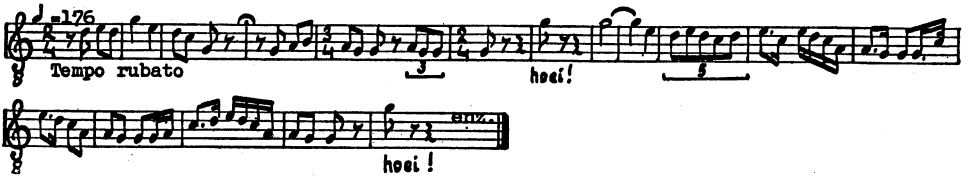
5. WAIGÉO

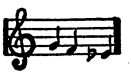
On the large island of Waigéo, just north-west of the Vogelkop, I visited the village of Urbinasopèn. The singing I heard there, which I recorded (see Illustration 1), again showed more correspondence with that of the north coast and of Uta. Phon. K 300 contains, among other songs, one called *Kalim ko kala* which means, bird-whistling-water. It consists of a kind of recitative first on the notes D♭ and B♭ and then on E and C . Further on, there are motifs in the following style:  which are sung by a leader whose prolonged notes are accompanied by a chorus singing short notes in unison. This results, from time to time, in two-part singing in major thirds.

Passages consisting of such "interlocking thirds" are a characteristic of negroid music.[44] Their frequent occurrence in the music of the peoples of Melanesian and partly Melanesian stock probably can also be attributed to the negroid element in their racial composition. This will again be discussed on p. 142 et seqq.

Phon. K 302II contains a more developed melody with range of exactly one closed octave, the construction of the scale being anhemitonic/pentatonic: 

ME. 19.



Phon. K 304, on the other hand, contains a melody with a very crude form. It has a range of only a major third and the tones:  . It is a marriage song by men.

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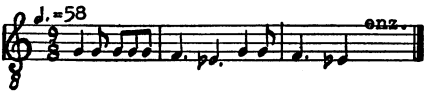
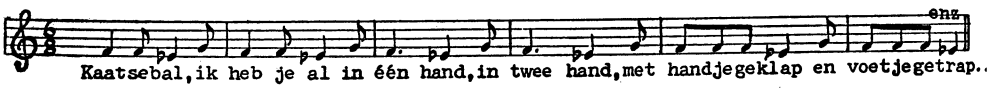
[44] See Will G. Gilbert, *Een en ander over de negroïde muziek van Suriname,* 1940, p. 15; id., *Muziek uit Oost en West,* 1942, p. 88; M. Kolinski in: M. J. Herskovits and F. S. Herskovits, *Suriname Folklore,* New York 1936, p. 498.

ME. 20.



One realizes from a song such as this just how old and how primitive of form are some Dutch children's songs of play. The song called *'Kaatsebal, ik heb je al'*, is built up with the same limited tonal material:



I was not successful in recording dance songs from this region from which a transcript could be made. It did not appear to be possible for these songs to be sung if the singer-dancers just stood quietly in front of the mouthpiece of the phonograph. The only way to hear the songs was when the men were dancing — the singing and the dancing went together. Moreover when they were singing, the intonation was very uneven. Illustration 2 gives an idea of such a dance and makes it clear why the singing accompaniment could not be recorded on a phonogram.

Thanks to the administrator of Sorong, Mr. J. B. Eyken, who gave detailed information to an inquiry I had instituted under the auspices of the Departement van Onderwijs en Eredienst (Department of Education and Public Worship) into the position of music and its occurrence in the Indonesian Archipelago, it is possible for me to give some further particulars about music and the dance in the Sorong area.

The information furnished by Mr. Eyken is as follows:

"The musical expressions of the indigenous people of this sub-division consist solely of music and singing as an accompaniment to dancing.[45] A brief description of the dances of these primitive people will, at the same time, give a picture of their music and singing.

"The dances can be divided into two groups, each differing considerably from the other: 1) dances of the inhabitants of the Radja Empat Islands; 2) dances of the tribes inhabiting that part of the Vogelkop coming within this sub-division [Sorong].

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[45] This is incorrect, in so far as there are also lullabies, rowing songs and marriage songs.

"Among the dances in the first group, the *wor* dances[46] are the most important. These are danced to a rhythm beaten out on the *tifa* and have no sung accompaniment. The movements are varied and often graceful. The *wor* dance originated on Biak[47] and its presence in the Radja Empat Islands is due to the fact that a large part of the population of these islands is made up of people from Biak: the Besser or Bessewer who live on the islands west of Waigéo; the major part of the population of Batanta; most of the people living on the coast of north-east Waigéo; and the entire population of the Ayu Islands and the Kofiau Islands come from there. The *wor* dance differs from place to place, for example, the people of Salawati and of Batanta dance it in a manner different from the way the people of Waigéo do it.

"In addition to the *wor* dances, there are in this group dances of importance which are an expression of the shamanism practised by these people. These dances are called *mon* and *landjin*. They are performed when someone in the village is ill. A platform of bamboo, often in the form of a canoe and having a bird design on it, is erected. The dance, to the accompaniment of music on the *tifa* and monotonous singing, is done round this stage. The *tukang mon* goes into a trance and the spirit, the *mon,* enters his body and gives details of the remedy to cure the sick person.

"Besides the *wor* and *mon* dances, there are yet other local dances, such as the *walla* of the Alfur of the islands of Misool. The *tifa* is not used for this dance; the dancing is done on a floor made of laths of the wood of the areca palm, or of bamboo, the rhythm being provided by the stamping of feet on the floor, the people singing the while.

"The dances of the second group, i.e., those of the Papuan tribes living in that part of the Vogelkop coming within the jurisdiction of Sorong, are quite different from those of the Radja Empat Islands. The dances of the second group are performed to the rhythm of monotonous singing: there is no accompaniment on the *tifa*. They consist mainly of a regular stamping of the feet, the right and left foot alternating, the knees being slightly bent, so that the body moves up and down in time with the rhythm. The Moi tribe, which lives in that part

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[46] With regard to these *wor* dances, see also F. C. Kamma, 'Levend Heidendom', *Tijdschrift Nieuw-Guinea* IV (1939), p. 326, et seqq. and V (1940), p. 22, et seqq.

[47] One of the two Schouten Islands to the north of Geelvink Bay.

of the Vogelkop lying between Tandjong Sausapor and Tandjong Seget, call the dance *alin*: it is a group dance.

"The tribes living to the north of Tandjong Sausapor and more inland, the Karon and the Moraid, call this dance *séra*. It is danced as described in the preceding paragraph but the dancers form a circle and link arms. Men and women dance together and children also join in.

"Finally, the Moi have a curious dance called *kalenkokla*[48] which means: playing birds.[49] This dance is performed by women only. Movement is largely confined to the buttocks which are waggled in such a way that the action can best be likened to a goose's posterior as it walks: it defies imitation. The men indicate the time by striking the *tifa* and singing."

The difference visually between the dance forms of the various tribes inhabiting the Vogelkop is not great, at least from what I saw in Manokwari (Illustration 3) of the Papuan dances they seem to me to have a strong resemblance to the *alin* of the Moi.

6. MUSICAL INSTRUMENTS OF THE NORTH- AND WEST COASTS

As far as musical instruments of the north coast and the off-shore islands are concerned, not much can be added to the data contained in SPM. A few additional remarks can, however, be made about some of the instruments.

I. *shark sistrum*: this remarkable instrument is not limited to the Vogelkop and the Schouten Islands where it is known on the island of Biak as *sekekas*[50] or *tobek*[51] for, according to H. W. Fischer,[52] it is also found in other parts of the archipelago: it is known in the Lingga

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[48] Cf. p. 26 [= p. 123], *Kalim ko kala,* the name of a song. Perhaps the same name is meant in both cases.

[49] In the *Verslag van de Zuidwest Nieuw-Guinea Expeditie 1904/5,* J. W. R. Koch describes, on pp. 566/7 of the chapter "Ethnographisch Verslag", a women's dance he watched in the neighbourhood of Merauke at which the performers imitated cassowaries by using leafy branches.

[50] Mus. Arch. Btv. Nos 856 to 859 and Tr. Inst. Nos. A 539 and 43/68.

[51] De Clerq and Schmeltz, *Ethnographische beschrijving van de West- en Noordkust van Nederlandsch Nieuw-Guinea,* 1893, p. 104 No. 508 and plate XXVI, fig. 7; G. A. J. van der Sande, 'Ethnography and Anthropology', *Nova Guinea* III, pp. 168, 171 No. 594 and pl. XX, fig. 6.

[52] 'Een rammelaar als hulpmiddel bij de vischvangst', *Intern. Archiv für Ethnographie,* Bd. XVIII (1908), p. 179.

Archipelago as *oro-oro*;[53] in the Natuna Islands, as *uruk-uruk*;[54] and on the Island of Bangka, as *orok-orok*.[55] Its form varies slightly throughout the area in which it is found. According to Father Geurtjens,[56] it is also known in the Kei Islands. All the instruments of this type known in Papua do not have the same shape. Specimens in the Royal Tropical Institute (Illustration 4), for example, are more simple and are less highly finished than the excellent example (Illustration 5, drawn by Mas Pirngadie) in the Musicological Archives in Djakarta.[57]

II. *jew's harps*: on Biak, called *songer*;[58] at Humboldt Bay, *pumbunè*;[59] in the Lake Sentani area, *bombom*;[60] and on the Waropén Coast *tunggé*.[61] The jew's harps made in these areas are more crude in workmanship and are often larger than their Malayasian counterparts, with the exception of the specimens from Waigéo (Illustration 6*a*) [62] which are undoubtedly influenced by Indonesian types. They also differ from the majority of the Malayan types, again with the exception of the Waigéo specimens, in that the 'frame' is not closed (Illustrations 6*b-g*). In this respect they are the same as the jew's harps of the pygmy tribes of the central range (see p. 118-119).

All these jew's harps are made either of bamboo or out of the wood of a palm tree. The "Rübenmaultrommel" [63] mentioned by Sachs as being in use in New Guinea and Melanesia, is not known to me from West New Guinea.

III. *thunder block*: at Humboldt Bay called *toor*.[64] This instrument consists of a trunk of a tree worked up into the shape of a canoe. Usually, an oblong hollow is made in the centre; in other words, it is

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[53] C. van Angelbeek, *Verh. Bat. Gen.* II, p. 58; C. F. de Bruyn Kops, 'Schets van den Riouw-Lingga-Archipel', *Natuurk. Tijdschr. van Ned. Indië* IV (1852), p. 314.

[54] Van Hasselt and Schwartz, *Tijdschr. Kon. Ned. Aard. Gen.* XV, p. 460.

[55] For the occurrence outside the Indonesian area (viz. in Malaya, New Ireland and Melanesia) see Sachs, *Geist und Werden der Musikinstrumente* (1929), p. 103.

[56] H. Geurtjens, *Uit een vreemde wereld of het leven en streven der inlanders op de Kei-eilanden*, 1921, p. 281.

[57] Mus. Arch. Btv. No. 856.

[58] Mus. Arch. Btv. Nos. 855 (Schouten Islands), 860 and 861 (Waropèn Coast), 863 (Moi tribe at Sorong); Tr. Inst. No. A 2234a (Waigéo).

[59] Tr. Inst. No. 16/543 (Humboldt Bay) and H 1144 (presumably Humboldt Bay) and in the Leiden Museum, among others, three examples from Witriwai (series 128/49).

[60] Tr. Inst. Nos. 574/34 and 35.

[61] G. J. Held, loc. cit. p. 346.

[62] Tr. Inst. No. A 2234.

[63] Curt Sachs, *Geist und Werden der Musikinstrumente*, 1929, p. 108.

a rudimentary slit drum. In the *karewari* men's houses (now demolished) in the Humboldt Bay and Lake Sentani areas, it was the custom to drop in onto the wooden floor. As is struck the floor, it made a sound like thunder at which moment a spirit was supposed to enter the men's house — at least, that is what the men would have the women believe.

IV. *slit drums*: *tongtong;* (Illustration 7).[65] These are made of wood and are found at Humboldt Bay and in the Lake Sentani area but not, it would seem, elsewhere on the western part of the north coast.

V. *stamping boards*: the floors, made of bamboo or laths of wood of the areca palm and, in Misool, erected for the *walla* dance (see p. 125), can be so called.

VI. *dance rattles,* for women: made from shells strung together. On Biak, they are called *korobow.*

VII. *dance staffs and spears*: (Illustrations 8 and 9);[66] used as a rhythmical accompaniment to the dance; apparently they occur everywhere on the north coast and on the off-shore islands.

VIII. *gongs*: presumably always imported from Indonesia; used at Geelvink Bay.[67]

IX. *one-headed wooden drums*: often of the goblet type, especially those used on the island of Yapèn (Illustrations 10 and 13*b*), but there are also more slim and more or less cylindrical types on which fibres are sometimes wrapped round the cane tightening rings, so that the drum has what seems to be a roll round the drumhead (Illustrations 13*d* and *e* and 16). Drums having such drumheads are exclusive to Humboldt Bay; the Tanah Merah Coast area, to the west of Humboldt Bay; and Lake Sentani. Hour-glass drums also occur on the Waropèn Coast (Illustrations 11 and 14*g*) and on some small islands off the north coast[68] (Illustration 12). Some of these drums have very fine

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[64] Mus. Arch. Btv. No. 862. See also J. A. Wasterval, 'Een en ander omtrent godsdienst, zeden en gewoonten bij de bevolking in en omtrent de Humboldtbaai', *Tijdschr. Bat. Gen.* LXI (1922), pp. 503 and 505, and Wirz, 'Beitrag zur Ethnologie der Sentanier', *Nova Guinea* XVI, p. 251, et seqq., pp. 334.

[65] Wirz, ibidem p. 335; Schoolmuseum The Hague, No. 47, 484.

[66] Tr. Inst., among others, Nos 573/53-58 (Humboldt Bay), 573/59 (Waropèn Coast), 574/39, 40, 746/17-26 (Lake Sentani), 133/114-119 (North coast, without further indication), 608/104 and 105 (Yapèn).

[67] A. Goudswaard, *De Papoewa's van de Geelvinkbaai,* 1863, p. 56.

[68] Schoolmuseum The Hague, No. 47. 482; Ethnogr. Mus. Breda, Nos 6428a and b.

carving on them (Illustrations 13*d*, 15 and 16). The skin of the iguana or the kangaroo is used; that of the cassowary, less often.

The word for drum differs from place to place. In the course of years, the following came to my attention:

timur, tiban, iembah	south coast of MacCluer Gulf.
sa(n)dip	Waigéo; the Schouten Islands and the Padaido Islands; Little Geelvink Bay; and the north-west coast of West New Guinea.[69]
silip, alip	east Waigéo, Misool.
pindotu, pirotu, siwa, airafé	island of Yapén.
pumpi	island of Kurudu, or Abĕrĕ.
afti	island of Wakdé.
njafti	island of Yamna.
atof, ĕmé	north coast near Witriwai.
hirĕré, roibĕrok	Geelvink Bay.
pibérotu	Wandammen Coast.
ksiwau, siwa, siwabuino	Waropèn Goast.
mĕsin, metsinggi, wagu or *wahu*	Humboldt Bay.
wachu	Lake Sentani.

X. *bamboo drums*: found at Humboldt Bay; frequently with fibres wrapped round the rings on the drumhead [70] (Illustration 13*c*).

CHORDOPHONES

These are rare. In West New Guinea they are only found in the western part where there has been Malay cultural influence and, as will be seen presently, in one form in the vicinity of Merauke in the south which, it would appear, was just reached, via the central range, by an offshoot of the Melanesian culture of the Sepik region.[71]

The following come in the class of chordophones:

XI. the *Moluccan one-stringed lute*: called *arababu*; found here and there in the western part of the north coast and on the Schouten Islands; [72]

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[69] There is a large kind, the *sa(n)dip béba,* and a smaller one, *sa(n)dip war (wor?),* which the performer holds under the arm during the dance.

[70] E.g., Tr. Inst. No. 716b.

[71] Cf. J. C. Lamster, 'Beschavingsgebieden op Nieuw-Guinea', *Tijdschr. Kon. Ned. Aardr. Gen.* XLII (1925), p. 402., et seqq.

[72] *Encyclopaedie van Ned.-Indië,* II, 2nd ed., p. 834b/5a.

XII. *three-stringed bamboo idiochord*: MacCluer Gulf;[73]

XIII. *one-stringed bamboo idiochord*: Schouten Islands. These are called *mambabores*. The specimen I obtained for the Musicological Archives in Batavia has been very carefully carved and is ornamented with a sitting male figure with a beak-shaped nose, the figure being painted black and the face white (Illustration 17).[74] It is said to represent a missionary who was stationed there.

AEROPHONES

Several forms of these are known on the north coast and off-shore islands. First, the famed holy clan house flutes, of which there are two kinds:

XIV. one group which are transverse, rather stumpy and short: at Humboldt Bay these are called *tamò*; and

XV. one group that are blown through the end (Illustration 18).

End-blown flutes are of various lengths:

(i)	the length of a hand:	the Sentani region, called *yokuë*; Tanah Merah, *fòh pete*;
(ii)	the length of a forearm:	the Sentani region, called *kĕru*; Taubadi, *tobo*; Entsau, *toboya*; Tanah Merah, *tigi-pete*;
(iii)	the length of the whole arm:	the Sentani region, *ivare*; Taubadi, *oti*; Entsau, *bréwo*; Tanah Merah, *kanowar*;
(iv)	the length of a leg:	Taubadi, *mèrauwi*; Entsau, *marauwi*.[75]

At Humboldt Bay, there is yet another name, *bukab idi,* for these end-blown flutes and on the island of Yamna, thy are called *awét*. Both these type of flutes are always used in pairs; they have no finger-holes.[76]

Other types of flutes are:

XVI. *end-blown flutes* with two finger-holes: Waropèn Coast; cf. p. 107;

XVII. *transverse flutes*: six, rarely five, finger-holes: (Illustration 19), imported from Amboyna by the Protestant Mission;

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[73] J. W. van Hille, 'Reizen in West-Nieuw-Guinea III', *Tijdschr. Kon. Ned. Aard. Gen.* XXIV (1907), p. 547, et seqq.

[74] Mus. Arch. Btv. No. 886.

[75] Wirz, 'Beitrag zur Ethnologie der Sentanier', *Nova Guinea* XVI (1928), p. 251, et seqq., p. 332.

[76] For these flutes, see also SPM, p. 16 et seqq. [= p. 13, et seqq.].

