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# The Musical Instruments of Madagascar

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In memory of Erich M. von Hornbostel

## Preface

If one throws a glance at the musicological treatises concerning Africa, browsing through studies on African organology by Ankermann, von Hornbostel or Mr. H. Wieschhoff, the island of Madagascar remains an almost blank spot on the maps of distribution. The ethnographic museums and musical instrument collections barely contain a few zithers [from Madagascar][*1] and the regional literature is extremely poor as far as information on music is concerned.[1]

[*1] [Footnotes and other additions in square brackets have been added by the editors. In line with TDE's editorial policies we have not changed the original wording in cases which would be considered inappropriate or even offensive today, e.g. "Negroes" etc. However, in some instances we have added terms in more current spelling or other information

Under these circumstances, the author deemed it appropriate to profit from the unique resources of the Musée d'Ethnographie du Trocadéro or, as it is called today, the Musée de l'Homme [Museum of Mankind] which contains nearly two hundred musical instruments from Madagascar. The encyclopedic catalog of these instruments, based on the classification of Hornbostel-Sachs and drafted in French terms, which the author has developed in collaboration with Mr. André Schaeffner, forms the basis of the present work. Some types of instruments have even helped us to enhance this classification, specifically regarding flutes, drums, and zithers.

However, in order not to distort the presentation of Malagasy instruments, we did not limit ourselves to the objects of the Musée [de l'Homme]. A second chapter fills in the gaps by citing instruments of other museums, interpreting photos taken at the local sites, and by investigating travel accounts since the 17th century, as well as modern literature.

Furthermore, the kaleidoscope of peoples in Madagascar, and the different influences the island has undergone, have imposed an essay on us, as a third chapter, on its relative and absolute chronology.

In publishing these studies, the author is pleased to thank those who made them possible and facilitated their implementation, above all the director of the Laboratoire d'Ethnologie and of the Musée de l'Homme, Dr. Paul Rivet, a professor at the museum, and Mr. Raymond Decary, of the Central Government of Madagascar in Antananarivo. This outstanding ethnographer has augmented the collections of the museum, with an important number of well-described objects, especially for our research. In addition, he has taken the trouble to distribute a questionnaire, which we compiled, to the administrators of the island's regions, and to send us their reports. I am equally grateful to Mr. Marcel Mauss, professor at the Collège de France and at the École pratique des Hautes-Études, the faithful protector of all ethnological research in France; to Mr. Henry Deschamps, cabinet chief of the Président du Conseil [prime minister]; and to the Rev. Father H. Dubois, who made their unpublished writings available to me; to all the higher representatives of the regions and the district chiefs of Madagascar who supplied their answers to my questionnaire; and finally to my dear coworkers at the museum, particularly the deputy director, Georges-Henri Rivière, to André Schaeffner, my devoted and diligent friend, and to Claudie Marcel Dubois.

C. S.

Paris, April 1937

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which we hope will be helpful. Surprisingly, in the present study Sachs did not consistently employ the classification of musical instruments he co-authored with Erich M. von Hornbostel in 1914 (English translation: Baines and Wachsmann 1961), which results in some inconsistencies with the Hornbostel/Sachs system. Eds.]

[1] There is only one monographic study on Malagasy music: the article by A. Sichel in A. Lavignac, *Encyclopedie de la musique* [Encyclopedia of Music], Paris, 1st part, vol. V, published in 1922, but written in 1907 and erroneously given the title "Histoire de la musique des Malgaches" [History of the music of the Malagasy] – The "Notes sur la musique malgache" [Notes on Malagasy music] by J.-J. Rabearivelo in *Revue d'Afrique*, Paris, vol. IV (1931) contribute nothing to the study of the music of Madagascar.

Abbreviations

(D.) Personnel communication by Mr. Raymond Decary from Antananarivo.

GGM. Gift from the Central Government of Madagascar, c/o Mr. Raymond Decary.

# Introduction: Madagascar and the Malagasy

The island of Madagascar is situated off the south-eastern coast of the African continent, and separated from it by the Mozambique Channel. It consists of a large territory; its 600.000 km² equals the surface area of France, Belgium, and Switzerland combined. Its 3.6 million inhabitants are farmers and cattle-breeders. There are two different, even antagonistic [ethnic] groups. The natives of the lowlands and coastal area (*Sakalava*, *Vezo*, *Mahafaly*, *Androy*, *Betsimisaraka*, *Tanala*) as well as the *Bara* and the *Betsileo* in the south of the central high plateaus are Negroes, whereas the northern center is inhabited by the *Merina* or *Hova*, a population of Malay origin. The descent [lit. racial position] of the black people in Madagascar is contested: some anthropologists associate them with the Negroes of Africa, others with certain Oceanic peoples. The Malagasy language spoken on the whole island by both brown [lit. yellow] and black people derives from the Indonesian group of Malayo-Polynesian languages and is particularly related with Batak in Sumatra.

In historical times, there were frequent instances of immigration to the island from overseas. Malays arrived several times since the beginning of the modern era, as did the Arabs, during the High Middle Ages, and now and then Hindu people from Gujarat. Europeans did not discover Madagascar until 1500. The Portuguese, Dutch, and French took turns settling it; the latter took possession of the island in 1896.

# 1. The Musical Instruments archived at the *Musée de l'Homme*

## *Idiophones*

### Percussion beam[*2].

Names:

- Region of Diégo-Suarez: *tsikaretika*.
- Region of Majunga, district of Kandrého: *raloba*.
    - of Antsohihy: *raloba*, *kimbolo*.
    - of Soalala: *karatsaka*.

[*2] [Since the instrument consists of a bamboo tube and not a solid piece of wood, the term "beam" used by Sachs is misleading. According to the Hornbostel-Sachs classification it falls in the category of percussion tubes. Eds.]

- Betsimisaraka: *farai*, *peripetika*.
- Tanala: *tsipetrika*.
- Farafangana: *volo*.

The beam consists of a piece of bamboo, which is several meters long and kept in a horizontal position. Both playing positions, known in Africa, Asia, and America, can be found on Madagascar: the bamboo rests either on the floor or at the height of the stomach, on two forked sticks pushed into the sandy ground.

The beam is played by several musicians at a time, who beat it with varying force, each using two small sticks. The players are almost exclusively women. One can see five of them on an Antaimoro photo (plate I, A) and three on a Betsimisaraka sketch, of which Mr. Raymond Decary has kindly transferred a copy to us. A Tanala photo (plate I, B) shows ten players, and would probably show even more if it had not been cropped. In the literature, only G. A. Shaw writes of "his and her hands";[2] the district chief of Soalala in the region of Majunga in the northwest likewise mentions both men and women in his report.