XVIII. *nose flutes*;[77] very rare. In Indonesia and in the regions influenced by Indonesian culture, nose flutes are used in the following places and among the following tribes:

place, or tribe	*name of nose flute*
north Nias[78]	*sigu nihu*[79]
Hainan (Basadung Li)	*tsui lau*[80]
Nicobar Islands	*hahèl, kahèl, hènhèl*[81]
The Philippines:	
Luzon	*tungali*[82]
the Apayaos	*balin(g)ing*
the Igorot	*calalic*[83]
the Tinguian	*kipanao, kalalèng*[84]
Malaya:	
the Semang	*bangsi,*[85] *bunung-giogu*[86]
the Plé or Orang Bukit[87]	*salèt*[88]
the Sakai	*tsjiniloi*[88]

[77] Tr. Inst., Nos. 573/33A (incomplete) and 573/33B (with 1 + 1 finger-holes).
[78] J. Kunst, *Music in Nias*, 1939, p. 58 et seqq.
[79] *Nihu* = nose. Cf. Siegfried Wolf, *Zum Problem der Nasenflöte*, 1914, p. 34. The Nais tribe 'of Sumatra', mentioned by this author, is a figment of his imagination as far as their being on Sumatra; and at the same time a writing or printing error. Undoubtedly Nias is meant since the 'Nais' word *sigu nihu* is pure Nias.
[80] H. Stübel, *Die Li-Stämme der Insel Hainan*, 1937, pp. 62, 112, 132, 176, and 202.
[81] W. Svoboda, 'Die Bewohner des Nikobaren-Archipels', *Intern. Arch. für Ethnogr.* V (1892), p. 209.
[82] Siegfried Wolf, loc. cit., p. 34.
[83] M. Garcia Matos y M. Schneider, *Catálogo de los instrumentos musicales "igorrotes" conservados en el Museo Etnológico de Madrid*, Madrid 1951, p. 5 et seqq.
[84] Rijksmus. voor Volkenk. Leiden, Nos. 821/29, 825/50, 1183/81, 761 and 942 (all with 3 + 1 f.h.) and 1183/60 (with 5 + 2 f.h.). See also Fay Cooper Cole, *The Tinguian*, 1922, p. 441 and fig. 82; Meyer and Schadenberg in *Publikationen K. Ethn. Mus. Dresden* VIII, pl. XVII, fig. 13 (with 3 + 1 f.h.). Other figures in Sachs, *Geist und Werden der Musikinstrumente*, Tafel 12, fig. 91 and in Roberto Romualdez, *Filipino Musical Instruments and Airs of long ago*, 1931, p. 17 (with 3 or 4 f.h.).
[85] W. W. Skeat and C. O. Blagden, *Pagan Races of the Malay Peninsula*, Vol. II, p. 117; H. Balfour, *Musical Instruments from the Malay Peninsula*, p. 15 (with 5 f.h.); Mus. Copenhagen, No. 4777. Cf. also Sachs, *Geist und Werden der Musikinstrumente*, Tafel 5, fig. 40.
[86] Siegfried Wolf, loc. cit. p. 32.
[87] P. Schebesta, *Orang Utan*, 1928, pp. 24, 26, etc., and fig. on p. 72.
[88] M. Kolinski, 'Die Musik der Primitiv-Stämme auf Malaka', *Anthropos* XXV

Burma: the Kachin [89]	
Thailand [90]	
Sumatra:	
the Simalungun Batak	*saligung* [91]
the Toba Batak [92]	
Borneo, west, central,[93] east:	
the Taman Dayak	*suling*
the Mendalan Kayan	*selingut* [94]
Mt. Kenya	*kelingut*
the Dusun	*turali* [95]
the Kanowit	*sangoi* [96]
the Iban	*sulieng idong* [97]
the Tebidah Dayak	*telali* [98]
west Sumba, Kodi district [99]	

(1930), p. 593; R. Martin, *Die Inlandstämme der malayischen Halbinsel,* 1905, p. 908.

[89] H. J. Wehrli, 'Beitrag zur Ethnologie der Chingpaw (Kachin) von Ober-Burma', *Suppl. Intern. Arch. für Ethnographie* XVII (1904), p. 69.

[90] John Bowring, *The Kingdom and People of Siam,* 1857, Vol. I, p. 147.

[91] Tr. Inst. Nos. 1019/5 and 6; Mus. Arch. Btv. No. 1044 (with 4 f.h.).

[92] Gemeentemuseum The Hague No. 275 (with 5 f.h.).

[93] H. F. Tillema, 'Uit Apokajan. Muziekinstrumenten', *Tropisch Nederland* VI (1933), p. 249.

[94] See also: W. Kükenthal, *Im malaiischen Archipel,* 1896, Tafel IX.

[95] R. Shelford, *An Illustrated Catalogue of the Ethnographic Collection of the Sarawak Museum,* Part i, Musical Instruments, p. 23; Sarawak Museum No. 776 (with 4 f.h.).

[96] Loc. cit., p. 23 and plate III, fig. 8 on right.; Sarawak Mus. No. 60 (with 3 + 1 f.h.).

[97] Loc. cit., p. 24 and plate III, fig. 8 on left; Sarawak Mus. Nos 558-562 (with 3 + 1 f.h.).

[98] Tr. Inst. Nos. A 6717 (with 4 f.h.); Rijksmus. Leiden No. 1219/337 (with 3 f.h.), Nos. 893/68, 1060/51 and 1219/355 (4 f.h.), No. 1219/336 (4 + 1 f.h.); Mus. voor Volkenk. Rotterdam Nos. 4183 and 13300 (3 + 1 f.h.); Gemeentemus. The Hague Nos. 276 (2 f.h.) and 273 (4 + 1 f.h.); Mus. Landbouwschool Deventer No. 55/267 (4 f.h.); Tilburg, Mus H. Familie, 2 sp. (4 + 1 f.h.). Cf. also: C. Bock, *Reis in Oost- en Zuid-Borneo van Koetei naar Bandjermassin,* 1881 and 1887, pp. 20 and 93, and plate XIX, figs. 2 and 3; H. Ling Roth, *The Natives of Sarawak and British Borneo,* 1896, Vol. II, p. 258; R. Shelford, loc. cit., pp. 20-25 and plate III, fig. 8, plate VIII, fig. 2; Ch. Hose and W. Macdougall, *The Pagan Tribes of Borneo,* Vol. I, p. 44.

[99] Verbal communication from the Sumbanese *guru indjil* (clergyman) Ka̧pènga Tanahômba.

central Celebes:

Posso district	*sanggona* [100]
the To Wana	*lolowè* [101]

Aru Islands [102]

Not all these flutes have the same form: some are whistle flutes with either an internal [103] or an external [104] air conduit.

It is doubtful whether nose flutes occur on Bali. I did not find them there and neither did Walter Spies, nor Colin McPhee, but C. M. Pleyte, in a discussion on the work of Meyer and Schadenberg on the Philippines,[105] in which he goes into detail about the distribution of nose flutes in the Indonesian Archipelago says: "It is an indispensible object for the Balinese *walian,* shaman: its sound enables him to reach a state of ecstasy."

Nose flutes have also been found outside the Archipelago, especially on the islands to the east of New Guinea, in both Melanesia and Polynesia.[106] It cannot, therefore, be said whether nose flutes entered New Guinea from the east or the west.

XIX. *middle-hole flutes:* [107] exclusive to Papua Talandjang, the hinterland of Tanah Merah. The middle-hole flute is even more rare than the nose flute. In Indonesia, I found it in only three or four places: in mid-west Flores, in the Nagé region, where it is called *huhé,* and among the Ngada, where it is known as *foi duri udi*; [108]

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[100] Rijksmus. Leiden No. 1300/9; Mus. Arch. Btv. Nos. 341-2 (3 f.h.); see also W. Kaudern, *Musical Instruments in Celebes,* 1929, p. 232, et seqq., and A. C. Kruyt and N. Adriani, *De Barè'è sprekende Toradja's,* Vol. II, pp. 382.

[101] Tr. Inst. No. 496/75; Mus. Arch. Btv. No. 348 (both 3 f.h.). See, however, Kruyt, 'Een en ander aangaande het geestelijk en maatschappelijk leven van den Poso-Alfoer', *Meded. Ned. Zend. Gen.,* Vol. XLI (1897), p. 44, and Kruyt and Adriani, loc, cit., Vol. II, p. 382. Here, the mouth flute is called *lolowè* to distinguish it from the nose flute.

[102] J. W. Tissot van Patot, 'Een viertal tochten door het eiland Terangan (Aroe-eilanden) in Maart en April 1907', *Tijdschr. Kon. Ned. Aardr. Gen.* XXV (1908), p. 89 and fig. opposite p. 83 pl. VI (2 f.h.).

[103] For example, some Dayak and Toradja instruments (cf. Siegfried Wolf, loc. cit., p. 34).

[104] For example, some instruments of the Batak and from the Nicobar Islands (cf. Siegfried Wolf, loc. cit., p. 34).

[105] *Indische Gids,* 1891, p. 1464, et seqq. (1465 § 4).

[106] Sachs, loc. cit., p. 116, et seqq.

[107] De Clercq and Schmeltz, *Ethnographische beschrijving van de Noord- en Westkust van Ned. Nieuw-Guinea,* 1893, p. 157 and plate XXXIX, fig. 10 = SPM, plate XI, fig. 47.

[108] Tr. Inst. Nos. 1148/99, 99a and 100; Mus. Arch. Btv. Nos. 686-689 and 699-701. Cf. Kunst, *Music in Flores,* (1942), p. 150, et seqq.

on Timor, where the Bélu tribe call it *(k)fui dolé, (k)fui teték, or(k)fui latan*;[109] and among the Toba Batak who know it as *taratoit, salohat, salodap*.[110] In Flores, these flutes appear to be played by women, which is a notable departure from usual custom: throughout the world, these are instruments played only by men.[111] Van der Tuuk, in his *Bataksch Woordenboek* (p. 152a) furnishes the noteworthy information that this also applies to the middle-hole flute used by the Toba Batak. Nowhere have I been able to find a mention of an occasion on which the New Guinea instruments are played or to find out who plays them, and nobody could tell me when I was there. Neither is it known whether, in those few other regions where they occur,[112] these instruments are played by women.

TRUMPETS

XX. *conch shell trumpets*: two kinds are known in New Guinea: one is the *Charonia tritonis,* which is always side-blown[113] (Illustration 20*a*), the other is *Cassis cornuta* which is sometimes side-blown (Illustration 20*c*), but is usually end-blown (Illustration 20*b*). On the island of Yapèn, these conch shell trumpets are called *tabura* or *buro,*[114] and on Biak, *kwur*.[115] The name used at Humboldt Bay is not known.[116]

XXI. *large wooden trumpets*: these come from Humboldt Bay.[117] They are up to 170 cms. in length and often stepped twice, and to play them the proper way demands much effort and experience (Illustrations 21 and 22).

XXII. *bamboo horns*: these are short, are often beautifully carved, or are ornamented with beadwork (Illustrations 23*a* and *b*).[118] None of these wooden and bamboo trumpets have finger-holes.

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[109] Rijksmus. Leiden No. 2380/260; Mus. Arch. Btv. No. 797.
[110] Tr. Inst. Nos. 1027/6, 7 and 14; Mus. Arch. Btv. Nos. 96-100.
[111] Here and there the panpipes are also an exception, see Sachs, loc. cit. p. 49, et seqq.
[112] See Sachs' enumeration, loc. cit., p. 98.
[113] Elsewhere, they are also end-blown, on Enggano, for example; cf. Tr. Inst. No. 1178/1.
[114] Mus. Arch. Btv. Nos. 887 to 898.
[115] Ibid., Nos. 911 and 912.
[116] Ibid., Nos. 908 to 910; Tr. Inst. Nos. 15/389 and 390, 578/24, 666/315-7.
[117] Mus. Arch. Btv. Nos. 913 to 915; Tr. Inst. No. 575/10.
[118] Tr. Inst. Nos. 520/99 (Mapia), 575/10 (Waropèn Coast), 608/71 (Japèn), 13335/63 and 64 (North Coast, without further specification); Batav. Gen. Nos. 18062 (Humboldt Bay), 18281 (Lake Sentani) and 15712/3 (Arso); Ethnogr. Mus. Breda No. 6642 (Arso).

7. THE SOUTH COAST

A. Melody

The Marind-anim (Illustration 24) who, by comparison with other Papuan tribes, are great in number and have a remarkable social organization, have become the best known of all the tribes living in the south of West New Guinea. That they have become so well known is due to the published work of the Roman Catholic missionaries who have lived among them and especially to the Swiss ethnologist Dr. Paul Wirz [119] and his excellent monograph on them. From this material it became clear that in the region inhabited by the Marind-anim there would be a fruitful harvest for the musicologist. Recordings of their songs and their music should, however, be made without delay for old traditions were disappearing rapidly and with them much of the music and the singing associated with certain ceremonies.

Wirz was the last person to do research among the Marind-anim while they were still, relatively, untouched by outside influences. To his great regret, and ours, he was not able to make any recordings. The aftermath of the First World War prevented the necessary equipment being made available to him with the consequence that a number of the musical expressions of these people have been lost to the world. Gone for ever are the days of their singing, for example, of the *ayassé,* the head-hunters' song, and the *gaga* which was connected with the now proscribed *mayo* ceremony which, according to Western ideas, was really a gruesome rite. Wirz did indeed try in the 3rd and 4th parts of his authoritative study, by describing them in detail, to give an impression of the singing and the dances of the Marind-anim, and of the Kanum-anim, a tribe living to the east of the Marind-anim. He also added a number of brief notations (see p. 164 Mes. 83 to 88 in this work), but this made the lack of reliable transcripts from recordings felt all the more.

However, thanks to Father Verschueren, abundant recorded material is now available from this area, and Mr. Soukotta also, has made a collection, by ear, of 24 songs of which the notation gives the impression that it is accurate and can be relied upon. In these recordings and in Mr. Soukotta's notation, with the odd exception, only *gad-zi* of the Marind- and Yé-anim, and *gad-zi* and *itór* of the Kanum-anim are

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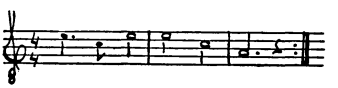
[119] *Die Marind-anim von Holländisch Süd-Neu-Guinea,* Hamburg 1925.

represented, only a part, therefore, of the musical forms at one time common in the Marind region.

Though had there been transcripts of the form of the lament. *yarut*;[120] of the boat song, the *tura-zi*,[121] which was sung to the beat of the paddles striking the gunwales of the canoe; of the *gaga*[122] and the *ayassé;*[123] of the authochthonous Marind-anim feast songs, the *samb-zi, yaba-zi, zi-ha*;[124] the *waiko-zi*;[125] the *suba-miet*;[126] and the *var-ti-zi*;[127] the *sosom* song called *bandra*;[128] and songs by whatever name they were known, it would seem that they would have been less rewarding because, according to Wirz' data, these songs consist of: "...a monotonous chant with alternating raising and lowering of the voice. After one, seldom two, short unaccented syllables there follows one long accented one which always ends in an accented *e* or *a*, or though less frequently, *o*. When the songs are chanted in this way, the voices are lowered gradually until one of the singers starts up again, often an octave higher. Sometimes, several words are strung together without any accent."

Reading that description brings an awareness of the absence of the living illustration that a recording would give for, if it is correct, then those old songs had a character that differed markedly from that of the present *gad-zi* and *itór*. They perhaps leaned towards the Papuan-Australian "Treppen-melos", though the fragment of the *waiko-zi* given by Wirz[129] does not point in this direction because of its pure fanfare form:  neither does his fragment of the *ayassé*:[130] 

I can not resist from quoting Wirz still further: "In general, it can

[120] Wirz, loc. cit., Vol. III, pp. 124 and 130 et seqq.; Vol. IV, pp. 23 and 25; id., *Dämonen und Wilde in Neu-Guinea,* 1928, pp. 121, 224, 280 and 377.
[121] Wirz, loc. cit., Vol. III, pp. 54 and 59; id., *Dämonen und Wilde,* p. 224.
[122] Ibid., Vol. III, pp. 8 and 18; id., *Dämonen und Wilde,* p. 224.
[123] Ibid., Vol. III, p. 55; id., *Dämonen und Wilde,* pp. 224 and 275.
[124] Ibid., Vol. IV, p. 4 et seqq.
[125] Ibid., Vol. IV, pp. 6, and 31 and 33; id., *Dämonen und Wilde,* p. 130.
[126] Ibid., Vol. III, p. 39; id., *Dämonen und Wilde, pp.* 233 and 377.
[127] Ibid., Vol. IV, p. 49.
[128] Ibid., Vol. III, p. 37.
[129] Ibid., Vol. III, p. 31.
[130] Ibid., Vol. III, p. 55.

be said that all the songs of the Marind-anim and the neighbouring tribes are very simple." He goes on to say: "All of them have a primitive scale structure. Seldom does the interval go beyond one full tone and rarely does the compass of a song contain more than one octave. The tempo is usually very slow, all the songs having long drawn-out notes. The *samb-zi* are the only exception. In this form, the tempo continually changes, the words being spoken so fast that only the final vowels of the words are sung.

"A form which has a character totally different from that of these genuine Marind songs is the *gad-zi*. It has considerably more melody, its scale having a larger range.[131] The rhythm of the *gad-zi* is certainly not as simple as that of the Marind songs mentioned in the preceding paragraph. A characteristic of many of the *gad-zi* is their complicated rhythm, a rhythm of which it would be difficult to make a notation. In many of them the drum beat, for example, is slightly slowed down, so that the songs are in effect stretched out, or two drum beats repeatedly follow each other in quick succession. All of this cannot, however, be well described in words.

"The songs having the greatest degree of melody, as well as a strict rhythm, are undoubtedly those known to the neighbouring tribes of the coastal region of East New Guinea as *itór*. The liveliness of these songs also distinguishes them from the Marind songs." [132]

In describing a *samb-zi,* Wirz writes: "It would be futile to attempt to make a notation of this song. It is not just one song; everyone is singing a different one. Yet when it is heard from afar it sounds melodic and is impressive. The song does not start off too quickly; one hears a low oh-oh-oh in between words which are sung or spoken so quickly as to be unintelligible. The tempo gradually quickens, the drums are beaten faster and faster, the speed finally reaching such a pitch that all one hears from them is a roll like thunder. There is no dancing; people just stay the whole night near the fire with the drums in the middle of them but, according to Marind ideas, it is dancing. The beating of the drums, the hair and the festive ornaments flying up and down, all this belongs to the dance (...)."

Futher on, he continues:

"Men who are not on the drums often have a stick, frequently

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[131] As will presently be seen, this last statement is, in general, not quite correct: the *gad-zi* also seldom have a range of more than an octave and frequently do not rise above a fourth.

[132] Wirz., loc. cit., Vol. IV, p. 9.

ending in a phallus, with which they beat out the rhythm on the ground. The tempo decreases to a slow beat. The words are hurled with force at the drums as if to thrash them. In fact, no other musical form of the Marind has so much expression, so many motifs, as the *samb-zi,* so that it is pleasant to listen to it, in contrast to the very melodic *gad-zi,* which however soon become wearisome, and the *yarut,* with its irksome uniformity and solemnity. In the *samb-zi,* there is something for everyone: now the motifs are spirited and lively, now monotonous and grave.

"If one wanted to analyze the *samb-zi* psychologically, one would be confronted with an enigma. Do the motifs express gaiety and merry-making? Hardly! But it is, nevertheless, *the* feast song. It poses as many questions as the psyche of the Marind themselves. They have a capacity for mystification which is such, that often one does not know whether they are speaking of something real or of something imaginary: so also is it with their songs." [133]

In the case of the *samb-zi* especially, it would have been useless to have tried to make a transcript.

Father Verschueren did, however, make at least one recording of a *samb-zi.* The transcript of this fragment, from the vicinity of Okaba, is given in ME. 24. It seems to me, however, that, in principle, it does not differ from the *gad-zi.* Certain it is, that nothing of the "Treppen-melos" (tiled melody) can be detected which, judging from Wirz' description, quoted in the preceding paragraph, could be expected to be the foundation of the old songs. What there is here, however, is another old melodic form, i.e., one which is closely related to that of the fanfare melody of the pygmies of the central range. It differs in that, in addition to the tones of the triad, a fourth and a fifth tone — the major sixth and the major seventh, respectively, occur with the result that the basic scale is as follows: 

Another rarity among the songs recorded by Father Verschueren is a fragment of a lament, *yarut* (ME. 22) also from Okaba. This *yarut* appears to be constructed of fragments of a diatonic scale and has a range of a fifth and contains therefore an interval of a semi-tone, something that is never found in music from the central range. The fragment of a *yarut,* (ME. 88),[134] given by Wirz, is indeed of a

[133] Wirz., loc. cit., Vol. IV, p. 5.
[134] Wirz., loc. cit., Vol. III, p. 130.

different structure, although it, too, has a range of a fifth and the scale — not the melody — consists of an interval of a semi-tone. Here, again, there is no "Treppen-melos".

Although it can be argued that the available transcripts of Marind-anim songs and of songs related to them present a picture that is too one-sided, they do, nevertheless, confirm fully the supposition that this culture of south New Guinea is a mixed culture, one in which cultural elements of the peoples living more to the north, the east and the west have been incorporated. Wirz points this out repeatedly in his observations about ornamentation, among other things.[135] And J. C. Lamster also devoted a treatise to this cultural immigration.[136] From the melodies already discussed and from those yet to be dealt with, there appears, similarly, to be unmistakable outside influence. And, in fact, the Marind-anim themselves are aware that they have taken the *gad-zi* from the Kanum-anim to the east of them, while the *itór,* popular with the Kanum-anim would, according to Wirz,[137] have been taken from the Markai, the Papuan constabulary trained at Port Moresby.

According to Father Verschueren,[138] however, the *gad-zi*[139] did not originate with the Kanum-anim, but its origin must be sought inland on the upper course of the River Fly in East New Guinea, where, as he has seen for himself, the people of the Kuni tribe have a dance which has a striking resemblance to that frequently performed by the Marind-anim to the accompaniment of a *gad-zi,* and have songs which, on their own statement, they compose themselves.

The remarkable fact then presents itself that, despite the quantity of songs of the Marind-anim that have been recorded, there are hardly any recordings or transcripts of the authochthonous songs of these people.

Which melodic forms and what type of scales characteristic of the *gad-zi* and *itór* are there to hand? It has already been stated that in

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[135] Wirz., loc. cit., Vol. IV, p. 7.

[136] J. C. Lamster, 'Beschavingsinvloeden op Nieuw-Guinea', *Tijdschr. Kon. Ned. Aardr. Gen.,* Vol. 42, p. 402 et seqq. Cf. also p. 438, where this author, in a discussion on Frank Hurley's book, *Pearls and Savages,* points out the agreement between the culture of the Marind-anim and that of the inhabitants of the upper region of the Fly River, an agreement which, according to Wirz (Vol. II, p. 25), extends also to the language.

[137] Wirz., loc. cit., Vol. IV, p. 7.

[138] J. Verschueren, 'Zang en dans op Zuid-Nieuw-Guinea', *De Maasbode* of 26 July, 1936.

[139] Father Verschueren writes this word as *ngatzie.*

these songs there is no occurrence of the Treppen-melos, which is characterized by Werner Danckert[140] as *"manlich betont"* (male accented), *"vaterrechtlich"* (patriarchal), such as that found among the tribes of the Van Rees Mts., among the peoples of some of the islands in Torres Strait, and at Beagle Bay in Western Australia. On the other hand, there are among the recordings some, MEs. 44, 52, 85 and 86, in which there is Werner Danckert's pure *"weiblich betonte"*, (female accented) *"mutterrechtliche"* (matriarchal)[141] triadic structure, and others, MEs. 26, 29, 45, 45a, 48, 49, 50, 55, 57, 58, 59 and 60, which, though not exclusively built upon ornamented triads, are for the greater part so formed. Among them there are a few, MEs. 35, 39 and 57, in which there are minor triads, something that is not found in the central range but which does occur in the music of other peoples of the Archipelago who have a negroid strain in them: the Ngada in mid-west Flores, for instance.[142] Such diaphony as does occur occasionally, like that expressed in the Kanum-anim *itór, sakarina ba tarka,* ME. 54, should also be attributed to negroid influence.

Scales which are anhemitonic and that have two,[143] three,[144] four,[145] or five tones,[146] are frequent.[147] In addition, there are also a number of melodies, MEs. 24, 48 and 49, that have semi-tone intervals or would have them did they exceed the octave. A few melodies, MEs. 25, 47, 55, 56, 65 and 77, are even built on a scale in which there are two different semi-tone intervals. The majority of these hemitonic scales are pentatonic,[148] there are also scales that are tritonic,[149] a rather larger number are tetratonic,[150] and a few are hexatonic.[151] Those of the latter containing two semi-tone steps approach the *pelog* system in a remarkable way.

The form of these melodies, however simple, is in many cases so

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[140] Werner Danckert. 'Musikwissenschaft und Kulturkreislehre', *Anthropos* XXXII (1937), p. 5.
[141] Ibid., p. 8.
[142] J. Kunst, *Music in Flores,* 1942, p. 80 et seqq.
[143] ME. 75.
[144] ME. 44, 52, 85, and 86.
[145] ME. 34, 36, 39, 41, 43, 49, 50 , 60, 61, 64, 66, 67, 70, 72, 79, and 83.
[146] ME. 28, 30, 31, 37, 40, 45, 51, 58, 63, 68, 69, 81, and 87.
[147] In this enumeration are also included those melodies which contain these triadic elements, the exceptions being the pure triadic melodies: this also applies to the hemitonic melodies to be discussed shortly.
[148] ME. 22, 24, 25, 27, 29, 38, 42, 47, 54, 55, 62, 65, 71, 73, 77, and 84.
[149] ME. 32.
[150] ME. 21, 26, 33, 45a, 48, 57, 59, 74, 76, 78, 80, 82, and 88.
[151] ME. 23, 35, 46, 53, and 56.

close to Western forms that awareness of it is involuntary: here the melody is minor, or something like it; there, major, or there is a resemblance. But, either because of the paucity of the sound material or because, for us Westerners, the melody wavers between major and minor, there are a large number of melodies which the European ear may not be able to distinguish as being in the one or the other.

As a result of my research, I am of the following opinion: the major-like type dominates, 43 out of the 69. By contrast, there are only eight melodies of a predominantly minor character, MEs. 30, 31, 33, 35, 38, 39, 57 and 88. There are also two, MEs. 32 and 75, in which there are too few tones for the form to be distinguished, and there are a considerable number which, to the Western ear, waver between major and minor. This wavering occurs in two ways. The majority of these songs waver between a major key and its relative minor, MEs. 28, 36, 37, 51, 63, 66, 68, 70, 83 and 87; others, between a major key and the minor of its major upper third,[152] i.e. given in one of the possible notations without accidentals, the structural melodic tones are triadic in the former case:

C E G and a c e

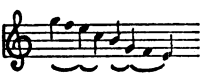
and in the latter:

C E G and e g b.

The basis of these groups of modally fluctuating melodies is, therefore, in both cases, a linking of a major and a minor triad:

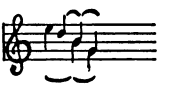
I. a c e g

and II. c e g b

i.e. a series of alternating major and minor thirds. That is the principle. In group I, it is embodied in its purest form in MEs. 36, 70 and 83; in group II, in ME. 59. The remaining melodies of this type, as well as having this chain of thirds, also have one or more other tones. There are also a few melodies in which the position of both triads is reversed; ME. 47:  Either the highest tone of the

[152] In the European tone system we would say the minor of the mediant.

series is placed an ocave lower, MEs. 37 and 40:  or, the

lowest tone, an octave higher, ME. 66: 

There are also melodies, of which the forms in the main do not differ from those just mentioned but in which the dominant mode according to Western ideas, does not waver and where the linking of four major and minor thirds still plays a more or less important role, MEs. 25, 26, 30, 31, 48, 50, 55, 57, 69, 72, 74 and 80. In these melodies, and in others I have indicated these tonal sequences with dotted curves written with the letters *ma*(jor) or *mi*(nor) above or below.

Dr. M. Kolinski found identical forms of melody, based on a "sequence of thirds moving in the same direction" in the material collected by Mr. and Mrs. Herskovits [153] among the Maroons in Surinam: "in several songs, a set of three thirds, and in exceptional cases, even of four, have been linked together moving in the same direction; in such a case, minor and major thirds alternate." The same thing was noticed by W. H. A. van Steensel van der Aa (Will G. Gilbert) in African and Afro-American negro music.[154] Here again, there is a negroid or negrito element. Of the other two characteristic combinations of thirds found by Kolinski in the melody of the Maroons, i.e., the "pendular swing", e.g., a c a c, and the "interlocking thirds", e.g. a c b d c e, the first is also found here and there in Papuan music: examples are given in SPM, Table II, mel β, hereinafter, ME. 42, in $^5/_7$ time and some of the melodies in Part I of Schneider's "Geschichte der Mehrstimmingkeit", which were transcribed by Kolinski.

It was after the foregoing was written that I read Sachs' authoritative study, "The Rise of Music in the Ancient World, East and West" (1943) and was struck by a passage on p. 296 in which he says that: "he has found that — regardless of race and region — there has been an all-embracing European style, neither modal nor pentatonic, but very primitive, though ready in due time to procreate the marvels of western music.

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[153] Melville J. Herskovits and Francis S. Herskovits, *Suriname Folklore,* New York, 1936, Part III: 'Suriname Music', by M. Kolinski, p. 498 et seqq.

[154] Will G. Gilbert, *Een en ander over de negroïde muziek van Suriname,* Amsterdam, 1940, p. 15; id., *Muziek uit Oost en West,* Den Haag, 1942, p. 88.

"This style, utterly different from Oriental styles, ignores the interval of the fourth, indeed the octave itself. Its melodies, rather, fall into patterns of thirds, as do many melodies of North American Indians, Melanesians and Africans, especially African pygmies and their asiatic cousins. From Iceland to the Balkan States, from Sweden to Spain, they consist of single thirds but mostly they jump to another third and yet another; there are melodies of no less than five such thirds of alternately major and minor size, each two of which form a perfect fifth. These thirds are sometimes open, sometimes filled with a note of minor importance."

Sachs then gives a number of striking examples: two Roumanian songs, the first built on one minor third and the second on two thirds; an Asturian song built on a series of three thirds; a Swedish song on a chain of four; and finally, an Icelandic song on one of five thirds.

He further observes: "The thirds, above all the triple third, indicate the structure of an overwhelmingly great number of those medieval melodies which, in Heinrich Besseler's words show that 'strange tonal vagueness that admits an interpretation both as either Dorian or Lydian and as a melodic major'." Precisely, therefore, the same phenomenon I heard when listening to the Marind-anim songs I have been discussing.[155]

It is not possible to say that, in general, the anhemitonic scales are the foundation of the major and major-like melodies and that the hemitonic scales are the foundation of the minor and minor-like melodies. Of the hemitonic melodies, MEs. 22, 23, 25, 26, 27, 29, 42, 45a, 46, 53, 54, 55, 56, 62, 71, 73, 77, 78, 80 and 84, show a more or less pronounced major character; of the anhemitnoic melodies, MEs. 30, 31 and 39, have a pronounced minor character. The range of these melodies, as would be expected, is limited. This becomes clear from the following survey:

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[155] I wonder whether we have here corroboration of the exactness of that mysterious intuitive feeling of similarity, of recognition by recollection, that so many Europeans feel when, unbiased and in spite of the difference in cultural standards and concepts, they come into contact with Papuans, a feeling that they never have for the Malays however strongly they are drawn to them because of their higher culture and forms of social intercourse.

Table II

Range	*type of song*	*anhemitonic: No. of ME.*	*tribe*	*type of song*	*hemitonic: No. of ME.*	*tribe*
minor third	*gad-zi*	75	Marind-a. (Merauke)			
fourth				*gad-zi*	32	Yé-anim
fifth	*gad-zi*	39	Yé-anim	*gad-zi*	21	Marind-a. (Okaba)
	gad-zi	40	Yé-anim	*yarut*	22	Marind-a. (Okaba)
	gad-zi	43	Kanum-a.			
	gad-zi	44	Kanum-a.	*itór*	45a	Kanum-a.
	itór	50	Kanum-a.	*itór*	54	Kanum-a.
	itór	52	Kanum-a.	*yarut*	82	Marind-a. (Birok, near Merauke)
	gad-zi	64	Marind-a. (Merauke)			
	gad-zi	72	Marind-a. (Merauke)			
	gad-zi	79	Marind-a. (Merauke)			
minor sixth				*gad-zi*	55	Kanum-a.
				gad-zi	65	Marind-a. (Merauke)
major sixth	*gad-zi*	37	Yé-anim	*gad-zi*	27	Marind-a. (Bian)
	gad-zi	41	Kanum-a.	*gad-zi*	29	Marind-a. (Kumbi)
	gad-zi	66	Marind-a. (Merauke)	*itór*	53	Kanum-a.
				gad-zi	84	Marind-a. (Merauke)
minor seventh	*gad-zi*	36	Yé-anim	*gad-zi*	38	Yé-anim
	gad-zi	68	Marind-a. (Merauke)	*gad-zi*	71	Marind-a. (Merauke)
	gad-zi	70	Marind-a. (Merauke)			
	gad-zi	83	Marind-a. (Merauke)			
	gad-zi	87	Marind-a. (Merauke)			
major seventh	*samb-zi*	24	Marind-a. (Okaba)	*itór*	48	Kanum-a. (Okaba)
				gad-zi	59	Marind-a. (Merauke)
Octave	*gad-zi*	28	Marind-a. (Bian)	*oad-zi*	23	Marind-a. (Okaba)

Table II - contd.

Range	*anhemitonic:* *type of song*	*No. of ME.*	*tribe*	*hemitonic:* *type of song*	*No. of ME.*	*tribe*
Octave	*gad-zi*	30	Yé-anim	*gad-zi*	25	Marind-a. (Bian)
	gad-zi	31	Yé-anim	*gad-zi*	26	Marind-a. (Bian)
	gad-zi	34	Yé-anim	*gad-zi*	35	Yé-anim
	itór	45	Kanum-a.	*gad-zi*	42	Kanum-a.
	itór	51	Kanum-a.	*gad-zi*	56	Kanum-a.
	gad-zi	60	Marind-a. (Merauke)	*gad-zi*	73	Marind-a. (Merauke)
	gad-zi	61	Marind-a. (Merauke)	*gad-zi*	74	Marind-a. (Merauke)
	gad-zi	63	Marind-a. (Merauke)	*gad-zi*	76	Marind-a. (Merauke)
	gad-zi	67	Marind-a. (Merauke)	*gad-zi*	77	Marind-a. (Merauke)
	gad-zi	69	Marind-a. (Merauke)	*gad-zi*	78	Marind-a. (Merauke)
	gad-zi	81	Marind-a. (Merauke)	*gad-zi*	82	Marind-a. (Merauke)
	gad-zi	85	Marind-a. (Merauke)			
	gad-zi	86	Marind-a. (Merauke)			
minor ninth				*gad-zi*	33	Yé-anim
minor tenth	*itór*	49	Kanum-a.	*itór*	47	Kanum-a.
major tenth	*gad-zi*	57	Kanum-a.	*gad-zi*	80	Marind-a. (Merauke)
	gad-zi	58	Kanum-a.			
eleventh				*itór*	46	Kanum-a.

The majority of these melodies end on the key-note, at least to the Western ear. But, other finals do occur:

Table III

No. of ME.	*if regarded as being in*	*final*
21, 22, 26, 27, 28	F minor	lower 4th
33, 34, 36, 37, 59, 60, 65	G minor	„ „
71, 73		„ „ (actually as if in a myxolydian mode).

Table III - contd.

No. of ME.	*if regarded as being in*	*final*
24, 42, 47, 52, 54, 66	G major	upper 3rd
72	A minor	,, ,,
74	C major	,, ,,
80, 83		,, ,,
51	D major	lower 3rd
63	G minor	,, ,,
68	C major	,, ,,
70	C major	,, ,,
76	G major	,, ,,
81, 87		,, ,,
65	E flat major	lower 2nd

MEs. 45, 53 and 88 cannot be determined because the recording ends abruptly.

Finally, the rhythm. Ternary and binary formations occur with about the same frequency. Often they are found alongside each other in the same melody and it is for this reason that I have sometimes refrained from indicating the metre and have confined myself to placing bar lines where I thought I heard a somewhat accentuated tone.

I have tried to find out whether the specific elements discussed in the preceding paragraphs are also characteristic for certain tribes and regions. In doing so it immediately became apparent that:

(i) all the melodies in the collection which are classified as minor come from the Yé-anim, with the exeption of one or two, ME. 57, and perhaps ME. 88;

(ii) as far as the Yé-anim is concerned, apart from the minor melodies and two doubtful cases, MEs. 32 and 36, there is only one with a pronounced major melody, ME. 34;

(iii) there is one unique case in the Kanum-anim collection of a two-part song, ME. 54. One can agree with Wirz that the Kanum-anim *itór,* MEs. 45-54, are, in general, livelier and melodically more interesting than the songs of the rest of the south of West New Guinea. Among the Kanum-anim songs there is also a greater proportion of melodies with fanfare elements than among those of the other tribes.

I have not otherwise been able discover either in the tonal range, in the number of tones used in an octave, in the use of final tones, in the form, in the use of scales or in the type of metre, a difference that can be regarded as a characteristic: with the exception of the island of the minor-melodies of the Yé-anim area, musically, the whole southern region of West New Guinea is homogeneous.

A simple survey of the scales on which all these melodies are built will be found in Tables IV and V in which I have transposed the scales in such a way that the accidentals could be omitted from the notation. With the hemitonic scales this could be done in the majority of cases in two ways: with the anhemitonic scales, in three.[156] It is remarkable that the notation of all these songs from the south of West New Guinea can be done on the notes of the Western diatonic system, i.e., when more than one semi-tone step occurs in a scale, such semi-tones are always on the fourth-fifth interval.