Mr. R. Decary informs us that this bamboo "is the true national instrument of the Betsimisaraka as the valiha is the typical musical instrument of the Merina." According to him it "is used for dance accompaniment and obsequies". This information is confirmed by the report on the voyage of Leguéval de Lacombe in 1823[3], and by the answers to the questionnaire we gave to the various district chiefs.

The distribution area comprises at least the regions of Majunga in the northwest, Diégo-Suarez in the north and the eastern coast, including the Tanala area[4]. G. A. Shaw has seen the [percussion] beam among the Bara and the Ikongo[5]. Regarding distribution outside of Madagascar, general information, and different types of the percussion beam, the reader is referred to the publication by Mr. André Schaeffner and the one by the present author, entitled Geist und Werden der Musikinstrumente (p. 14: percussion beam).

- 35.68.6. People: Tanala; town: Fort-Carnot. Length of the bamboo: 201 cm, diameter: 9.5 cm. In addition two sticks and four long beaters of 30.5 to 36 cm. GGM
- 35.68.28. People: Betsimisaraka; town: Mananjary. Length of the bamboo: 127.5 cm, diameter: 8 cm. In addition two sticks and four beaters of 33.5 cm. GGM

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[2] G[eorge] A[ndrew] Shaw, "Notes on the National Musical Instruments of the Malagasy," *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 266.

[3] B.-F. Leguéval de Lacombe, *Voyages à Madagascar* [Voyages to Madgascar] (1823-30), (Paris 1840), 95f.

[4] Alfred and Guillaume Grandidier, *Ethnographie de Madagascar* [Ethnography of Madagascar], vol. III, (Paris, 1908-1917), 144.

[5] G[eorge] A[ndrew] Shaw, "Notes on the National Musical Instruments of the Malagasy," *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 266.

In the Betsimisaraka picture just mentioned, one can see a woman sitting on the floor next to the large beam, holding on her thighs a small piece of bamboo and striking it similarly with two beaters. This instrument must be related to a bamboo beaten with a piece of wood which is used on the Malay island Nias. The Rijksmuseum [Imperial Museum] in Leyden keeps one specimen of 30 cm length and a diameter of 6 cm[6].

**Percussion slat (Majunga: *kakanikakanika [read: kakanikanika]*, Tanala: *rondro*).**

A simple wooden slat decorated with a few transverse red lines and put "on the rice mortar, whose cavity serves as a resonator. One strikes it rhythmically with beaters. Children's toys, but also used by adults. It was played at the time of the Malagasy government [i.e., pre-colonial rule. Eds.] to welcome the kings or the chiefs upon their arrival in the villages" (D). While Mr. Decary's note only mentions it being used in the region of Tanala, according to the report by the district chief of Soalala this rudimentary xylophone would only be "played by children" in the region of Majunga.

If the Manganja of southern Africa also put a single slat on a calabash to strike it[7], the similarity does not suffice to establish a direct relationship between these two types.

- 35.68.7. Tanala (Fort-Carnot). Length 45, width 12.5, height 1, beaters 37 cm. GGM.
- 35.68.7. Tanala (Fort-Carnot). Length 64, width 11, height 2-3, beaters 36.5 cm. GGM.

**Tube rattle.**

Names:

- Tuléar region, district of Béroroha: *kritsakritsa*.
  - Ameazaobo [read: Ankazoabo]: *tsikiripika*.
- Morondava region, district of Morondava: *tsikatray*.
  - Maintirano: *tsakaiamba*.
- Majunga region, district of Bealanana: *kaiamba*.
  - Ambato-Boé mi [read: Ambatoboeny]: *kahamba*.
  - Mitsinjo: *voamaintilany*.
  - Antsohihy and Befandriana: *faray*.
  - Soalala: *kaiamba*.
- Diègo-Suarez region, district of Diègo Suarez: *faray*.
  - Vohémar: *faray*.
- Tanala: *kaiiamba*.
- Antaimoro: *tsikatrai(ka)*.

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6 No. 1002/200. Cf. H. W.Fischer, *Katalog des Ethnographischen Reichsmuseums* [Catalog of the Imperial Ethnographic Museum], vol. IV (Leiden: E. J. Brill, 1909), 65.

7 Bernhard Ankermann, "Die afrikanischen Musikinstrumente". *Ethnologisches Notizblatt*, vol. III/1, (Berlin, 1901).

- Antaisaka: *tsikitray*.
- Farafangana: *doka*.

The term *kaiamba* originates from the Congo.

A tube rattle made of one or two internodes of peeled bamboo is closed at the ends by the natural nodes. However, the wall has been perforated so that a certain quantity of canna grains can move inside (plate II, B). Only sometimes is the bamboo replaced by the common reed which the Malagasy call *bararata*.

The operation of it is described by Mr. Raymond Decary as follows: “One holds it with both hands. Moved at both ends and shaken jerkily, it serves to rhythmically accompany the dance”. The main administrator of the Diégo-Suarez region reports that “one makes it sound by striking it on the knee”. On a photo of the Colonial Exposition (plate II, A), however, a Sakalava from Nossi-Bé is accompanying the tube zither while holding the tube rattle resting on his thighs and gently striking it with his left fist.

The instrument is used commonly, on any occasion, by men and women among the coastal peoples, as well as those living in the east and the west. Those living on the plateaus and in the south, however, are not familiar with it (D). According to Mr. R. Decary, among the Tanala the instrument “must have been introduced by the Betsimisaraka some forty years ago”. Mr. Ralph Linton informs us that it has become a children’s toy there[8]. According to the district chief of Béroroha (Tuléar region), however, in that district this kind of rattle is used “exclusively by a group of dancers from the canton of Manamaty, originally from Tanala”.