A short description of each of the melodies that have been discussed now follows. The tempo has only been shown in those musical examples of which I could make a transcription from a good recording and could verify it by comparing it with an earlier one. This also applies to examples from north and central New Guinea. Of those in which no tempo has been given, MEs. 24, 26-28, 30 and 31, are on phonograms of which I do not have a good copy to hand — I had made a transcription of them in Batavia but had not noted down the time. MEs. 59-82 are from Mr. Soukotta's collection and MEs. 83-88 are from Wirz.

MARIND-ANIM

Okaba

Okaba lies in the western part of the territory inhabited by the Marind-anim and is on that part of the coast that, together with the coastal area lying to the east of the Bian River, was occupied by the Marind-anim coming from the east. It is this part of the Marind-anim people which may be regarded as being the carriers of the *mayo* cult.[157] The *gad-zi* called *Wépermai* (ME. 21, phon. 308II): the singing and the words are so clear that I could make a notation and take down the words. Scale: hemitonic/tetratonic.

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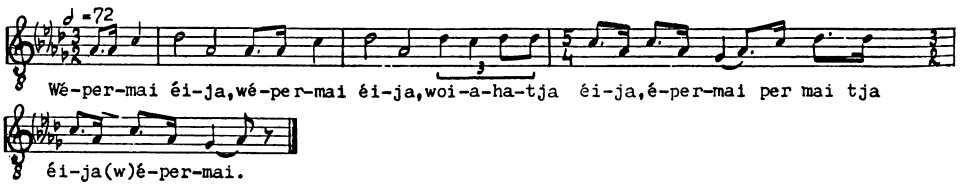
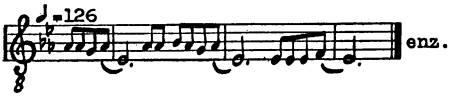
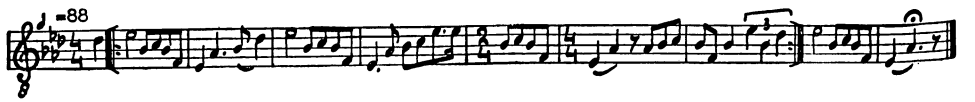
[156] The diatonic scale of ME. 75, even in four different ways.
[157] Cf. Wirz, loc. cit., Vol. II, p. 26.



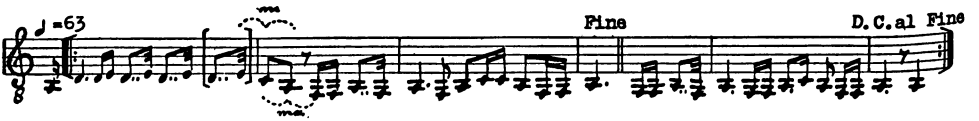
The *yarut* called *Ngandi* (ME. 22, phon. 309II). Scale: hemitonic/pentatonic.



The *gad-zi* called *Aruiam* (ME. 23, phon. 309I), charms with its impression of melancholy longing which is the more strongly expressed by virtue of the really good voice of the singer. This same man sang the previous song ME. 22. Scale: hemitonic/hexatonic.



A *samb-zi* fragment (ME. 24, phon. 309III): sung by the same singer as on phons. 309I and II. Scale: hemitonic/pentatonic.



These four songs from Okaba have a pronounced major character.

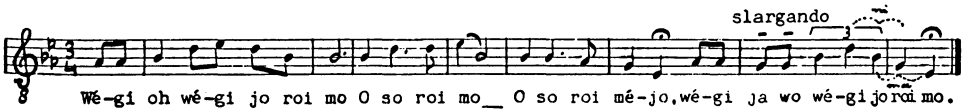
The Bian Region

The basin of the Bian River would appear to have been populated by a first wave of Marind-anim emigrants earlier than the rest of the area they inhabit today. According to Wirz,[158] these Bian Marind-anim differ markedly from the rest of the Marind-anim in their myths as well as in their language, and in their secret societies also. They show some affinity with the Yé-anim, who live on the upper course of the Maro River, with whom they are on friendly terms.

The *gad-zi* called *wégi oh,* (ME. 25, phon. 308I): sung for Father Verschueren by a small group of young men. The pentatonic scale

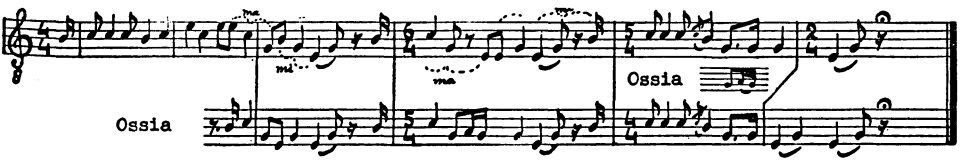
[158] Wirz, loc. cit., Vol. II, p. 26.

makes an impact because of the two semi-tone intervals which make for a resemblance to the *pelog* system.

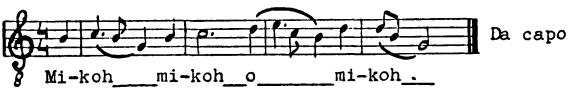


Mr. Soukotta also made a notation of this *gad-zi,* ME. 76, which is without doubt the same as that of ME. 25 though rhythmically it is different and in addition, by the occurrence of a second semi-tone interval (in ME. 25), there is some difference in the tone scales, but otherwise it is the same.

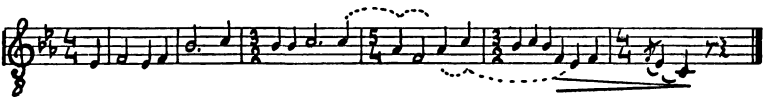
The *gad-zi* called *kombuire* (ME. 26, phon. 308III), displays clear fanfare elements which point in a northerly direction. Scale: hemitonic/tetratonic:



The *gad-zi* called *mikoh,* (ME. 27, phon. 311III):



and the *gad-zi* called *rikes* (ME. 28, phon. 311IV):

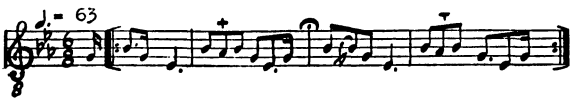


come from the upper Bian, the region above all others of the *imo* cult, and were sung by a man from the village of Kapevako. Both these melodies, though brief, also have that singular melancholy, unmistakably musical, that might be said to be characteristic of so many Marind-anim songs. The scales of both are pentatonic, but ME. 27 is hemitonic, while ME. 28 is anhemitonic.

The first three of the Bian songs are in a major key. The melody of ME. 28 wavers between tonality and mode. Initially, the impression is that it is in A♭, though the F♯ in the third bar suggests F minor.

The Kumbi region

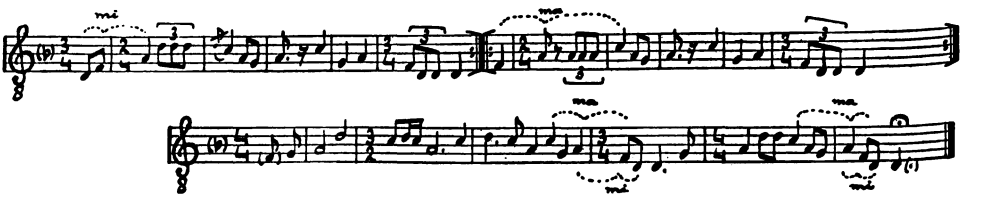
There is only one song, *aira savia,* from the people of the Kumbi River, which flows into the sea to the east of the Bian. This song, ME. 29, phon. V 18c, was recorded in the village of Wéyaw. It, also, contains fanfare elements. Scale: hemitonic/pentatonic. Mode: pure major.



THE YÉ-ANIM (YÉ-NAN)

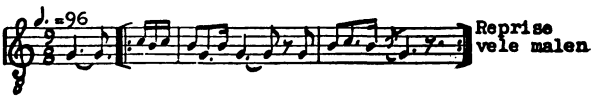
The Yé-anim are neighbours of the Marind-anim and inhabit a region to the north-east of them on the upper course of the Maro River. Examples of their songs are given in MEs. 30 to 40. I have already observed that the great majority of Yé-anim songs differ from those of the Marind- and Kanum-anim by being in the minor key.

MEs. 30 and 31 (phon. 311[I] and [II]); from the village of Bupul in the far north, begin with the words *élésok* and *manadèk oh,* respectively, and bear a marked resemblance to each other. They may be regarded as two variants of the same melody. Their scale is the same: anhemitonic-pentatonic. Mood: minor.

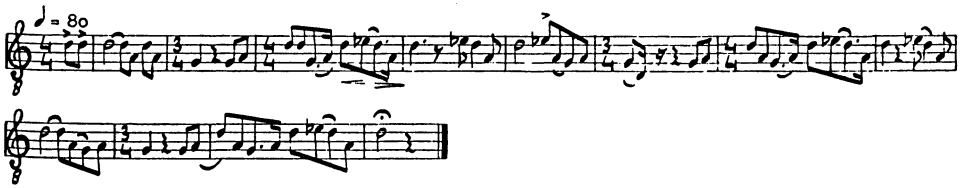


MEs. 32 to 36 are examples of songs from Erambu, a settlement in the south and one of the villages inhabited by the Fé clan.

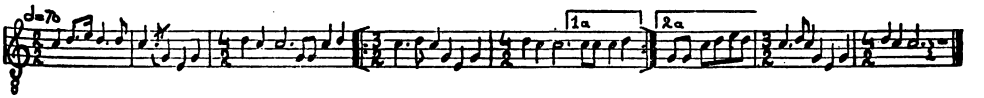
ME. 32 (phon. V. 10a). The words of this song are: *ngaroh, ngaroh nbungaroh nguroh.* The mode can not be determined because of the paucity of the sound material, Scale: hemitonic/tritonic.



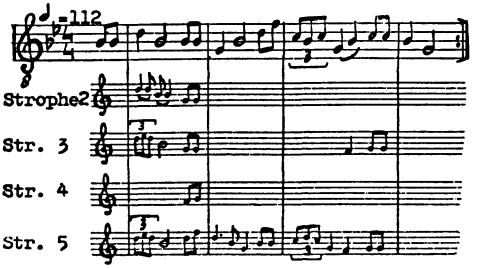
ME. 33 (phon. V 11a), opening with the words *gia sobogya,* is also in a minor key. Scale: hemitonic/tetratonic.



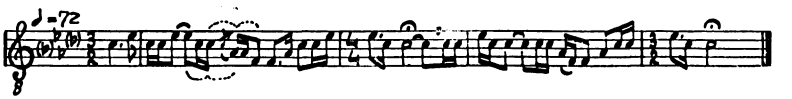
ME. 34 (phon. V 12b), beginning with the word *yakyaké,* is an exception, being unmistakably in a major key. Scale: anhemitonic/tetratonic.



ME. 35 (phon. V 11b), is again a melody in a pure minor key. The opening word is *sasaérah.* Scale: hemitonic/hexatonic.

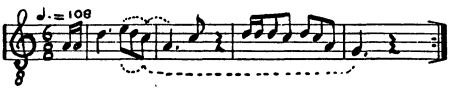


ME. 36 (phon. V 12a) is called *Bosam.* Scale: anhemitonic/tetratonic. This melody, too, wavers between a major key and its minor parallel.

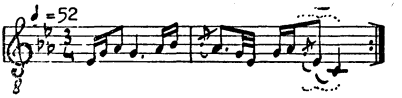


Three songs, MEs. 37 to 39, and one instrumental melody come from the village of Donggiap in the south-west of the Yé-anim area. Two of these songs are in a minor key, while the third, ME. 37, and the instrumental melody, waver between a major key and its minor parallel.

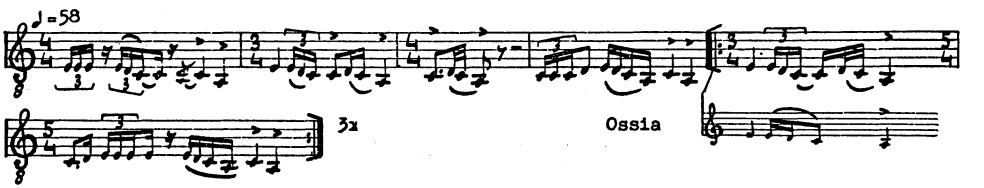
ME. 37 (phon. V 15a) has the opening words *karamdé awakwah.* Scale: anhemitonic/pentatonic.



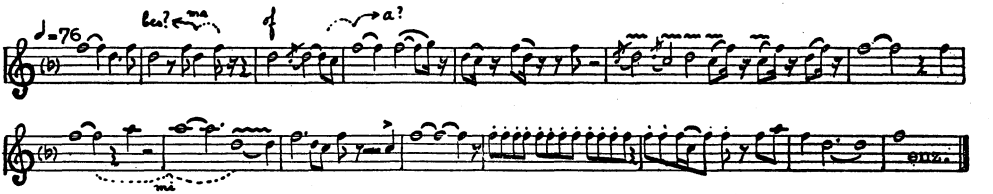
ME. 38 (phon. 16) is called *Binasakop*. Scale: hemitonic/pentatonic.



ME. 39 (phon. V 15b) has the opening words *obadobon gareh*. Scale: anhemitonic/tetratonic.



ME. 40 (phon. V 13) is a very accurate rendering of a flute solo. The flautist was a man of 45, by Papuan standards, therefore, an old man.



A melody such as this is played on a flute having only one finger-hole. The flautist, as well as producing the full tones, presumably makes use of the technique of overblowing and an occasional half-stopping of the finger-hole to produce the right tone. By further stopping of the open end, whereby the flute becomes virtually a closed pipe, he probably obtained one or more extra tones. In no other way would it be possible for him to produce five different tones in one octave on a flute with only one finger-hole. Scale: anhemitonic/pentatonic.

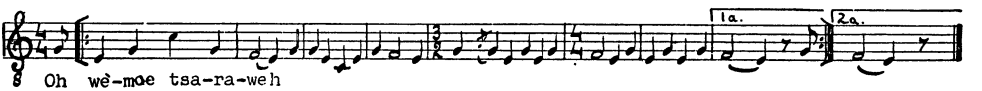
THE KANUM-ANIM (KANUM-IREBE)

The Kanum-anim tribe lives on the coast between Merauke and the frontier between East- and West New Guinea. The tribe was formerly rather considerable but as a result of the incessant head-hunting raids made by the stronger Marind-anim during the years preceding the intervention of the Dutch Government, it has been gradually decimated and now consists of only a few hundred people.

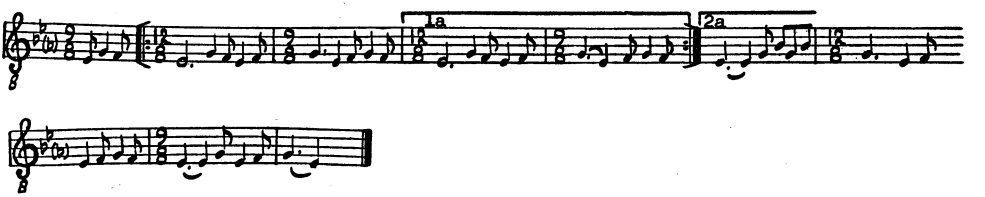
A series of the songs of these people has been recorded consisting of *gad-zi,* MEs. 41 to 44 and 55 to 58, and *itór,* MEs. 45, 45a and 46 to 54. If a comparison be made between the two groups, it is the *itór* with their liveliness and variety that score over the *gad-zi.* Wirz has already been quoted (p. 138) with regard to the possibility of their having originated in the Port Moresby area.

ME. 41 (phon. 310[I]), is a melody with a short anhemitonic/tetratonic scale. Like the three *gad-zi* following, it was sung by the chief of the village of *Yangandur.* The opening words are: *uhé tobowari.*

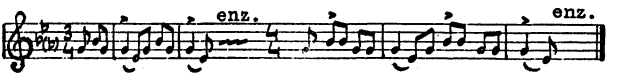
ME. 42 (phon. 301[II]). The opening words are *oh wému tsarawéh.* When the grace note is included, the scale is hemitonic/pentatonic. The melody is hardly attractive; it might be described as being a school song which has misfired. For the rest, bars 5-7 are interlocking thirds as noted earlier, a characteristic of the negroid music.



ME. 43 (phon. 310[III]), has the opening words *oh psamaka tjaéla.* It has a short but lively undulating anhemitonic/tetratonic melody.



ME. 44 (phon. 310[IV]), has the opening words *oho watsi ketsyiel.* It belongs to the fanfare melody group. Only the three tones of the triad are used.

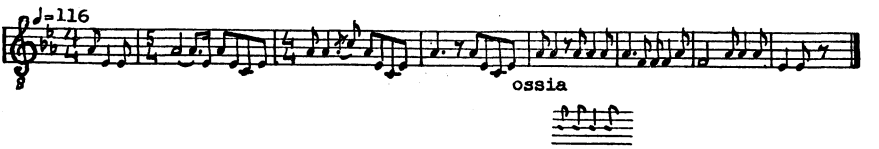


The following *itór* are not only more lively than the foregoing but their form is also more protracted.

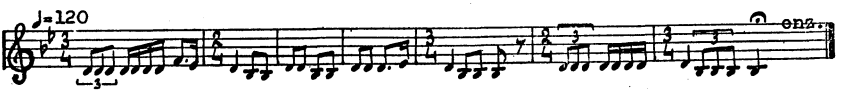
ME. 45 (phon. V 4b), also displays the fanfare formation. The text of the song reads:

kule kule kule
kule yegitareh (bis)
watwatah
téikimaréka
yéki yéki yéki taré

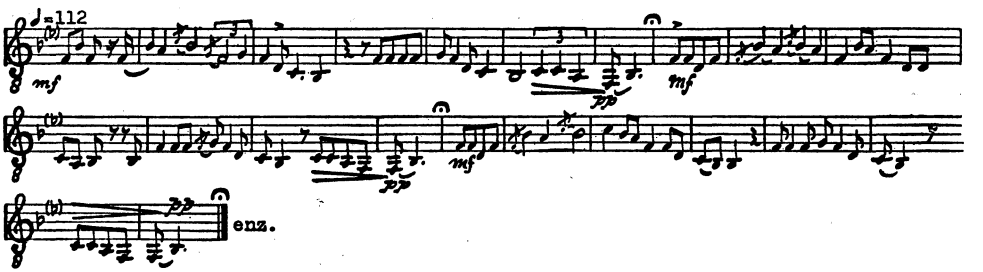
Scale: anhemitonic/pentatonic.



ME. 45a (phon. V 1b), has also a fanfare texture but is less varied than ME. 45. The opening words are: *yani sangrané.* Scale: hemitonic/tetratonic.



ME. 46 (phon. V 1a). The melody is repeated three times, each time with a slight variation. Each time the sound of the voice is rather strong at the start but almost disappears at the end of the phrase. Scale: hemitonic/hexatonic.