- 35.68.14. Tanala (Fort-Carnot). Length 61 cm. GGM.
- 35.68.15. Tanala (Fort-Carnot). Length 57 cm. GGM.
- 35.68.16. Tanala (Fort-Carnot). Length 74 cm. GGM.
- 35.68.17. Tanala (Fort-Carnot). Length 63.5 cm. GGM.
- 35.68.18. Tanala (Fort-Carnot). Length 41.5 cm. GGM.
- 35.68.19. Tanala (Fort-Carnot). Length 41 cm. GGM.
- 35.68.20. Tanala (Fort-Carnot). Length 42 cm. GGM.
- 35.68.21. Tanala (Fort-Carnot). Length 45.5 cm. GGM.
- 35.68.22. Tanala (Fort-Carnot). Length 61.5 cm. GGM.
- 35.68.35. Betsimisaraka (town: Mananjary). Length 60 cm. GGM.
- 35.68.36. Betsimisaraka (town: Mananjary). Length 61.5 cm. GGM.
- 35.68.37. Betsimisaraka (town: Mananjary). Wine red color. Length 55.5 cm. GGM.
- 35.68.54. Antaisaka (town: Farafangana). Length 52 cm. GGM.
- 35.68.55. Antaisaka (town: Farafangana). Length 59 cm. GGM.
- 35.68.56. Antaisaka (town: Farafangana). Length 57 cm. GGM.
- 35.68.59. Antaimoro (town: Vangaindrano). Length 42 cm. GGM.
- 35.68.60. Antaimor[o] (town: Vangaindrano). Length 43 cm. GGM.
- 22.13.23. “Madagascar”. Length 57 cm.

[8] Ralph Linton, “The Tanala, a Hill Tribe of Madagascar.” Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 270.

**Raft Rattle.**

Four sticks of supple wood form a square frame. On both sides it is covered by pieces of rush nailed tightly together, forming a very flat body which is filled with red grains. To serve as a handle, one or two sticks of the frame are extended so that the whole object resembles a fan (plate II, C).

The instrument seems to be a specialty of the Sakalava women from the Morondava region. It is called *tsikatray* in that district and *tsakaiamba* in the Maintirano district.

- 99.56.15. Sakalava. Name indicated: *zavamaneno*, which just means "musical instrument". From one side to the other thirty-one sections. Height: 25 cm, width 43 cm.
- 33.1.34. Sakalava. With seventeen sections of rush on one side and nineteen on the other. Here the two vertical sticks are extended. Height: 52 cm, width 25 cm. (plate II, C).

This kind of rattle can be found in southern Africa[9] and in the Belgian Congo[10]. Held in a horizontal position in both hands and supported against the belly, it serves, at least in the latter region, to direct the dances. In Madagascar, their Congolese name *kayamba* signifies all sorts of rattles.

A similar rattle – but with a braided frame – has been excavated near Ancon in Peru[11].

**Sewn rattle.**

As names, the reports of the district chiefs specify *kahemba* for Kandreho, *makasa* for Soalala, *faray* for Vohemar, and *tsikatray* for Morondava. A thin wooden handle is inserted in the tip of a small pyramid-shaped container sewn of *fandrana* leaves and filled with grains (plate II, D). According to G. A. Shaw, these are rice grains[12]. The usage [lit. destination] of sewn rattles in the last three of the cited districts is not confirmed. Those of the first region and those in the *Musée* only exist in combination with the musical bow. While playing the bow, the right hand, which holds the stick, shakes the rattle held between the forth and the fifth fingers (p. 43). This custom is reminiscent of the pellet bells in the form of a bunch of grapes on the handles of the bows of fiddles in India[13] and of the little calabash

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9 Examples in the *Musée de l'Homme*: n° 55325 (Mangbétu), 33.52.11 (without indication of the origin), 35.74.13 (Chisena kaffirs in Mozambique), 35.75.5 (Uganda).

10 Congo Museum in Tervueren, N° RM XI, 42; cf. *Notes analytiques sur les collections ethnographiques du Musée du Congo* [Analytical notes on the ethnographic collections of the Congo Museum], Brussels, vol. I, 1st part, 1902, 38 and plate I, fig.4); Stephen-Chauvet, *Musique négre* [Negro Music] (Paris, 1929), 237 and fig. 18.

11 Karl Gustav Izikowitz, *Musical and other Sound Instruments of the South American Indians* (Göteborg, 1935), 134 (and fig. 62).

12 G[eorge] A[Andrew] Shaw, "Notes on the National Musical Instruments of the Malagasy," *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 268.

13 C. Sachs, *Die Musikinstrumente Indiens und Indonesiens* [The Musical Instruments of India and Indonesia], Handbücher der Staatlichen Museen, 2nd ed., Berlin: Georg Reimer, 1923, 144; C. Sachs, Curt, *Die Musikinstrumente Birmas und Assams* [The

filled with grains of millet which André Schaeffner has seen among the Gurmãse in Pama (Upper Volta) in the same hand which strikes the hourglass drum [lit. armpit drum][14]. But this combination exists with the musical bow as well: the Negroes of Bahia in Brazil play it together with a basketwork rattle, of which the British Museum in London holds an example[15].

The distribution of the sewn rattle probably coincides with that of the musical bow.

- 35.68.40. Betsimisaraka (Mananjary). 14 x 5 cm. GGM
- 35.68.41. Betsimisaraka (Mananjary). 18 x 5.5 cm. GGM
- 35.68.42. Betsimisaraka (Mananjary). 21 x 6.5 cm. GGM
- 35.68.43. Betsimisaraka (Mananjary). 45.5 x 5 cm. GGM
- 91.45.68. "Madagascar". 31 x 5,5 cm.

The sewn rattle, which is extremely rare outside of Madagascar, is found among the Bushmen with the shape of the ear of an antelope of the genus *springbok*[16].

The sewn rattle is sometimes replaced — it too, alas – by old, flattened tins of condensed milk, with their lids removed (plate II, E).

- 35.68.38. Betsimisaraka (Manjanjary). 7.5 x 11.5 cm. GGM.
- 35.68.39. Betsimisaraka (Manjanjary). 8 x 11.5 cm. GGM.

This rattle can be found in the region of Diégo-Suarez under the name *faray*.

**Basket rattle.**

On Madagascar basket rattles exist in three different forms. In the case of the first, a number of small wickerwork baskets made of palm leaves and filled with grains is fixed to a wooden handle, which is shaken by the hand.

- 82.63.4. Isle of Sainte-Marie. With six baskets. 18 x 19 cm. (plate II, F). On loan from the National Conservatory of Music. With four baskets. 16 x 14 cm.

In another type, the baskets are put together in the form of ankle bells for the dancers: ten little quadrangular prisms with rounded corners woven of palm leaves and filled with "grains of sand, various seeds, and even rice" [17], which are strung on two double lines of raffia, are tied to the ankles before the dance. One can distinguish these anklets in the photo on our plate.

- 22.13.20. Sakalava from Nossi-Bé. Total diameter about 14, that of the prisms 5-6 to 3 cm (plate II, G).

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Musical Instruments of Burma and Assam], Sitzungsberichte der königlich bayrischen Akademie der Wissenschaften, Philologisch-historische Klasse (Munich, 1917), 25; T. C. Hodson, *The Meitheis*, (London, 1908), 55.