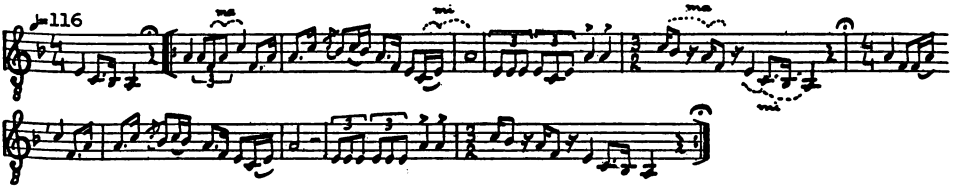


The text reads:

Watimitiah
wé maripah
kolé kissareh
wetnapa kiwareh
taramasintaï
watimaripah
tatamitiah.

Note the varying rhymes.

ME. 47 (phon. V 4a) is one of the melodies which has a pronounced *pelog* character. Indeed, its agreement with a melody from Bali that I noted down is conspicuous. This latter melody was sung for me by the then punggawa of Ubud, Tjokorda Gdé Raka Sukawati, the President of the former state of East Indonesia. A part of this melody is given here for comparison.

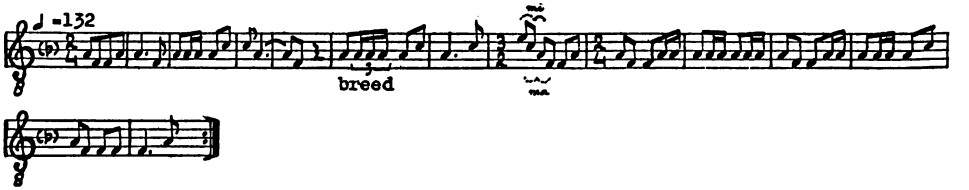


Bali:

In both cases, the scale is hemitonic/pentatonic and wavers between the major key and the minor of its upper third. The text of the Papuan song reads:

Kol kolle kollelah
ngéikara piah
ngéikara taiorah
ngéikarah
sangralélèwamah
balélé mawéh.

ME. 48 (phon. V 5a), is a spirited dance rhythm and also has a fanfare style. Scale: hemitonic/tetratonic.



The text reads:

Nékaré
sénéga ngéikaré
ahwitawima ngéikaré
télinga rekes
sételingawéh.

ME. 49 (phon. V 5b), also has a fanfare form. The text is as follows:

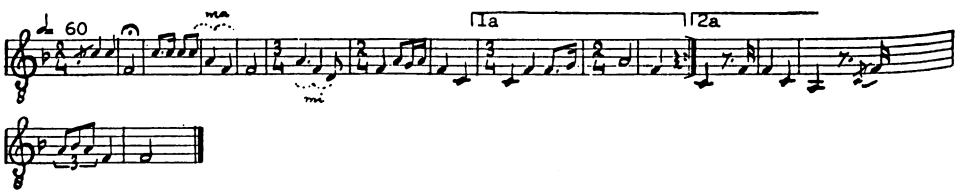
Ah koléh
ah mata roputah
ah lékvké
lepurkéké léném
maino maino
sia karéh.

+) This half bar is only sung the first time.

= =) This bar is only sung the second time.

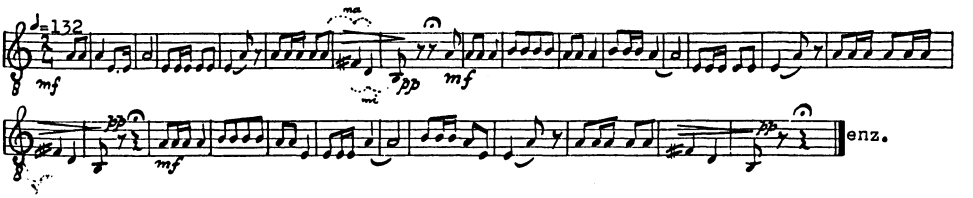
ME. 50 (phon. V 7a), also has a suggestion of fanfare form, though less so than in MEs. 48 and 49. The text, rhyming here and there, reads as follows:

Hai manulaki
iewasasinuah
hai sita kolélah
mba muyowéh
hai mbanopowéh
hai turumba
muyowéh
hai saki saki
mbainoréh
hai turumba
muyowéh



MEs. 49 and 50 have an anhemitonic/tetratonic scale. ME. 51 (phon. V 6a), and ME. 52 (phon. V 7b), also make use of an anhemitonic scale: tritonic and pentatonic, respectively.

ME. 51 again wavers between a major key and its minor parallel. The same melodic phrase occurs three times with small variations. As with ME. 46, each phrase starts rather loudly and becomes very soft at the end.



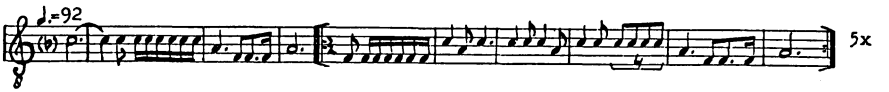
The text reads:

Hai yeino seengrie
yeino keirah
kaminakarah
hayun ungapa
kapu teika
yeino pu tairéh.

ME. 52 also displays pure fanfare melody. The text is as follows:

Kupé katalmiawéh
éh masaheinoréh
aih kupéka, saka sinuéh
kupé kataléma wéh.

The rhyme is unmistakable.



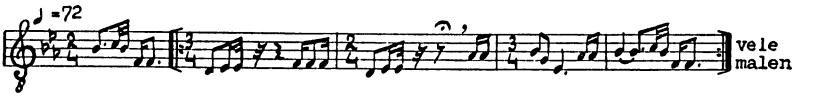
The two remaining *itor,* ME. 53 (phon. V 9) and ME. 54 (phon. V 8), differ from those already discussed. The first by its remarkable rhythm, which might be called 'breathless', and the other by its polyphony.

ME. 53 was sung by five men and boys in strict time. Scale: hemitonic/hexatonic.

The text reads as follows:

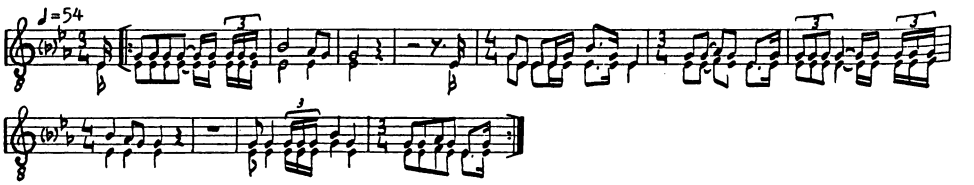
Ayayoh
luparéyoh
ayayoh
luparéyoh
tula leimikara
lantu lantu.

ME. 54: sung polyphonically by the same singers as ME. 53: mainly major and minor thirds, but here and there fourths and fifths occur. Scale: hemitonic/pentatonic.



The words are as follows:

Hai sakarina
batarkaämi
hami
naga kupagakah
hai lakimariakah
hai sapasinu.

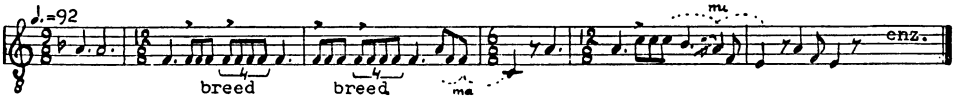


Similar polyphonic music is not known from elsewhere in West New Guinea, apart from the two-part singing I have noted on Waigéo,[159] though it does occur among different tribes more to the eastward. Schneider gives some examples of it, two of them being songs recorded by Landtman from the Island of Kiwai in the estuary of the Fly River;[160] one more argument for the easterly origin of the *itór*.

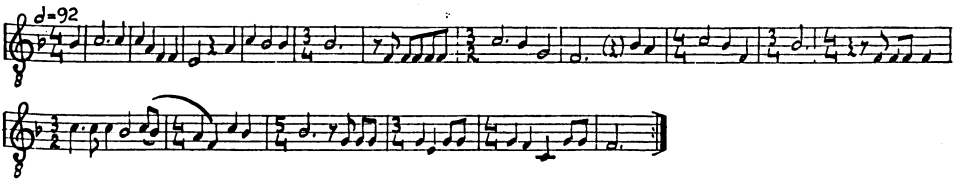
There are still four *gad-zi* from the same region. Father Verschueren took down neither the texts nor the opening words.

ME. 55 (phon. V 19), displays fanfare elements, but in addition, there are two semi-tone steps: the scale is, therefore, pentatonic.

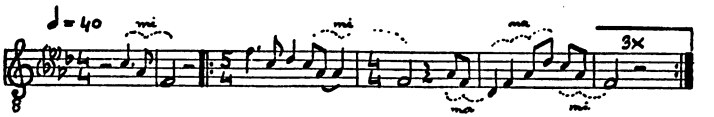
[159] See p. 26 ad phon. K 300.
[160] *Geschichte der Mehrstimmigkeit* I, Mels. 65 and 66.



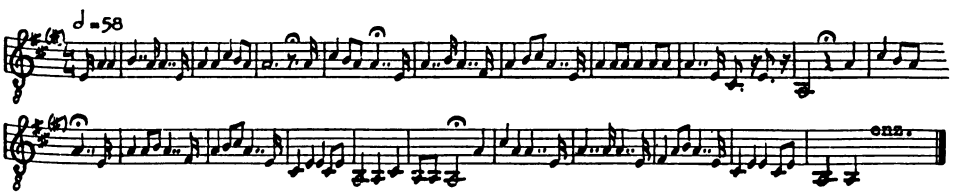
ME. 56 (phon. V 20), is built on the same scale as ME. 55 with the difference that one of the two intervals of thirds is filled with a tone, with the result that the melody must be classified as hemitonic/hexatonic. In this melody, in contrast to the preceding one, there is nothing fanfare-like at all; the melancholy longing in the melody is striking (see also MEs. 23, 27 and 28).



ME. 57 (phon. V 24b), also shows fanfare elements but this could be interpreted as being the result of the presence of a chain of negroid thirds. In addition, apart from the melodic scheme of ME. 88, which is suggestive of the minor mode, the melody of ME. 57 is the only song in a minor key in the collection reproduced here from outside the Yé-anim area. Scale: hemitonic/tetratonic.



ME. 58 (phon. V 21b). This melody, with its lively character, could well be an *itór*. The fanfare element is pronounced, though the insertion of two tones that do not belong to the triad, make the scale anhemitonic/pentatonic.



In these Kanum-anim melodies, the major key predominates. Only ME. 57, as already noted, is in a minor key and ME. 47 is characterized by a wavering between major key and the minor of its upper third. This would also be shown in ME. 48 but for the fact that the highest tone in this melody, E, occurs only once and is of little consequence, with the result that the tones C and A retain their dependence on the tonic F and do not, together with the E, crate the atmosphere of a minor key.

THE MARIND-ANIM

Merauke

There are 24 songs from the Merauke area of which the notation was made by Mr. Soukotta.

The introductory note to his collection gives the impression that it contains exclusively *gad-zi* sung by the Marind-anim. That the *gad-zi, wégi yo,* (ME. 76), is also sung in the upper Bian region (see ME. 25) is not in conflict with this idea because the Bian people are reckoned as belonging to the Marind-anim, though to an older group of emigrants.

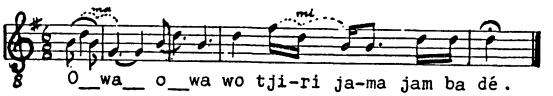
When comparison is made between the songs collected by Mr. Soukotta and those transcribed from Father Verschueren's recordings, those of the former are, in general, more simple and more regular in their form. This might be attributable to the fact that Mr. Soukotta had to rely on his ear and his skill in notation and would, therefore, have done the more simple *gad-zi.* It is not possible to say in how far his notation has been unconsciously 'corrected' as a result of his knowledge of Western music.

The great majority of the songs are written in a ternary metre: only MEs. 68, 74 and 77 are wholly binary; MEs. 72, 73 and 75, are partially so; and MEs. 71 and 78 are binary except for one bar in ¾ time. The scales are tetratonic or pentatonic, except ME. 75, which has only two tones. The hemitonic and the anhemitonic are represented almost equally, 11 as against 13, respectively. Most of the melodies are pure major; only MEs. 63, 66, 68 and 70 waver between a major type of tone and the minor of its upper third; [161] MEs. 69, 72 and 74, though not displaying a wavering of tonality, appear, nevertheless, to

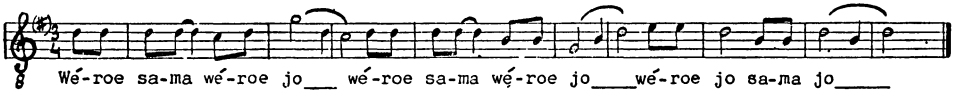
[161] That Me. 78, unlike MEs. 76 and 82 which make sole use of the same scale, is not considered as tonally neutral is due to the fact that there the *F♯* is simply felt as the leading note to the key note *G* and not as the fourth of the great upper third *B*.

be built on a series of alternating major and minor thirds. Mr. Soukotta was able to take down the texts of all his songs.

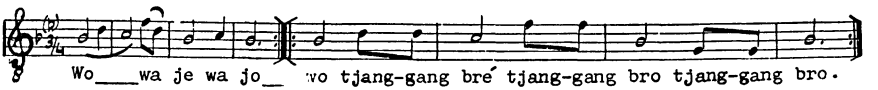
ME. 59.



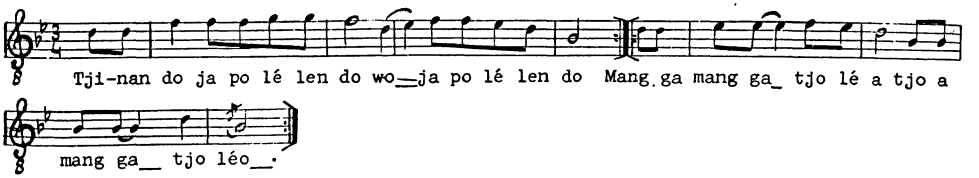
ME. 60.



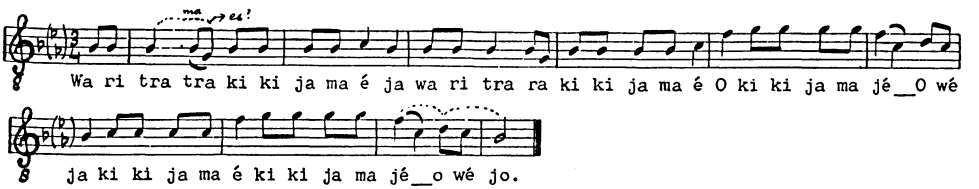
ME. 61.



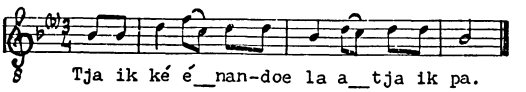
ME. 62.



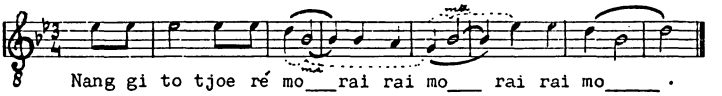
ME. 63.



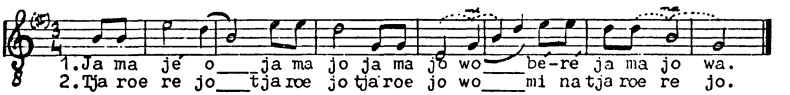
ME. 64.



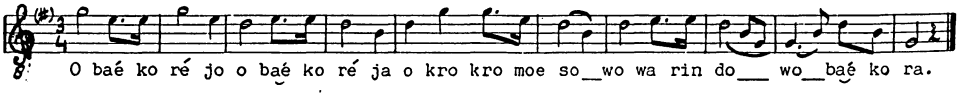
ME. 65.



ME. 66.



ME. 67.



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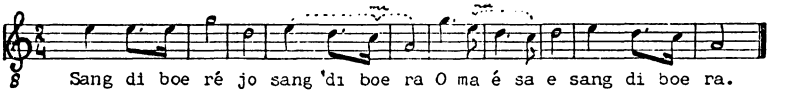
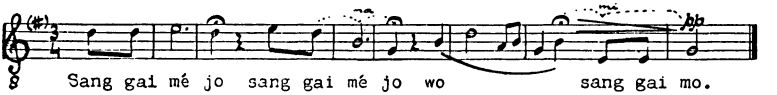
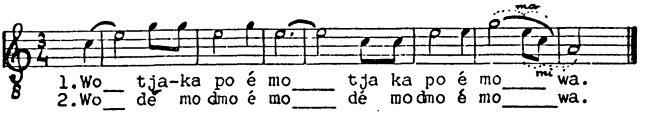


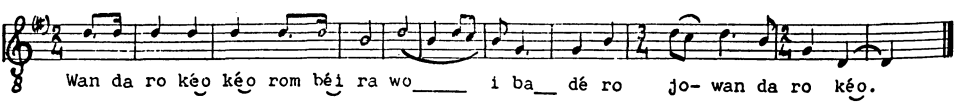
ME. 69.



ME. 70.



ME. 71.



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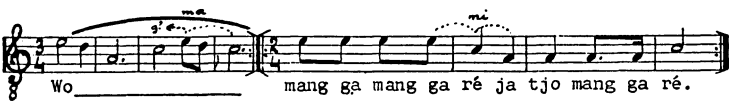

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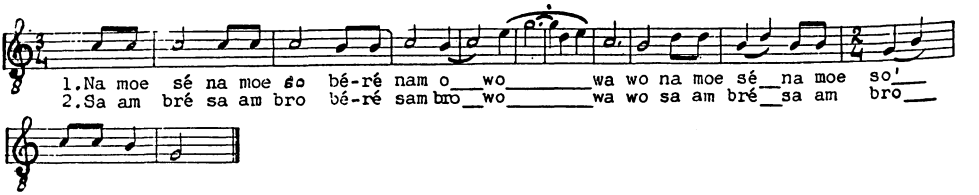

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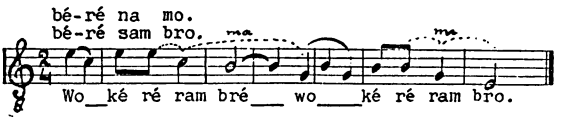

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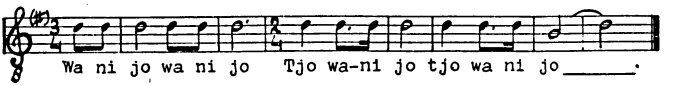

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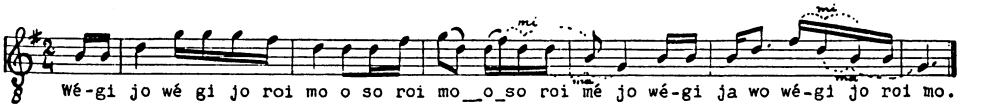
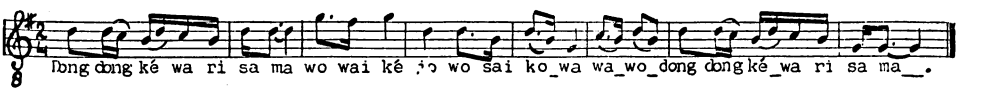
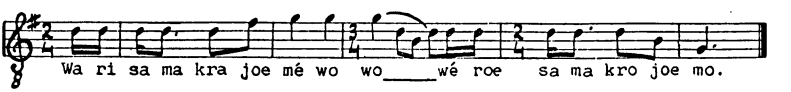


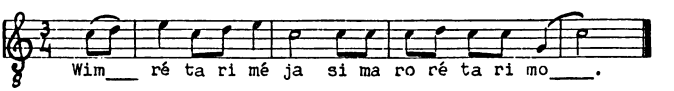
ME. 77.