14 Personal communication.

15 Henry Balfour, *The Natural History of the Musical Bow* (Oxford: The Clarendon Press, 1899), 39, with fig.

16 P[ercival] R. Kirby, *The Musical Instruments of the Native Races of South Africa* (London 1934), 1, plate 1, A.

17 G[eorge] Petit, *Collection ethnographique provenant de Madagascar*, (Paris : L'Anthroplogie, 1923), 364.

In an analogous manner, forty identical prisms, strung together in a row, form a belt apparently used like the anklets, to serve the dance. Outside of Madagascar it can be found in Dahomey [Benin][18] as well as among the Pondo [in Cameroon] and the Zulu of South Africa[19].

We have found the following names for basket rattles worn by dancers in Madagascar:

- District of Port-Bergé, Mitsingjo [read: Mitsinjo], Soalala, Maintirano: *makasa*,
- District of Antsohohi [read: Antsohihy] and the region of Diégo-Suarez: *masevy*,
- District of Menabe: *mahea*,
- District of Analalava: *maseva*.
- 30.73.14. Makoa Negroes, Besalampy (town in the northwest). Total length of the belt about 105 cm, the length of the prisms about 6 cm.

**Shaken sliding tubes.**

Distribution and names:

- West. Morondava.
    - Antsohihi: *karakaraka*.
    - Soalala: *lonjo*.
- North. Nossi-Bé: *enjoenjo*.
    - Antalaha.
- East. Betsimisaraka.
    - Tanala: *kotra*.

Mr. Raymond Decary describes this scarecrow as follows: “a wooden pole about 2 m high; on top of its upper end there is a crossbar about 40 cm long. Six mobile bamboo tubes of 40 cm are threaded at one end on this bar. The other end of these tubes can beat against a second wooden crossbar nailed to the pole at about 30 cm below the upper crossbar.” Mr. Decary continues: “The scarecrow is erected in the middle of the rice fields on the hills, and serves to keep away the flocks of cardinal birds or *fody* (and the wild boars, C. S.). The wind is able to shake the bamboo tubes against each other. If wind is lacking, a long line fixed to the tip of the apparatus whose end reaches up to the house of the guardian allows shaking the *kotra* at the desired moment (plate III, B)”.

A photo taken in the east of the island (plate III, A) shows a slightly different disposition: there are four tubes, and two poles instead of one.

Mr. André Schaeffner has been the first to consider this apparatus to be a forerunner of the Javanese tubular chime known as *angklung*[20]. For details of this

[18] Paris, *Musée de l’Homme*, n° 50701.

[19] [Percival] Kirby op. cit., 5 and 6, plate 3 A. Cf. also C. Sachs, *Geist und Werden der Musikinstrumente* [Essence and Evolution of Musical Instruments], (Berlin, 1929), 93.

[20] A[ndré] Schaeffner, *Origine des instruments de musique* [Origin of Musical Instruments] (Paris: Payot, 1936), 102.

instrument, see page 209 of the present authors work *Geist und Werden der Musikinstrumente*.

- 35.68.9. Tanala from Fort-Dauphin. Height and width: 45 cm (plate IV, A) GGM.

Although the six tubes have the same length, their nodes are located at different heights. The sections below the nodes which strike against the crossbar therefore produce sounds of perceptibly different pitch. Their lengths – 168, 103, 83, 188, 130, 163 mm – are unfortunately too small in proportion to their diameters, so that we are not able to translate their metric proportion into their musical proportion. In addition, the nodes have holes and one part of the section in question has been removed. Thus it is impossible to find out more about the scale the maker wanted to produce.

**Scraper (Tanala *tsikadraha*, Sakalava *faray*).**

A bamboo tube with transversal notches, scraped with a small stick. For general information about this instrument, its different forms, and its distribution, the reader is referred to what we have written in our book *Geist und Werden der Musikinstrumente*, page 16.

In Madagascar there are two different models of scrapers. The one from the east is characterized by its open ends. One of them is cut straight, the other obliquely. Near the latter, the bamboo has about thirty notches (plate II, H).

Regarding the four examples at the *Musée* that Mr. Raymond Decary has kindly procured for us, he offers the following commentary: “The bamboo is held in the left hand at the opposite side of the tapered end, and the musician scrapes the notches rhythmically with … a piece of split bamboo, which is flat, is 15-30 cm long, and 1-2 cm wide. In general it is peaked or oblique at one end … The slits in some of the bamboo tubes are purely accidental. It serves to accompany and provide the rhythm for dancing.”

“Distribution: Tanala and Betsimisaraka region.”

The instrument shown in plate I, B, a bit blurred, on the left-hand side of the big percussion beam seems to be a scraper of this type.

All four specimens of the *Musée* stem from Vohipeno in the Tanala region.

- 35.68.10. Length 58, diameter 4.5, stick 34 cm.
- 35.68.11. Length 39, diameter 6, stick 17 cm.
- 35.68.12. Length 45, diameter 7, stick 28 cm.
- 35.68.13. Length 57, diameter 6, stick 33 cm. GGM.

The other model, which is represented in the *Musée* by a scraper of the Sakalava from Nossi-Bé, is prolonged beyond the internode by two “transnodes” – concerning this term see page 52 – one of which is the handle. The internode has a longitudinal incision, accompanied by successive notches around the tube at distances of 2 mm. It is scraped with a flat piece of reed, pointed at both ends and split into eleven fragments until its middle. Mr. Georges Petit, professor of zoology at the *Musée*, to whom the museum is indebted for the only specimen of this

model, calls it *faray*[21]. This name is confirmed, by the way, by the district chief of Ambanga [read: Ambanja], where the instrument is also found.

- 22.13.26. Sakalava of Nossi-Bé. Length 57, thickness 2, fissure 37 x 1.5, scraping stick 30.5 x 1.5 cm.

An identical scraper exists under the name *caracachá* among the Mura Indians of Autaz, in Brazil[22]. It seems to have been imported by the numerous Negroes of that area.

The prototype of the curious contamination of notches and a slit is probably represented by a big wooden drum with slit and notches which the *Mission Dakar-Djibouti* brought in 1931 from the Bambara of Bugulu County in French Sudan[23]. Mr. André Schaeffner, a member of this mission, has indicated the existence of other similar instruments, much smaller and lighter, which the player presses against his body. These are no doubt the missing link between the wooden drum with notches and the scraper with a slit.