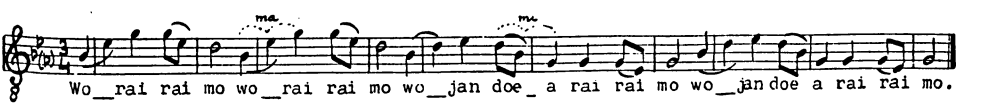
ME. 78.



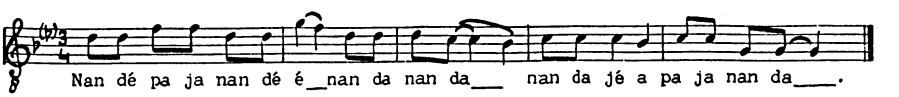
ME. 79.



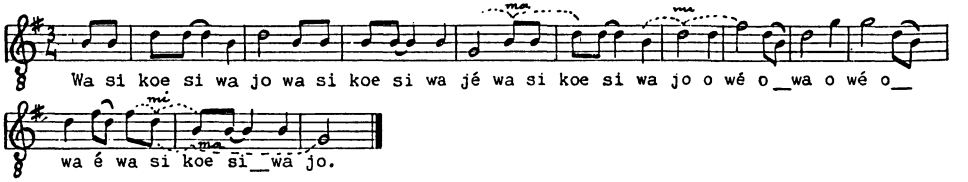
ME. 80.



ME. 81.



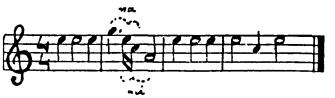
ME. 82.



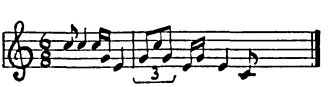
There are also six fragments of songs, MEs. 83 to 88, to be discussed which Wirz included in his book.

Both the hemitonic and the anhemitonic are represented. There are two songs, MEs. 85 and 86, of which the scales are tritonic; two, MEs. 83 and 88, are tetratonic; and two, MEs. 84 and 87, are pentatonic. MEs. 84, 85 and 86 are major in character; ME. 88, minor. MEs. 83 and 87 waver between a major mode and its minor parallel. ME. 88 is (the outline? [author's query] of) a fragment of a *yarut.* lament. (This has already been mentioned on p. 138).

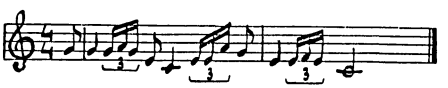
ME. 83.



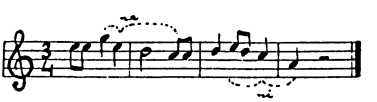
ME. 86.



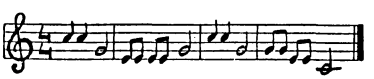
ME. 84.



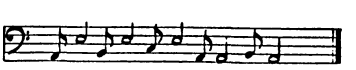
ME. 87.



ME. 85.



ME. 88.



To sum up:

1. at the present time, fanfare melody in its purest form is found most commonly in the western part of the central range, but, as has been said earlier, it has prevailed over a far wider area. This hypothesis is strengthened by the fact that the Marind- and Kanum-anim songs whether they are pure, or whether they are mixed with other elements, display ornamented triads in their construction, as do some of the songs from the Sepik area; [162]

[162] Schneider, *Geschichte der Mehrstimmigkeit* I, Mels. 61 and 64.

2. the anhemitonic tetratonic and the anhemitonic pentatonic scales occupy an important place in the music of the east [163] as well as of the north and south of New Guinea. Werner Danckert couples the use of these scale forms, as well as the fanfare melody, with a matriarchial culture; [164]

3. the Papuan-Australian "Treppen-melos" of which the existence could be confirmed in the Van Rees Mts.,[165] and here and there on the north coast,[166] does not, apparently, occur in the central range and the south, at least, it has not emerged from the transcripts of the recordings now available. However, the possibility that it was once known in the southern part of the island must be taken into consideration, while Wirz' description of the impression which the *samb-zi* made on him (see pp. 137-138) can, without doubt, be interpreted as leaning towards "Treppen-melos";

4. the use of the hemitonic scale can be ascribed to contact to the westward (Indonesia) as well as to eastward (Melanesia).

B. The Musical Instruments of the South Coast

The south of New Guinea, it seems to me, is richer in the variety of its musical instruments than the north or even the west of the island.

IDIOPHONES

I. *clappers*: Marind-anim, *sing-sing*; sometimes made of lobsters' pincers, or shells: usually of shells of fruit. Apparently found everywhere.[167]

II. *bronze bells*: with china tongues (Indonesian influence): (one example) found in the Mimika region.[168]

III. *rubbing instruments*: Mimika region; consist of bones which are notched transversely; or of carved gourds,[169] used for holding lime, against which the spatula used to handle the lime is rubbed.

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[163] Cf. the publications mentioned in a. and d. in note 25 above.

[164] Werner Danckert, *Musikwissenschaft und Kulturkreislehre*, p. 5; id., 'Der Ursprung der halbtonlosen Pentatonik', *Mélanges offerts à Zoltán Kodály à l'occasion de son soixantième anniversaire*, 1943, p. 9.

[165] SPM, p. 8 [= p. 7 above], et seqq.

[166] Songs of North New Guinea, p. 7 [= p. 88 above], Nos. 2 and 3.

[167] Wirz. loc. cit., Vol. IV, p. 60 et seqq.

[168] Coll. Bat. Gen. No. 14110.

[169] A. F. R. Wollaston, 'An Expedition to Dutch New Guinea', *The Geograph. Journal* XLIII (1914), p .270.

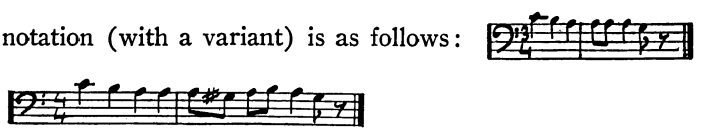
IV. *spears*: (Illustration 25) : [170] used during the dance as a rhythmical accompaniment: found along the entire south coast.

V. *slit-drums*: a hollowed-out tree trunk; exclusive to the upper course of the Digul River.[171]

VI. *jew's harps*: Marind-anim,[172] *zimbombo*; [173] Tapiro.[174]

VII. *sand drums*: (*sa-kandara*) : noted by Wirz among the Marind-anim. These sand drums are made in the following way: two children, starting at a little distance from each other, dig down into the sand and scoop out a hole below the surface. The tunnels made by their digging are left open. To produce the sound, the area between the two openings is struck with the flat of the hand at a point just above the cavity; a sound like a muffled drum beat is the result. Wirz [175] gives a clear description and a sketch of a sand drum.

VIII. *pairs of bamboo internodes* (*nakok*). The striking of bamboo internodes against each other plays an important role at the *ezam* feast, a feast held on the upper course of the Bian River. Wirz,[176] in describing this ceremony speaks, mistakenly, of drums, but from his very clear definition of the instrument there seems to be no doubt that his drums are these bamboo internodes. They are 60 cms. to 70 cms. long, open at one end and closed at the other with a wooden plug. They are used in pairs and are struck together. Wirz states explicitly that it is the closed ends that are struck against each other. Is not this a 'slip of the pen'? Bamboo instruments such as these sound infinitely better when they are held at the closed end and struck against each other at the open end. In the Bian region, they provide the accompaniment to an extremely monotonous but very moving chant of which Wirz' notation (with a variant) is as follows:



[170] Tr. Inst. among others, Nos. 26/642, 644 and 645, 1468/50a/c (Merauke), A 1715c, 34/69 and 70 (Casuarina Coast), 276/1 (Lorentz River), A 315d, 1094/1 (Oost Bay), A 1715a/b and 1468/51 (Digul). See also H. W. Fischer, 'Ethnographica aus Südwest-Neu-Guinea', *Nova Guinea* VII (1923), plates XXIII and XXIV.

[171] Wirz, *Dämonen und Wilde in Neu-Guinea*, 1928, p. 91.

[172] Wirz, *Die Marind-anim*, etc., Vol. I, p. 84 and Tafel XXV, fig. 2.

[173] Communication from Father Geurtjens.

[174] A. F. R. Wollaston, loc. cit; C. G. Rawling, *The Land of the New-Guinea Pygmies*, 1913, pp. 258-9 and 274.

[175] Wirz, *Die Marind-anim*, etc., Vol. I, p. 80.

[176] Ibid., Vol. III, p. 40 et seqq.

IX. *pounding tubes.* On the basis of a report from M. A. de Kock on the pygmies of Mt. Goliath in which he says: "In the course of the singing, rhythmical, short muffled sounds were made, probably on bamboo containers," [177] it can perhaps be assumed that this tribe uses the pounding tubes.

CHORDOPHONES

X. One type of chordophone is known. This instrument has presumably come to the south coast from the Sepik region. The Marind-anim have a one-stringed musical bow.[178] A toy bow usually serves for the purpose. It is held between the teeth, the string being struck with a small stick, the area between the bow and the string acting as a resonance chamber. Beaver [179] and Landtman [180] mention that the same toy-instrument is used on the Island of Kiwai in East New Guinea.

MEMBRANOPHONES

This form of musical instrument is found everywhere, especially one-headed hour-glass drums.

XI. The most widely distributed type is the Marind-anim *kandara* (Illustrations 26 and 28), which has superseded other related forms, such as the Yé-anim drum.[181]

The Marind-anim drum has a narrow and cylindrical waist from which it widens towards the two ends. A handle, forming a rectangle is set in the middle part. The size of these drums varies from some decimeters to more than one and a half metres. The skin used is that of the iguana, *minyawak,* or the kangaroo. The Yé-anim drums, *tempai, teruar,* do not have a cylindrical middle part but a waist from which the two ends gradually spring. This is also the case with other drums from the south (Illustrations 14*a-f* and 27). The handle on a Yé-anim drum is considerably smaller than that on a Marind-anim drum.

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[177] M. A. de Kock, 'Eenige ethnologische en anthropologische gegevens omtrent een dwergstam in het bergland van Zuid-Nieuw-Guinea', *Tijdschr. Kon. Ned. Aard. Gen. XXIX* (1912), p. 159.

[178] Wirz, loc. cit., Vol. I, p. 84; cf. also: id. 'Beiträge zur Ethnographie des Papua-Golfes, Britisch Neu-Guinea', *Abhandl. und Ber. der Museen für Tierk. und Völkerk. zu Dresden,* Bd. XIX (1934)

[179] W. N. Beaver, *Unexplored New Guinea.* 1920, p. 178.

[180] G. Landtman, *Ethnographical Collection from Kiwai-district of British New Guinea,* 1933, p. 48.

[181] Wirz, *Die Marind-anim,* Vol. I, p. 83. A drawing of it is to be found in: Tafel XXV, fig. 5.

The hour-glass drums of the people of the Mimika- and Lorentz Rivers have drumheads which are larger and wider than the base of the drum. This is in contrast to the Marind- and Yé-anim drums, of which the conical drumhead and base are the same size.

Father Geurtjens gives a detailed description of the way in which the Marind-anim make their drums. The result, obtained with the primitive means at their disposal, merits unreserved admiration. Father Geurtjens says:[182] "I had often wondered how these people were able to make their drums with their clumsy tools and were able to hollow out the hour-glass shape so neatly. I had no opportunity to find out along the coast because the drums are made in the hinterland and are traded there.

"The drums are made from the wood of a tree with a soft heartwood. A piece of the trunk is trimmed into the rough shape of a drum. One end is hollowed out a little and the piece of wood is then stood upright, the hollowed-out end uppermost. The lower end is stuck in the ground sufficiently to prevent its falling over. The hollowed-out end is then filled with water which is constantly and carefully replenished. Under the action of the water, the soft heartwood quickly begins to rot. The softened parts are then removed. When half of the cavity has been rotted away in this manner, the piece of wood is then reversed and the same thing is repeated at the other end. This process enables the innermost part to be pushed through with a piece of hard wood or a piece of bamboo. The result is a channel running through the length of the piece of wood. This channel is then widened by firing, the heat being regulated by bellows and the inside is scraped with shells and pigs' tusks. Internodes of bamboo are also made to explode in the cavity — if sound internodes of bamboo are held in a fire they burst open with a mighty bang. This is intended as sympathetic magic, the object being that the drum will produce a loud sound. When the required internal cavity has been obtained, the outside of the drum is then worked with an adze and finished off: carving is then done with pigs' tusks.

Some very beautiful photographs of south-coast drums are given by H. W. Fischer in his 'Ethnographica aus Südwest-Neu-Guinea'.[183]

The hour-glass drums of the people of the Mimika are called *imi*

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[182] H. Geurtjens, 'Uit het moderne stenen tijdperk', *Cultureel Indië,* V (1943), p. 107/8.

[183] *Nova Guinea,* Vol, VII (1923), plates XXI and XXII.

or *ta'impe*: the people of the Lorentz River region call their drums *kiendo.*

The skin on the drumhead of the hour-glass drums of the south coast and of the Mimika (Illustrations 14*a-f,* 26, 27 and 28), is glued to the body of the drum. The skin on the drumhead of west coast drums, on the other hand, is often kept stretched by a ring of cane. In the extreme west of New Guinea the cane ring is used in combination with wooden wedges (Illustration 13*a*). This combination of a cane ring and wedges is the method used of old in Indonesia for tightening the skin.

The Marind-anim use a mixture of lime, blood and urine to make the glue to fix the skin to the drumhead. The blood is sometimes that of an animal, but in most cases it is obtained by making an incision, with a sharp piece of bamboo, in the glans of the drum's owner. The Marind-anim believe that a drum of which the skin is glued with such a glue will make a particularly clear sound and will create a strong reaction in the women. A number of tiny balls (Illustration 27) are usually to be found on the drumhead — or traces of them are — placed evenly in a square. These balls are made of the viscous substance which a particular kind of spider secretes in its abdomen for making its web. Skins are frequently seen with a square consisting of three rows of three of these tiny blobs or four rows of four. Their function is to improve the sound.

In the event of the skin becoming slack during the playing of the drum, the right tension is again obtained by warming it over a fire. A photograph showing this being done is given in "l'Orient", 1939, November 11th, No. 45, p. 27 but the plate is not sharp enough to be reproduced here.

XII. Beaker- and cylindrically shaped drums [184] predominate in the Triton Bay and Etna Bay area further to the west; they are also found in the Digul River region.[185]

AEROPHONES

These instruments are found in the south, among them being various kinds of flutes. There, however, they are not 'holy' like some types found on the north coast and here and there on the north-east coast of East New Guinea.

XIII. *flutes.* A flute used on the Eilanden-, Lorentz- and Noordwest

[184] SPM, map.
[185] Wirz, 'Beiträge zur Ethnographie des Papua-Golfes', p. 45/6.

Rivers consists of an internode of bamboo perforated at both ends, or completely open at one end and perforated at the other; it has no finger-holes and is end-blown.[186]

XIV. The Marind-anim have a flute, with no finger-holes, which is side-blown; it must therefore be closed either by the node, or with a plug, at the end closest to the blowing hole.[187]

XV. The same tribe also have small bamboo signalling flutes,[188] stopped, or open, at the lower end; nothing is known about the form of the mouthpiece. It is probably played according to the 'house key' principle, i.e., like the panpipes.

XVI. They also have another kind of flute made from a long thin bamboo internode. The bottom end is stopped with a plug. It is split along its entire length and strips of bark are wrapped tightly round it. The sound it produces is unpleasant and cracked.[189] This flute, called *haupa,* is regarded as the younger sister, *déma-nakari* of the *sosom,* the bullroarer, and is played together with the latter during the *sosom* ceremony.

XVII. The Yé-anim use a rather long and slender bamboo flute which has one finger-hole and is end-blown.[190]

XVIII. Flutes have also been noted among the people on the coast opposite Frederick Hendrik Island; the peoples of the Noord- and Noordwest Rivers;[191] and among the people on the south coast of MacCluer Gulf (Goras),[192] but no indications have been given regarding their form or the way in which they are played. The Noord River is another name for the Lorentz River and there is, therefore, a possibility that these flutes conform to the type discussed in XII. An example of Yé-anim flute music is given in ME. 40.

XIX. *panpipes.* The panpipes, in a rather degenerate form, just reach West New Guinea at Merauke.[193] It is not possible to say whether this instrument reached the Marind-anim via the south coast or whether, once again, it must be regarded as having come from the Sepik region.

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[186] Coll. Bat. Gen. Nos. 16461 and 13874-7.
[187] Wirz. *Die Marind-anim,* Vol. I, p. 84; Coll. Bat. Gen. No. 14023.
[188] Wirz, loc. cit., Vol. I, p. 84.
[189] Wirz, loc. cit., Vol. III, p. 37.
[190] Tr. Inst. Nos. 1328/1 and 2.
[191] J. S. A. van Dissel in: *Tijdschr. Kon. Ned. Aardr. Gen.* XXIV (1907), p. 1026.
[192] *Verslag van de militaire exploratie van Nederlandsch Nieuw-Guinea 1907-1915,* 1920, p. 329.
[193] Wirz, *Die Marind-anim,* etc., Vol. I, p. 84 and Tafel XXV, fig. 1. See also SPM, pl. XIII, fig. 57.

Certain it is that not only the tribes from the basin of the Sepik [194] but also some of the mountain tribes living on the boundary between the Territory of Papua and the Territory of New Guinea [195] use the panpipes, so that this cultural possession could well have travelled along an overland route. It should be noted, however, that the panpipes from central New Guinea have eight pipes, of which four are closed and four open, whereas the Marind-anim panpipes only have four pipes, all of which are open at the bottom. But the tribes living on the coast more to the east also have panpipes which are not identical to those of the Marind-anim. The panpipes of the former have more pipes, at least six,[196] sometimes seven [197] and even eight.[198] [199]

Other aerophones found in the South of West New Guinea are:

XX. *trumpets*: end-blown wooden trumpets of a more or less conical shape (Illustrations 20*c* and 30) are found over the entire area: on the upper Digul, where they are known as *kindet*; [200] among the Wani-anim, where they are called *buge*; [201] and in the Mimika region.[202] [203]

XXI. *bamboo horns*: these are blown at one end.[204] They are found

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[194] Cf. O. Schlaginhaufen, 'Eine ethnographische Sammlung vom Kaiserin Augusta-Flusses in Neu-Guinea'. *Abhandl. K. Z. A. E. Mus. Dresden* XIII (1910), p. 35; F. von Luschan, 'Zur Ethnographie des Kaiserin Augusta-Flusses', *Baessler Archiv I* (1911), p. 111, fig. 20; R. Neuhauss, *Deutsch Neu-Guinea,* 1911, I, p. 315; O. Reche, *Der Kaiserin Augusta-Fluss,* 1913, p. 425.