**Jew's harp** (Merina *lokánga váva*, "mouth instrument"[24] of iron, in the European form of an epaulet; the vibrating tongue is soldered to the summit of the frame without protruding from it (fig.1).

According to Mr. R. Decary jew's-harps are sold as toy instruments for children at the markets of the Imerina and Betsileo[25].

- 35.68.65. Antananarivo. 6 x 3.5 cm. GGM
- 35.68.66. Antananarivo. 6 x 3.2 cm. GGM (fig. 1)

Fig. 1: Jew's harp 35.68.66

[21] G[eorge] Petit, *Collection ethnographique provenant de Madagascar* (Paris : L'Anthroplogie, 1923), 364.

[22] Musée d'Ethnographie, n° 29. 8.216 (Tastevin Collection)

[23] Musée d'Ethnographie, n°31.74.1588-9.

[24] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-français* [Malagasy-French Dictionary]. 1st ed. (Antananarivo, 1888), 579. 2nd ed., (Antananarivo, 1899), 785.

[25] For the Jew's harp cf. Curt Sachs, "Die Maultrommel", *Zeitschrift für Ethnologie*, vol. 49, (Berlin, 1917); and *Geist und Werden der Musikinstrumente*, 230.

## *Aerophones.*

### Conch.

Like the Malayo-Polynesian form, it always has a lateral blowing hole like a transverse flute (plate V, A; VI, F). With the help of dictionaries and regional reports, we have found the following names:

- Merina and Betsileo: *antsiva*.
- Sakalava[26] and Tanosy: *antsivá*.
- Taimorona: *ansiva*.
- Menabe: *antsiva-bé*, "great *antsiva*".
- Ambilobe, Merina: *anjombona*.
    - Antakarana: *bankora*.
- District of Diégo-Suarez: *bakora*.
- Maintirano, ritual conch: *maromogny*.
    - secular conch: *milarchy* [read: *milarohy*].
- District of Tuléar, ritual [conch]: *beabobo*, *maromena*.
    - secular: *antsiva*.

These conches seem to be found all over the island, even in the interior. They are reserved for men everywhere.

They are interesting from more than one point of view. First of all: among the Antandroy, in the south, one distinguishes the male conches, called *antsíva láhy*, from the female ones, which are named *antsíva vávy* and are different in size and sound[27]. So far this is the only confirmed case of a bisexual concept of the conch[28].

Among the same tribe, and more or less varied in the whole south of Madagascar, Mr. Raymond Decary has been able to observe a traditional language of short and long blows, which elsewhere are whistle or slit drum languages[29]. The district chief of Belo confirms this in his report. The language is called *kolondoy*.

Indeed, the conch has mainly become a signal instrument in Madagascar. It announces the arrival or departure of sailors and wagoners, it convokes the townspeople and the members of religious communities, it warns of a danger as a tocsin would (plate V, A).

[Their use for] simple entertainment is rarer. In about 1850, the Englishman W. Ellis saw three or four conches, which – as he expressed it – formed a sort of bass for a soft and monotonous song sung by a large choir of women: "A large company of singing women in front of whom stood three or four men blowing the

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[26] J[oseph] Aubry, *A Madagascar* [On Madagascar], (Epinal, 1910), 28, mentions Sakalava *anisoa*. A. Sichel, op. cit., 3228, has cited another group of words: *kárana*, *kárany*, *akóra*, *ankóra*, *akárana*, *ankárana*. He derives them from an Arabic word *al-kirana* signifying "sea shell". However, Arabic dictionaries translate it as "eggshell" without ever mentioning a musical instrument. By the way, is not the trumpet called *karanā* in Sanskrit and Bengali and *karnā* or *qarnā* in Arabic?

[27] [Raymond] Decary, *L'Androy*, vol. II, (Paris, 1933), 147.

[28] Cf. C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 35.

[29] [Raymond] Decary, *L'Androy*, vol. II, (Paris, 1933), 148 and 153.

turbo or trumpet shell, and making a kind of bass to the women's soft and monotonous music in singing"[30]. Nowadays they accompany, among other events, the battles of the Bara.

However, the magic role of the conch, which, here as elsewhere, must have preceded its entertainment and purely practical roles, has left obvious traces. It is used during funerals[31], specifically for those of princes, and formerly in the ancestor cult of the Sakalava. The district chief of Analalava has indicated that "it is used on the occasion of royal ceremonies. They are blown by the guardians of the royal graves, called *morarivobe*. The sorcerers called *mpamosavy* or *ampamoriky* blow them at night to call the spirits of the deceased when they dance naked and smeared with grease on the graves". The district chief of Tuléar adds:

> These two instruments (conch and *hazolahi*) are sacred. They are only to be used by courtiers especially designated and reserved for royal ceremonies (organized by old chieftains or descendants of the kings of Sakalava and Masikoro), circumcisions, *bilo* (a celebration to bring about healing from a sickness), and obsequies. They are also utilized for sacrifices arranged after a nightmare, with the goal of appeasing the fury of the spirits, or on the occasion of the 'bath' of the royal fetishes.

The [role of the] conch in assisting in the treatment of illnesses is mentioned often; regarding this role there is even an account from the year 1792[32]. The most palpable instance of magic is the conch calling the wind to swell the mariner's sail. This usage seems to be common along the entire coast[33].

In view of this double use – pure magic on the one hand and secular signals on the other hand – it is not surprising that now and then – as our list of names indicates – one encounters two conches of different character and name. It goes without saying, however, that the fishermen do not change the instrument to call the wind.

- X.33.284. An *Eutritonium gigas*. 32.5 x 19 cm. (plate VI, F).
- 22.13.27. Vezo. A *Cassis cornuta*. 21 x 18 cm.
- 07.2.10. Sakalava. A *Strombus* with suspension line. 19 x 13 cm.
- 24.1.33. Antairomana (Vangaindrano). A *Achatina*[34]. 16.5 x 8 cm.

Massive wooden **horn** with conical bore, without special mouthpiece.

A pyrography shows this instrument blown by a native[35].

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30 William Ellis, *Three Visits to Madagascar, 1853-56*, (London 1858), 399.

31 [Raymond] Decary, *L'Androy,* vol. II, (Paris, 1933), 147; G. Lavau, G., "Rites funéraires des Malgaches" [Malagasy funeral rites], *La Révue de Madagascar*, n° 5, (1932), 64.

32 *Collection des ouvrages anciens concernant Madagascar* [Collection of early works on Madagascar], published by Alfred Grandidier et al., vol. V, (Paris 1903-20), 376.

33 [George] Petit, *Collection ethnographique provenant de Madagascar* (Paris : L'Anthroplogie, 1923), 362. – Reports by several district chiefs.

34 In 1642 F. Cauche in his "Relation du voyage de F. C." [Account of the Voyage of F. C.]. *Collection of Works, etc.*, vol. VII, 68, cites a conch which is supposed to correspond with what is called *vignot* in France. If his comparison is correct from a zoological point of view, it would then be the *Littorina littorea*.

- 27.1.6. Tanala. No name is given. Height 40, diameter 2-6 cm.

**Curved horn.**

Fig 1 b: Curved horn 37.17.1

It is said that only since the arrival of the French, and among the Antandroy since 1922, has a horn been introduced whose sound could be mistaken for that of a European bugle[36]. It is called *bingo* in the districts of Sakaroha [read: Sakaraha] and Betioky, *antsiva* in Belo, and *antsivambazaha* or "horn of the whites" in Androy. It consists of a stalk of papaya, bamboo or *bararata* reed, with the horn of a cow forming the bell.

This kind of composite horn is well-known. It exists in the hinterland of Burma[37] as well as in southern Africa[38], though it is true that in Africa the mouthpiece is on the side. It is highly significant that the mouthpiece of the Malagasy trumpet is distinctively cut obliquely: the musician is obliged to hold the instrument as if it were transversal. Could this possibly be the link between the end-blown and the side-blown trumpet?

- 37.17.1. Ambovombe. Name given: *antsivambazaha*. With the cow horn the *bararata* reed has a length of 128 cm, the horn itself about 13 cm. (fig. I b)

**End-blown flute.**

Names:

- Merina: *sódina*.
- Tuléar: *sódina*, *sódy*, *sóly*[39].
- Morondava: *sódina*, *kitsody* (Betsileo), *sóly*.
- Majunga: *sódina*, *antsódina*, *sódy*.
- Diègo-Suarez: *sódina*.
- Betsileo: *drétsa*, *sódina*, *sóly*, *kiatsódy* {*kitsódy*?}[40].
- Androy: *soly*, *fololitsy*[41].

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35 Cf. also Ralph Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 267f., plate 30f.

36 Raymond Decary, *L'Androy*, vol. II, (Paris, 1933), 148.

37 C[urt] Sachs, *Die Musikinstrumente Burmas und Assams*. Sitzungsberichte der königlich bayrischen Akademie der Wissenschaften, Philosophisch-Historische Klasse, (Munich, 1917), 144.

38 A horn of the Wafipa in the *Staatliches Museum für Völkerkunde* in Berlin is presented in B. Ankermann, *Die afrikanischen Musikinstrumente*, (1902), fig.98; for the Abyssinian horn cf. Villoteau, "Description historique, technique et littéraire des instruments de musique des Orientaux" [Historical, technical, and literary description of the musical instruments of the Orientals], *Description de l'Égypte* [Description of Egypt] (Paris, 1823), 540.

39 Aubry reports *hazo maré* and *sondy* as names in Sakalava, p.29.

40 The name *drétsa* is given by H[enry] Dubois, *Essay de dictionnaire betsileo* (Antananarivo,1917), 54. – In the Sakaraha district the name *kiatsódy*, probably Betsileo.

- Finally, there is the word *sobába*[42]. The *o* is always pronounced as *u*.

The flute is played to some extent all over Madagascar, but in the western and northern parts it is mainly the Betsileo who have introduced it. Among the Antandroy it is said to be "rather infrequent"[43]. It should be mentioned, however, that Flacourt, the first historian of the island (1646-1660), saw the flute in the east among the Matitanana[44].

Only men use it. Magic and religion are connected with it.

Generally the flute is made of reed. To cut the air better, the upper opening, which serves to produce the sound according to the principle of a hollow key, is in most cases beveled at the rim.

Despite the type's simplicity, it is easy to distinguish several main groups. Besides the iron flutes with three holes, which will be discussed later, flutes with four holes can be found in the west. The district chief of Morombe mentions one made of wood, and the chief of Marovoay mentions yet another type, with the explicit remark that it has no bell.

Indeed, the existence or absence of a small bell made of horn, or more rarely of a calabash, distinguishes the flutes of Madagascar. The flutes with a bell stored in the *Musée* all have six holes on their front side. The flutes without a bell also have six holes, or [six holes and] another dorsal hole for the thumb. The geographical distribution of the bell cannot yet be specified, because in general the regional information is not sufficiently precise. In any case, the two types exist alongside each other in the regions of Morondava, Majunga, and Diégo-Suarez.

**Flute with bell.**

The flutes with bells (plate V, B), demonstrably more primitive, are also longer than the others. They have six holes on the front side in a single group, and end in a small bell of bovine horn, or more rarely a calabash. Fixed neither with glue, nail or binding, the bell can be removed easily. Therefore, in a museum one can never be sure whether the flute which presently carries a bell did so originally. That is why we have refrained from cataloging the nature and length of this accessory.

For reasons given later, we not only measure the total length of the flute, but also the distances between the upper end and the center of each lateral hole. In these measurements *I* designates the distance between the upper end and the center of the nearest hole in the *front* and so forth. The letter *D* marks the thumb

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41 R[aymond] Decary, *L'Androy*, vol. II, (Paris, 1933), 148.

42 P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique), 571 (591); 2nd edition (from which we are citing the pages in brackets) of 1899. and Gabriel Ferrand, *Les Musulmans à Madagascar et aux îles Comores* [The Muslims on Madagascar and on the Comoro Islands], Publications de la Faculté des Lettres d'Alger, Bulletin de correspondance africaine, [Publications of the Faculty of Humanities at Algiers, Bulletin of African correspondence] vol. III, (Paris, 1902), 59.

43 [Raymond] Decary, *L'Androy*, vol. II, (Paris, 1933), 148.

44 Étienne Flacourt, *Histoire de la grande isle Madagascar* [History of the Great Island of Madagascar], (Paris, 1661), reprint in *Collection des ouvrages, etc.* [Collection of Works, etc.] vol. VIII, 159.

hole on the rear (*dorsal*) side of the instrument. Indications such as 180-1 mean that the established measurement lies between 180 and 181 mm.

- 35.68.26. Tanala (Ifanadiana). Without beveling. GGM.

I: 180-1 II: 207-8 III: 238-9 IV: 260-1 V: 284 VI: 306-7 total: 350-1

- 35.68.27. Tanala (Ifanadiana). Without beveling. GGM.