[195] J. C. Hides, *Papuan Wonderland,* 1936, pp. 93 and 204.

[196] Fly-river: L. M. d'Albertis, *New Guinea,* 1880, Vol. I, fig. 9 opposite p. 305; S. Baglioni, 'Ein Beitrag zur Kenntnis der natürlichen Musik', *Globus* XCVIII (1910), p. 265, figs. 15 and 16; Kiwai (estuary of the Fly): G. Landtman, *The Kiwai Papuans of British New Guinea,* 1927, p. 47 and fig. opposite p. 45.

[197] Naiabui, opposite the island of Yule: L. M. d'Albertis, loc. cit., p. 395.

[198] Wirz, 'Beiträge zur Ethnographie des Papua-Golfes', p. 47 (with fig.).

[199] With regard to the distribution of the panpipes in the Indian Archipelago, see my *Music in Flores,* p. 152 et seqq., and for its distribution outside the archipelago: Curt Sachs, *Geist und Werden der Musikinstrumente,* p. 49, et seqq.

[200] Mus. Arch. Btv. Nos. 924 and 925; Coll. Bat. Gen. Nos. 1478b and 14796.

[201] Mus. Arch. Btv. No. 926.

[202] Tr. Inst. No. 1091/62.

[203] For the wooden trumpet in East New Guinea see C. G. Seligmann, 'Note on a Wooden Horn or Trumpet from British New-Guinea', *Man* XV (1915), p. 22 et seqq.; W. N. Beaver, 'A further Note on the Use of the Wooden Trumpet in Papua', *Man* XVI (1916), p. 23 et seqq.; E. W. Chinnery, 'Further Notes on the Use of the Wooden Kipi Trumpet and Conch Shell by the Natives of Papua', *Man* XVII (1917), p. 77.

[204] The bamboo trumpets of the Sepik, by contrast, are side-blown. See, e.g., Ernst Fuhrmann, *Neu-Guinea,* 1922, p. 103.

on the Noord- of Lorentz River where they are known as *phie* or *pfia*[205] (Illustrations *23c* and *29a*); in the Mimika region;[206] among the Tapiro pygmies, and at Oost Bay.[207] These instruments also appear to be used as lime throwers and, in addition, it is even suspected that they are used as a kind of tobacco pipe. Some have fine carving on them.[208]

XXII. *shell trumpets*: have been noted at Kaimani in the south-west and in the entire region of the Gulf of Papua[209] in East New Guinea.

XXIII. *ocarinas*: made of a coconut with a defective form[210] (Illustration 31); the blowing hole is at one end; half way along the shell there is a finger-hole.

XXIV. *bullroarers*. In Indonesia, the bullroarer has degenerated into a child's toy almost everywhere it occurs.[211] In New Guinea it still retains its old function of being the voice of the spirit.[212] The Papuan bullroarer (Illustrations 32 and 33) is lancet-shaped (in cross-section, slightly convex on either side) and it usually has carvings of primitive figures on it. It varies in size, the type most frequently found being approximately 40 cms.[213]

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[205] Mus. Arch. Btv. No. 923; Tr. Inst. Nos. 1091/62 and 63. Cf. SPM, p. 66/7 [= p. 48-49] and H. W. Fischer in: *Nova Guinea* VII (1913), p. 133 and plate XXII.

[206] A. F. R. Wollaston, *Pygmies and Papuans,* 1912, p. 143.

[207] Tr. Inst. Nos. A 518a-c.

[208] W. Joest, 'Waffe, Signalrohr oder Tabakspfeife?', *Intern. Arch. für Ethnogr.* I (1888), p. 176 et seqq.; J. C. van Eerde, 'Kalkblazen', *Tijdschr. Kon. Ned. Aardr. Gen.* XXII (1909), p. 639; De *Zuidwest-Nieuw-Guinea-expeditie,* 1908, pp. 69, 602, 626, et seqq., pl. XI, fig. 468; Nova Guinea VII, p. 134, No. 1430, pl. XXII, fig. 11.

[209] Wirz, 'Beiträge zur Ethnographie des Papua-Golfes', p. 47.

[210] Tr. Inst. Nos. A 559 and H 1143; Col. Bat. Gen. Nos. 3262 and 13661. Cf. Wirz, *Die Marind-anim,* etc., Vol. I, p. 84 and Tafel XXV, fig. 3 and 4; SPM, p. 68 [= p. 49 above].

[211] Cf. Kunst, *Music in Flores,* 1942, p. 158. There is an exception in the case of the Minangkabau (or at least there was until recently), see J. L. van der Toorn, 'Het animisme bij den Minangkabauer der Padangsche Bovenlanden', *Bijdr. Kon. Inst.,* Vol. 39 (1890), p. 55; and for some Dayak tribes (among others, the Kayan), see Hose and MacDougall, *The Pagan Tribes of Borneo,* Vol. II, 1912, p. 23.

[212] Otto Zerries gives a general survey of the distribution and use of the bull-roarer in his book *Das Schwirrholz,* Stuttgart 1942. Details about New Guinea and the surrounding islands are on pp. 41-83.

[213] Cf. Wirz, *Die Marind-anim,* etc., Vol. III, pp. 37/8 and 44, et seqq; id., 'Beiträge zur Ethnographie des Papua-Golfes', p. 90, et seqq. and Tafel XXII.

According to Wirz, it undoubtedly came into West New Guinea from the eastern part along with certain secret rites. From the Kanum-anim, the Marind-anim have, for example, taken the *sosom* feast, at which a bullroarer shaped like a fish,[214] plays an indispensable role as the voice of the *sosom* giant.[215] And this whole feast and the myths associated with it show a striking conformity with the initiation ceremonies and sagas of the Bukaua, Yabim and Tami in East New Guinea.

The Marind-anim call the bullroarer *sosom, tepo-anim* [216] or, depending upon the kind of palm tree from which it is made, *gongai* or *arib*.[217]

On the upper Bian, the dwelling place of the descendants of the first immigration wave of the Marind-anim, the bullroarer formed an integral part of the horrible *ezam* ceremonies. The bullroarers used at these ceremonies were often very large.[218] They were divided into *ezam* = male, and *uzum* = female.[219]

Bullroarers are not known to the Yé-anim but they do occur on Komolom Island and Frederick Hendrik Island and also on the upper *Digul*.[220]

XXV. *buzzing nuts*: used by the Marind-anim.[221] This instrument is a small nut with carvings on it and has openings which, as producers of sound, bear the same relationship to each other as the nostrils and mouth. A string is attached to one of the 'nostrils' and with it the instrument is whirled around and makes a buzzing sound. A similar instrument is also known in the delta country, the coastal area formed by the mouths of the Fly, Bamu, Kiki and Purari Rivers.[222]

XXVI. *buzzer*: made of the leaves of the coconut palm. This is a peculiar toy-instrument closely related to the bullroarer in the sound it produces and in the way it is used but quite different in shape and in

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[214] Tr. Inst. No. 520/74.

[215] The Kanum-anim in their turn apparently took it from the Keraki tribe dwelling to the east of them, who call the bullroarer *sosa,* and which also represents the voice of a giant. This giant, also called *Sosa,* is comparable to the *Sosom* of the Marind-anim. See F. F. Williams, *Papuans of the Trans-Fly,* Oxford 1936, p. 18.

[216] For the meaning of this term see: Wirz, *Die Marind-anim,* Vol. III, p. 36.

[217] Wirz, loc. cit, p. 45.

[218] Wirz, loc. cit., p. 41. Pictures also in Hans Nevermann, 'Die Kanum-irebe und ihre Nachbarn', *Zeitschr. für Ethnologie,* Vol. 71 (1939), p. 55, fig. 46.

[219] Wirz, loc. cit., p. 45.

[220] Wirz, loc. cit., p. 46.

[221] Schmelts, 'Beiträge zur Ethnographie von Neu-Guinea', *Intern. Arch. für Ethnogr.* XVI (1904), p. 224.

[222] Wirz, 'Beiträge zur Ethnographie des Papua-Golfes', p. 47.

the material used to make it. It consists of a short stick with a small flat square made of split leaves of the coconut palm on the top part of it; one of the points of the square being at the top of the stick. The strips of leaves are so positioned, that on each side of the square they are parellel to, and spaced apart from, each other thus forming a series of squares with a square. When it is waved about in the air it makes a buzzing sound similar to that of the bullroarer but of less volume. Wirz gives a description of this instrument but it is none too clear; fortunately, however, he provides a sketch of it which does away with the obscurity in the description.[223]

The subject of Papuan music is one on which more could have been said; it just depends upon the point at which one desires to stop. The function of the singing and of the musical instruments in the social system of these tribes and in their religion could have been dealt with in detail, but then a description of every aspect of their life could not have been avoided. Consideration of the ornamentation on flutes, drums, trumpets, dance spears, etc., might have produced startling results bearing on cultural influence and origins. I have, however, preferred to work within narrow limits in order not to lose myself in fields in which such excellent research has been done by others more competent than I and which belong to cultural anthropology in general rather than to comparative musicology in particular.

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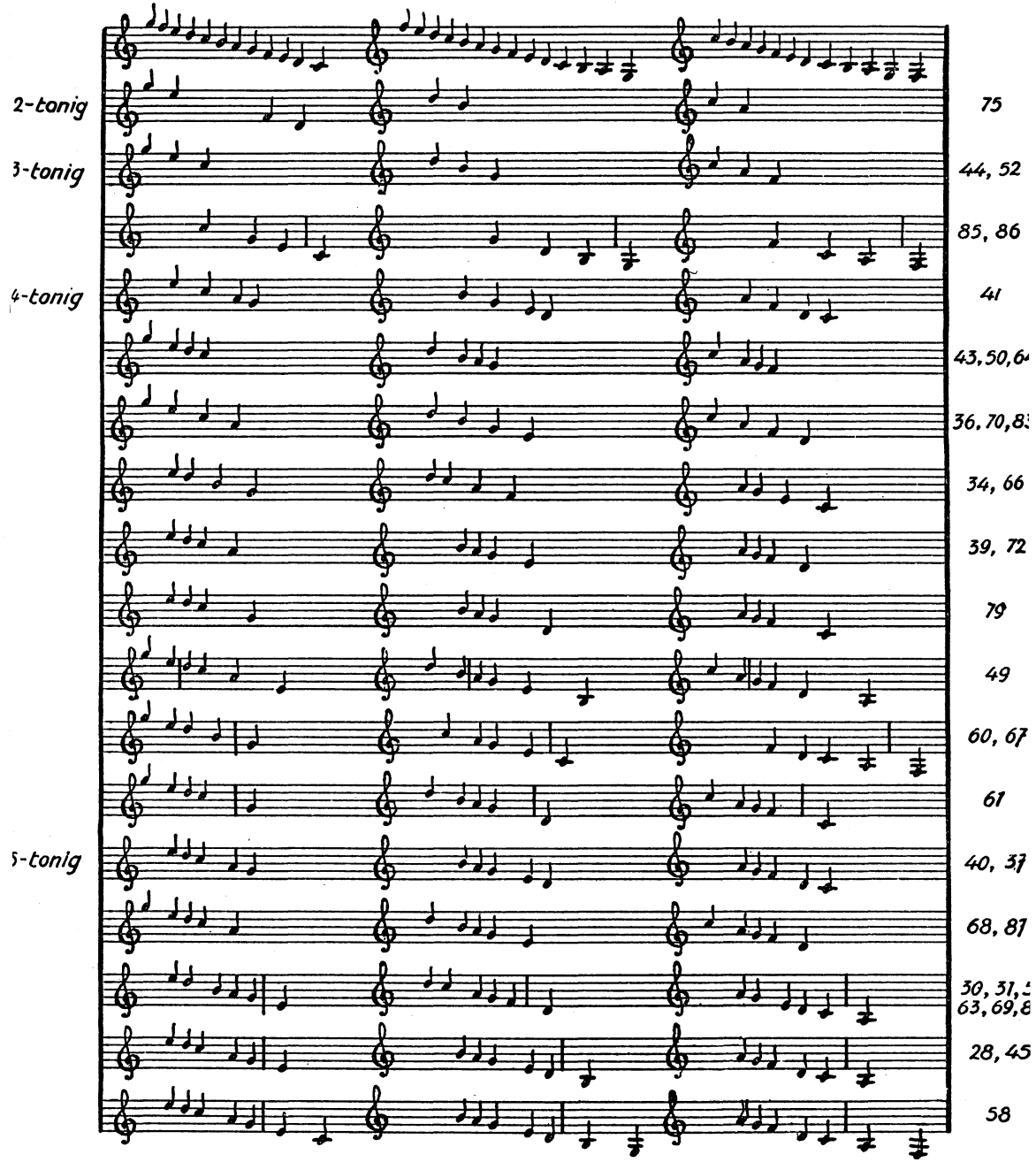
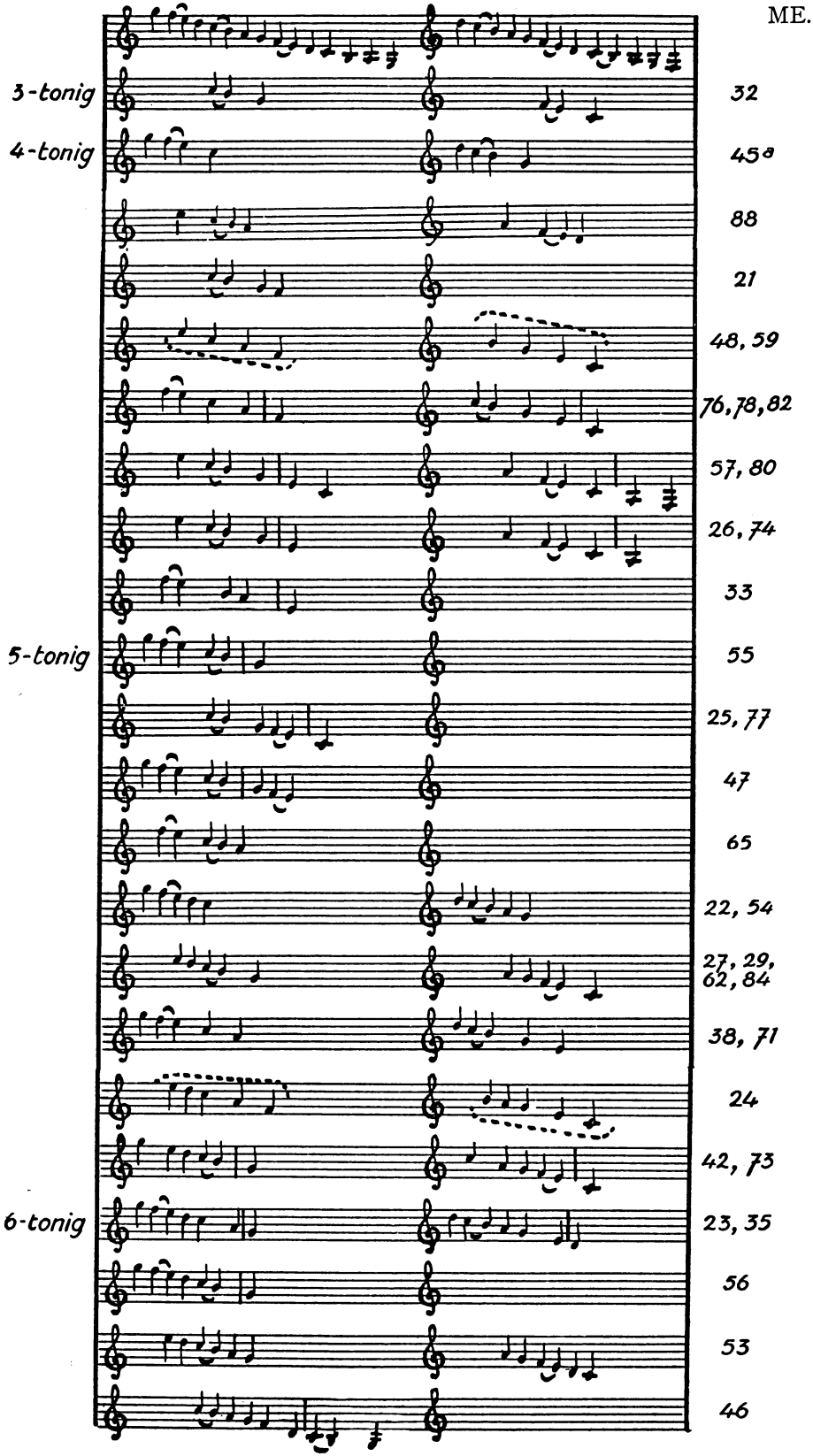
[223] Wirz, *Die Marind-anim*, Vol. I, pp. 81/2 and fig. 5.

Anhemitonic scales from western South New Guinea [1] ME.



[1] The no. 34 placed alongside the 8th bar should be placed alongside the 10th.


3-tonig
4-tonig
5-tonig
6-tonig
32
45a
88
21
48, 59
76, 78, 82
57, 80
26, 74
33
55
25, 77
47
65
22, 54
27, 29, 62, 84
38, 71
24
42, 73
23, 35
56
53
46

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RECORDS

Wattle Recs. Archive Series 2: MX 165/166 An Introduction to the Music of New Guinea. 30 cm. 33.

BAM EX 294(M) Nouvelle-Guinée 17 cm. 45.

BAM EX 612(M) Nouvelle-Guinée No. 2: Sépik 17 cm. 45.

Note:

Father Verschueren deposited three magnetic tapes with Marind-anim music in the Ethnomusicological Archives of the Institute of Musicology, University of Amsterdam (cat. nrs. A 21-1/3). These tapes, recorded by him in 1962/3, contain samples of *gad-zi, samb-zi, yarut,* and other ceremonial music. Tapecopies can be abtained on request under certain restrictive conditions.

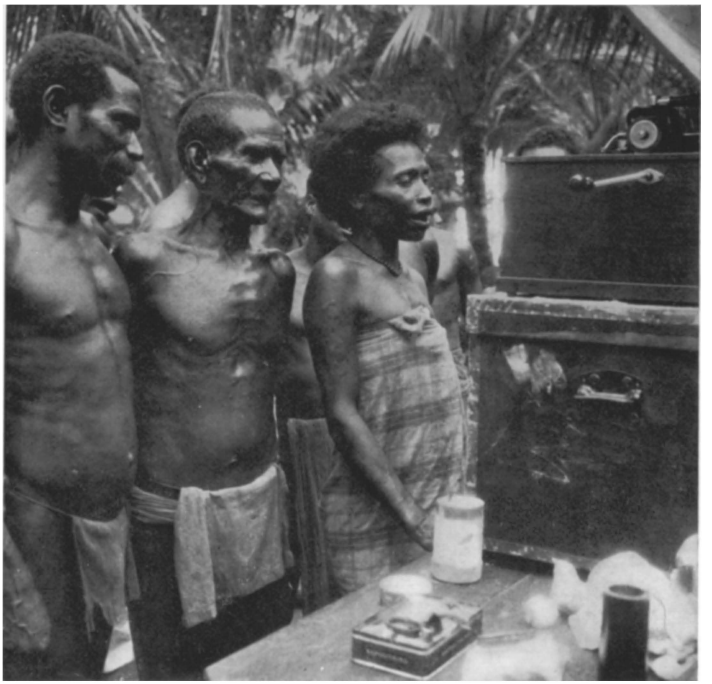


Photo Kunst

Illustration 1. Singing in front of the phonograph at Urbinasopen, on the Island of Waigéo.