I: 197 II: 225 III: 253 IV: 276 V: 300 VI: 323 total: 368

- 35.68.32. Betsimisaraka (Mananjary). With beveling. GGM.

I: 237-8 II: 278-9 III: 319-0 IV: 359-0 V: 398 VI: 441-2 total: 518

- 35.68.33. Betsimisaraka (Mananjary). With beveling. GGM (fig. 2).

I: 254-5 II: 290 III: 328-9 IV: 362-3 V: 398-9 VI: 436-7 total: 530-1

Fig. 2: Flute with bell 35.68.33

- 35.68.34. Betsimisaraka (Mananjary). With beveling. GGM.

I: 255-6 II: 291-2 III: 325-6 IV: 359 V: 394-5 VI: 436 total: 54…

- without no. With beveling.

I: 268-9 II: 307-8 III: 345-6 IV: 386-6* V: 427-8 VI: 474-5 total: 545
* [sic!]

- without no. With beveling and two tin rings.

I: 266-7 II: 312-3 III: 356-7 IV: 403-4 V: 448-9 VI: 492-3 total: 54…

- without no. With beveling and two leather rings.

I: 281-2 II: 329-0 III: 374-5 IV: 417-8 V: 456 VI: 499-0 total: 580

- 31.85.12. With beveling and pyrography.

I: 165-6 II: 196 III: 227-8 IV: 263-4 V: 296 VI: 327-8 total: 391

**Flute without bell.**

The end-blown flute of the second type has no bell, and in general it is shorter than the flute with a bell. It has six holes on the front side and exists either with or without a dorsal hole placed above the first hole on the front. The summary of this form is 6+1 holes (fig. 3).

Fig. 3: Flute without bell

With 6 holes:

- 36.68.23. Tanala (Fort-Carnot) With beveling. GGM.

I: 101 II: 120 III: 138 IV: 157-8 V: 177 VI: 198-9 total: 233

- 35.68.24. Tanala (Fort-Carnot). With beveling. GGM.

I: 99-0 II: 119 III: 138 IV: 156 V: 174 VI: 196 total: 232

- 35.68.25. Tanala (Fort-Carnot). With beveling. GGM. (fig. 3).

I: 98-9 II: 118 III: 137 IV: 156 V: 175-6 VI: 195-6 total: 232

- D 33/36.9. Merina. Without beveling, pyrographed.

I: 139 II: 176-7 III: 207 IV: 237 V: 279 VI: 311-2 total: 377

- D 33/36.10. Merina. Without beveling, pyrographed.

I: 143 II: 177 III: 207-8 IV: 240-1 V: 272-3 VI: 307 total: 395

- 31.85.14. With beveling and pyrographed.

I: 224 II: 250 III: 280-1 IV: 316 V: 349 VI: 381-2 total: 453

A 6+1 holes

- 31.85.11. With beveling and pyrographed.

D: 143 I: 181-2 II: 213-4 III: 247-8 IV: 278 V: 314-5 VI: 347-8 total: 408

- 91.45.47. Sakalava. With beveling.

D: 98 I: 132-3 II: 165-6 III: 197-8 IV: 232 V: 263-4 VI: 293-4 total: 360

- 91.45.48. Sakalava. With beveling.

D: 96-7 I: 131-2 II: 164 III: 194 IV: 228 V: 260-1 VI: 291 total: 359

- 91.45.49. Sakalava. With beveling.

D: 108 I: 145 II: 172-3 III: 201-2 IV: 237-8 V: 267-8 VI: 298-9 total: 354-5

The exact measure of these distances is no museographical pedantry: recent research has proven its importance. The American Ch. Kasson Wead had already shown that the placement of the holes does not at all correspond to musical necessity[45], and this negation is not only valid for the oboes, flutes, and clarinets of

[45] Ch[arles] K[asson] Wead, “Contributions to the history of musical scales”, *Annual Report of the Smithsonian Institution, 1900*, Washington 1902.

all primitive peoples, but also for those of the European orchestra, until the innovation by the flute player Theobald Boehm in 1832. According to the experiments by Mr. Victor Loret[46] and the author[47], our late friend Erich M. von Hornbostel was able to give the definitive solution of this strange phenomenon[48]. Here is the result:

The placement of the holes is determined by the thumb, which serves as the unit of measurement.

The number of standard measures is far from unlimited. From the measurements of existing flutes etc. all over the world, one can identify certain fixed measures dating back at least as far as King Gudea of Sumer around 2600 [BCE].

According to the antique conception, both the measures and the sounds are laws of the universe. In ancient cosmology, sounds and measures were identical.

With flutes, clarinets, and oboes, the sacred measures of antiquity have been disseminated throughout the whole world.

In spite of the lack of a unit of measurement and the grossness of their procedures, primitive peoples have conserved the ancient measures until today.

A flute's unit of measurement may be detected by measuring one by one the distances from the upper end of the instrument to the center (!) of each hole. The total length is often unimportant.

Here are the results of our measurements of end-blown flutes of Madagascar.

On the basis of the measurements of four flutes one finds 16.53 mm, a unit well known by metrologists under the name *inch* [lit. thumb] *of King Gudea* of Sumer (about 2600 BCE) – the oldest of all measures. This inch serves many a foot and cubit of antiquity:

- 15" or 247.95 mm make the *Syrian foot*,
- 16" or 264.48 mm the *foot of Gudea*,
- 20" or 330.60 mm the *foot of Gudea*, referred to as *ancient*
- 24" or 396.72 mm the *cubit of Gudea*, referred to as *young*
- 25" or 413.25 mm the *small Phoenician cubit*,
- 32" or 528.96 mm the *royal Egyptian or Samian cubit*.

The second and most frequent unit in Madagascar – six flutes – is the inch of 19.836 mm. Of this unit:

- 15" or 297.540 mm make the small Olympic, Attic or Roman foot,
- 16" or 317.376 mm the *great Olympic foot*,

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[46] V. Loret, "Les flûtes égyptiennes antiques" [The Ancient Egyptian Flutes], *Jounal asiatique*, vol. XIV, (Paris, 1889), 197f.

[47] C[urt] Sachs, *Die Musikinstrumente des alten Ägyptens* [The Musical Instruments of Ancient Egypt], (Berlin: Karl Curtius, 1921), 82f.

[48] E[rich] M[oritz] von Hornbostel, "Die Massnorm als kulturgeschichtliches Forschungsmittel [The Dimension Standard as a Research Device of Cultural History]. *Festschrift für P[ater] W[ilhelm] Schmidt*, (St. Gabriel-Möldling, 1928).