Photo Kunst

Illustration 2. Men's dance at Manoi (an island opposite Sorong, north-west New Guinea).

Photo Kunst

Illustration 3. Men's dance at Manokwari.

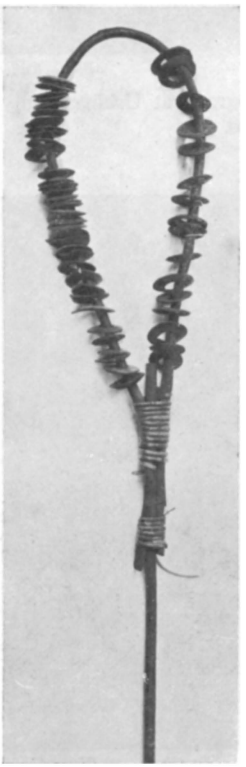


Photo Trop. Inst.

Illustration 4.
Shark sistrum
from Biak (Trop. Inst.,
No. 43/68).

Illustration 5.
Shark sistrum from
Biak (Mus. Arch. Btv.,
No. 856) after a drawing
by M. Pirngadie.

g *f* *e* *d* *c* *b* *a* *Photo Trop. Inst.*

Illustration 6. Jew's harps. *a.* from Waigéo (Trop. Inst., No. A 2234a); *b. c.* (with case) from the Awèmbiak tribe, central range (Trop. Inst., No. 514/233); *d, e.* from the Kapauku tribe, central range (Trop. Inst., No. 1298/100a/b); *f.* from Humboldt Bay (Trop. Inst., No. 16/543); *g.* from Lake Sentani (Trop. Inst., No. 574/34).

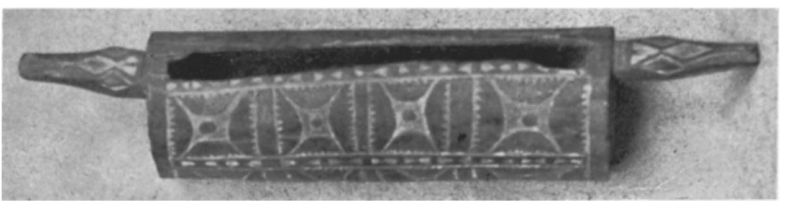


Photo Schoolmuseum

Illustration 7. Split drum from Humboldt Bay (Schoolmuseum, No. 47.484).

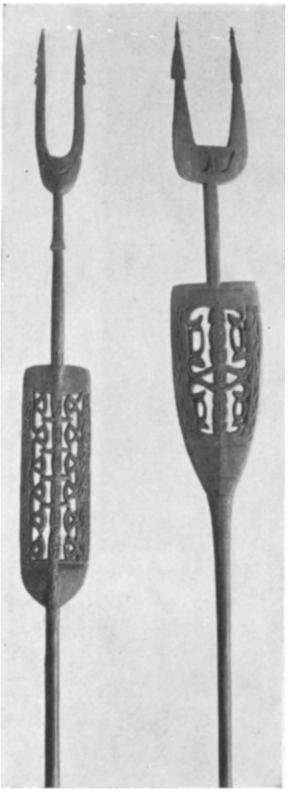


Photo Trop. Inst.

Illustration 8.
Spears used during the dance, north coast (Trop. Inst. Nos. 1335/115 and 1325/117).

a b c d e f g h

Photo Trop. Inst.

Illustration 9. Staffs used during the dance. *a.* and *b.* from Yapèn (Trop. Inst., Nos. 608/104-105); *c, d.* from Humboldt Bay (Trop. Inst., Nos. 573/53-54); *e, f, g, h.* from Lake Sentani (Trop. Inst., Nos. 746/25, 19, 24, 17).

Photo Trop. Inst.

Illustration 10.
Drum from the Island of Yapèn.

Photo Trop. Inst.

Illustration 11. Drums from the Waropèn coast.

Photo Schoolmuseum

Illustration 12.
Waisted drum from the Island of Wakdé (Schoolmuseum, No. 47842).

a *b* *c* *d* *e*

Photo Trop. Inst.

Illustration 11. Types of drums. *a.* from the western part of the Vogelkop (Trop. Inst., No. A 5368); *b.* from Yapèn (Trop. Inst., No. 608/69); *c.* from Humboldt Bay (Trop. Inst., No. 716b); *d, e.* from Lake Sentani (Trop. Inst., Nos. 44/6 and 746/15).

a *b* *c* *d* *e* *f* *g*

Photo Trop. Inst.

Illustration 14. Types of drums. *a.* and *b.* from the Noord- or Lorentz River (Trop. Inst., Nos. A 49 and 50); *c.* from the Mimika (Trop. Inst., No. A 711); *d.* from the Manowé tribe, south New Guinea (Trop. Inst., No. 1091/39); *e, f.* from the Mimika (Trop. Inst., Nos. 1091/42 and A 707); *g.* from the Waropèn coast (Trop. Inst., No. A 713).

Photo Trop. Inst.

Illustration 15.
Animal carving on a drum from the Geelvink Bay.

Illustration 16. Drum with carving on it, Lake Sentani.

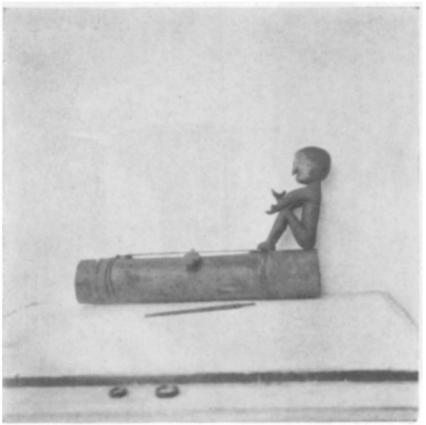
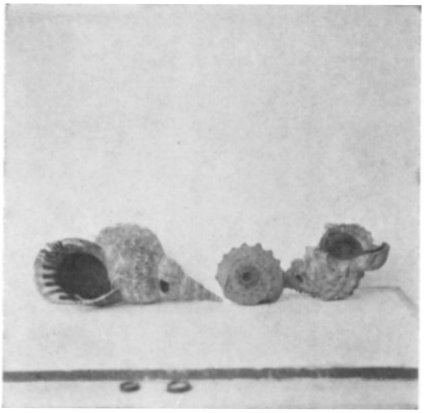


Illustration 17. One-stringed bamboo idiochord from the Schouten Islands (Mus. Arch. Btv., No. 886).

Illustration 18. Blowing of the holy flutes, Kaptiau (north coast).

Illustration 19. Flute orchestra composed of school children, north coast (Ambonese flutes).



a *b* *c*

Illustration 20. Shell trumpets.
a. Charonia tritonis with mouth hole at the side; *b. Cassis cornuta* with mouth hole at the epex; *c. Cassis cornuta* with mouth hole at the side.

Photo Trop. Inst.

Illustration 21. Wooden trumpet from the north coast.

Photo Trop. Inst.

Illustration 22.
Wooden trumpet
from Humboldt Bay
(Trop. Inst., No. 575/10).

a *b* *c*

Photo Trop. Inst.

Illustration 23. Bamboo horns. *a.* from Yapèn (Trop. Inst., No. 608/71); *b.* from the north coast (Trop. Inst., No. 1335/63); *c.* from the south coast, Lorentz River (Trop. Inst., No. 1468/130a).

Photo Trop. Inst.

Illustration 24. Married Marind-anim male (*amnangib*).

a *b* *c* *d*

Photo Trop. Inst.

Illustration 25. Spears used during the dance. *a.* from the Lorentz River (Trop. Inst., No. 276/1); *b.* from the Casuarina Coast (Trop. Inst., No. 34/70); *c, d.* from Merauke (Trop. Inst., Nos. 26/644 and 642).

Photo Trop. Inst.

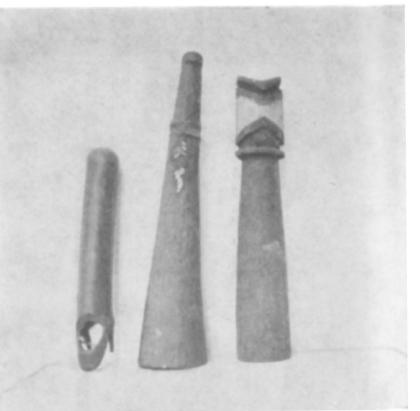
Illustration 26. Marind-anim drums.

Photo Trop. Inst.

Illustration 27. Drums from the south coast (Mimika?). The tiny viscous balls can be seen on the two drums in the foreground.

Photo Trop. Inst.

Illustration 28. Marind-anim with drum.



a *b* *c*

Illustration 29. *a.* Bamboo trumpet from the Lorentz River (Mus. Arch. Btv., No. 923); *b.* wooden trumpet, Wani-anim tribe, south coast (Mus. Arch. Btv., No. 926); *c.* wooden trumpet, upper Digul River (Mus. Arch. Btv., No. 924).

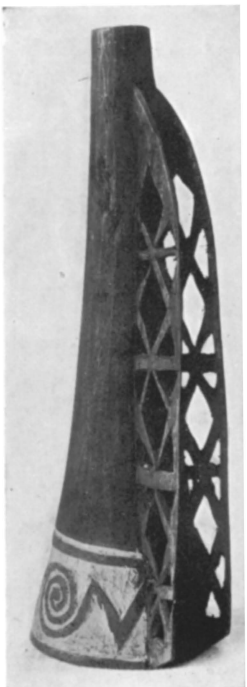


Photo Trop. Inst.

Illustration 30. Wooden trumpet of the Digul Papuans (Trop. Inst., No. 1374/38).

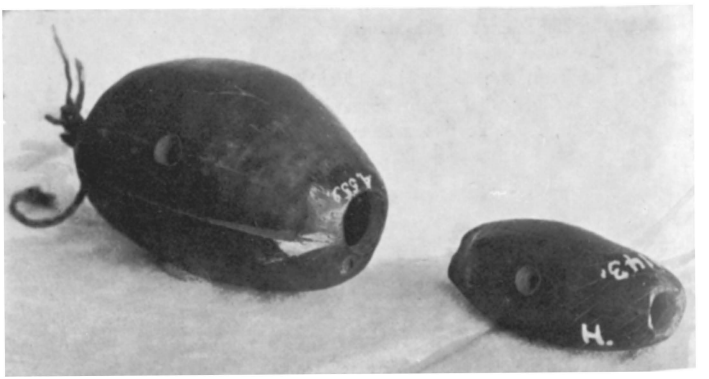


Photo Trop. Inst.

Illustration 31. Ocarinas made of coconuts, Marind-anim (Trop. Inst., Nos. A 559 and H 1143).

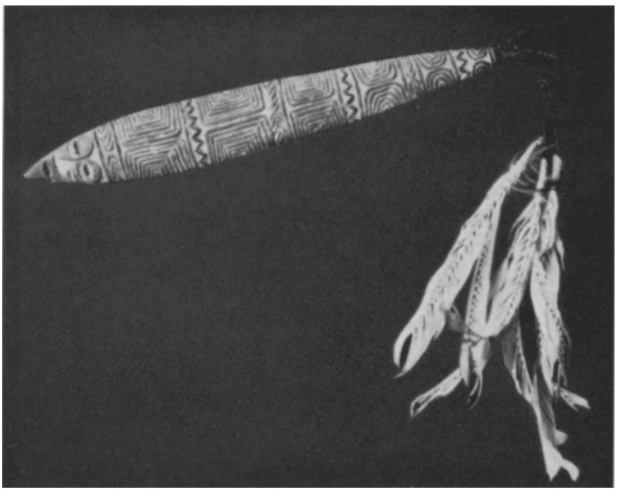
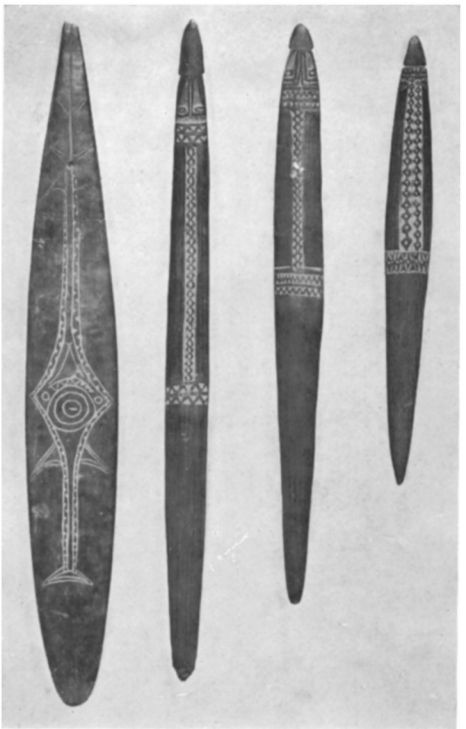


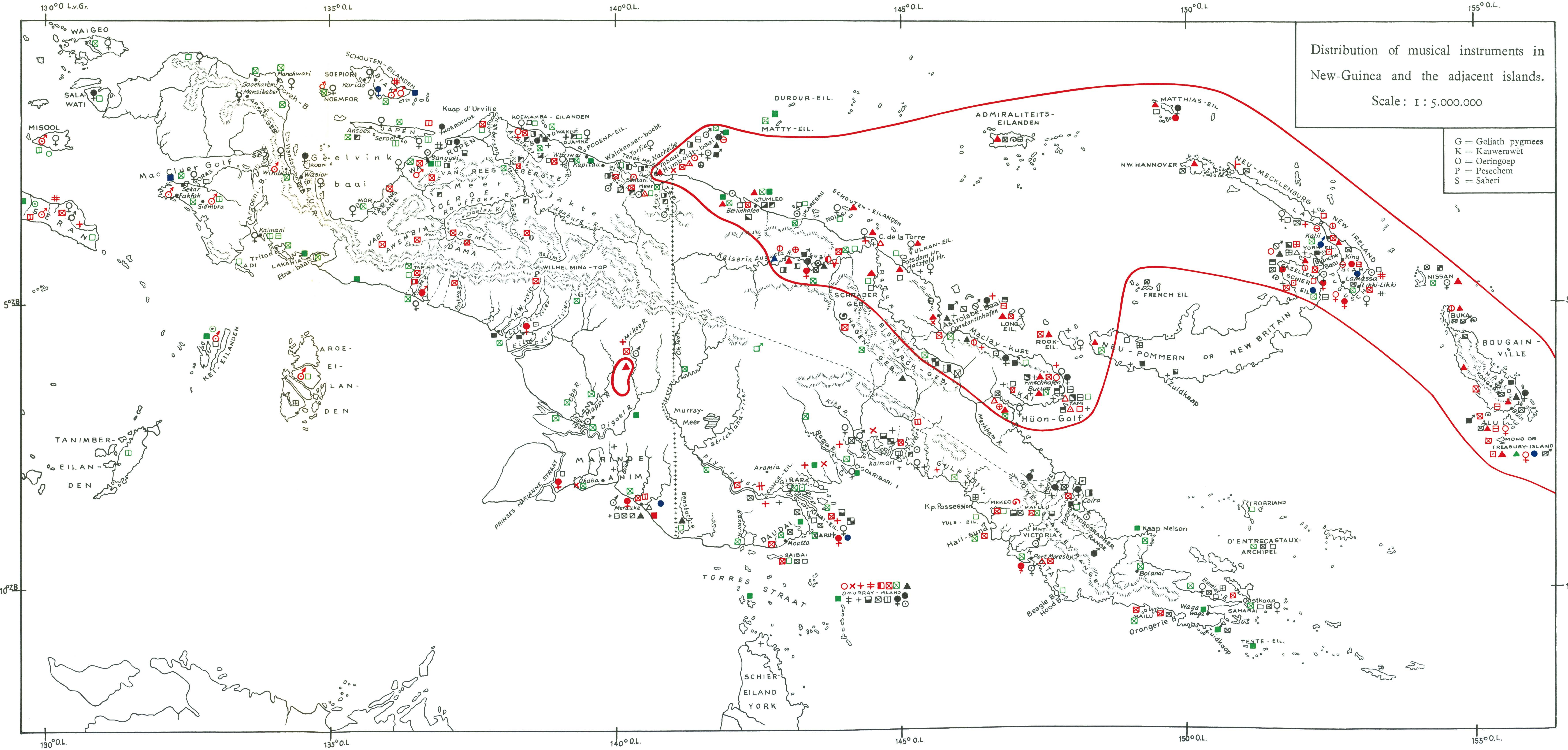
Illustration 32. Marind-anim bullroarer (*sosom*). Length 40 cms., greatest breadth 5½ cms. (Trop. Inst., No. 520/74).



a *b* *c* *d*

Photo Ethn. Mus., Leiden

Illustration 33. Bullroarers. *a.* south coast of New Britain; length 44½ cms., breadth 6½ cms. (Leiden, No. 1485/98); *b.* from Bungu, Austr. New Guinea; length 43 cms., breadth 3 cms. (Leiden, No. 1351/17); *c.* from Astrolabe Bay, Austr. New Guinea; length 37½ cms., breadth 3½ cms. (Leiden, No. 568/99); *d.* from Cape Cretin, Austr. New Guinea; length 29 cms., breadth 3 cms. (Leiden, No. 553/8).


Distribution of musical instruments in New-Guinea and the adjacent islands.
Scale: 1 : 5.000.000
G = Goliath pygmees
K = Kauwerawèt
O = Oeringoep
P = Pesechem
S = Saberi
WAIGEO
SALAWATI
MISOOL
SCHOUTEN-EILANDEN
Geelvink baai
Mac Cluer Golf
DUROUR-EIL.
MATTY-EIL.
ADMIRALITEITS-EILANDEN
MATTHIAS-EIL.
NW. HANNOVER
NEU-MECKLENBURG OF NEW IRELAND
NISSAN
BOUGAINVILLE
FRENCH EIL
NEU-POMMERN OR NEW BRITAIN
Zuidkaap
Hüon-Golf
Maclay-kust
Astrolabe-baai
WILHELMINA-TOP
Murray-Meer
KEI-EILANDEN
AROE-EILANDEN
TANIMBER-EILANDEN
MARIND-ANIM
PRINSES MARIANNE STRAAT
TORRES STRAAT
MURRAY-ISLAND
SCHIEREILAND YORK
D'ENTRECASTEAUX-ARCHIPEL
TROBRIAND
TESTE-EIL.
Kaap Nelson
Port Moresby
Merauke
Kaimani
130° L.v.Gr.
135° O.L.
140° O.L.
145° O.L.
150° O.L.
155° O.L.
5° Z.B
10° Z.B.