- 18” or 357.048 mm the *great Ptolemaic foot*,
- 20” or 396.720 mm the *cubit of Gudea* , referred to as *young*,
- 24” or 476.064 mm the *Olympic cubit*,
- 25” or 495.900 mm the *cubit of Gudea*, referred to as *ancient*, or *royal Babylonian cubit*, or *great Phoenician cubit*.

The third unit, on the basis of two flutes, is the inch of 22.04 mm,

- 20” or 440.8 mm make the *Babylonian cubit*, referred to as *general*.

Besides these three sacred measures, we identified as units: for three flutes an inch of 18.2 mm, and for three flutes the inches of 22.4, 23.5, and 28.2 mm. A single flute, the no. 91.45.48, abandons the general principle and adopts, as we shall see, a particular system of unequal symmetry, which again shows an optical but not a musical order.

In the following table the theoretical measures are compared with the real distances found in the flutes of Madagascar. Needless to say, while theory yields thousandths of millimeters, the practical measurement applied to objects with rough material and made with little care strongly limits the precise measurement down to the millimeter. In this table, only those measurements are included which may be taken as equal to the metrological data. Under this proviso, we have been extremely rigorous: no deviations are tolerated at all unless they are below two millimeters.

With inch of Gudea (16.53 mm).

| | | 91.45.47 | 31.85.12 | | 31.95.11 | 31.85.14 |
|---|---|---|---|---|---|---|
| 6” | 99,18 | D 98 | | 11” 181,83 | I 181-2 | |
| 8” | 132,24 | I 132-3 | | 13” 214,89 | II 213-4 | |
| 10” | 165,30 | II 165-6 | I 165-6 | 15” 247,95 | III 247,8 | |
| 12” | 198,36 | III 197-8 | | 17” 281,01 | | III 180-1 |
| 14” | 231,42 | IV 232 | | 19” 314,57 | V 314,57 | IV 316 |
| 16” | 264,48 | V 263-4 | IV 263-4 | 21” 347,13 | VI 347-8 | V 349 |
| 18” | 297,54 | VI 293-4 | | 23” 380,19 | | VI 381-2 |

With inch of 18.2 mm.

| | | 91.45.49 | | | 35.68.33 | 35.68.34 |
|---|---|---|---|---|---|---|
| 6” | 109,2 | D 108 | | 14 254,8 | I 254-5 | I 255-6 |
| 8” | 145,6 | I 145 | | 16 291,2 | II 290 | II 291-2 |
| 9,5” | 172,9 | II 172-3 | | 18” 327,6 | III 328-9 | |
| 11” | 200.2 | III 201-2 | | 20,5” 363,1 | IV 362-3 | |
| 13” | 236,6 | IV 237-8 | | 22” 400,4 | V 399 | |
| 20” | 354,0 | t. 354-5 | | 24” 436,8 | VI 436-7 | VI 436 |

With inch of 19.836 mm.

| | | 35.68.23 | 35.68.24 | 35.68.25 | | |
|---|---|---|---|---|---|---|
| 5” | 99,180 | I 101 | I 99-0 | I 98-9 | D 33/36 9 | |
| 6” | 119,016 | II 120 | II 119 | II 118 | | |
| 7” | 138,852 | III 138 | III 138 | III 137 | I 139 | |
| 8” | 158,688 | IV 157-8 | | | | |
| 9” | 178,524 | V 177 | | | | |
| 10” | 198,360 | VI 198-9 | | | | |
| | | | 10,5” | 208,278 | III 207 | |
| | | 35.68.32 | without no. | | | |
| 12” | 238,032 | I 237-8 | 12” | 238,032 | IV 237 | |
| | | | 13,5” | 267,768 | | I 268-9 |
| 14” | 277,704 | II 278-9 | | | V 279 | |
| | | | 15,5” | 307,458 | | II 307-8 |
| 16” | 317,376 | III 319 | | | | |
| | | | 17,5” | 347,140 | | III 346 |
| 18” | 357,048 | IV 359 | 19” | 376,884 | t. 377 | |
| | | | 19,5” | 368,812 | | IV 386-7 |
| 20” | 396,720 | V 398 | | | | |
| | | | 21,5” | 426,484 | | V427-8 |
| | | | 24” | 476,064 | | VI 475 |
| | | | 27,5” | 545,490 | | t. 545 |

With inch of 22.04 mm.

| | | D 33/36 9 | |
|---|---|---|---|
| 6,5” | 143,26 | I 143 | 35.68.26 |
| 8” | 176,32 | II 177 | |
| 9,5” | 207,38 | III 207-8 | II 207-8 |
| 11” | 242,44 | IV 240-1 | III 239 |
| 12” | 262,48 | | IV 261 |
| 12,5” | 273,50 | V 272-3 | |
| 13” | 284,52 | | V 284 |
| 14” | 308,56 | VI 307 | VI 307 |
| 16” | 350,64 | | t. 350-1 |
| 18” | 396,72 | t. 395 | |

With inch of 22.4 mm.

| | | without no. |
|---|---|---|
| 14” | 313,6 | II 312-3 |
| 18” | 403,2 | IV 403-4 |
| 20” | 448,0 | V 448-9 |
| 22” | 492,8 | VI 492-3 |

| | | |
|---|---|---|
| | With inch of 23.5 mm. | |
| | without no. | |
| 12” | 282 | I 281-2 |
| 14” | 329 | II 329-0 |
| 16” | 376 | III 374-5 |
| | With inch of 28.2 mm. | |
| | 35.68.27 | |
| 7” | 197,4 | I 197 |
| 8” | 225,6 | II 225 |
| 9” | 253,8 | III 253 |
| 13” | 366,6 | tot. 368 |

Hence, all nineteen of the Malagasy flutes in the *Musée* were made based on a standard measure. But only two of them, nos. 35.68.23 and D 33/36.10, have completely equidistant holes, the distance being one inch for the first flute and one and a half for the second one. The other ones have undergone variations; at times it is one hole and at other times, another single hole or a group of holes deviate from the correct placement.

How can these discrepancies be explained? Do they serve to improve intonation? Do they facilitate fingering? Is it simply negligence?

Calling on coincidence to cover up the gaps in our knowledge is tantamount to blocking the path of intelligence. Therefore, let us put aside the assumption of simple negligence, and stick to the questions of intonation and fingering.

The equidistance of the holes clearly goes against the forming of a usable scale. In order to produce equidistant notes, a geometrical progression of the holes is required: their distance must increase towards the flute’s lower end.

Only in three cases has this requirement been incorporated: twice, the last hole has been lowered and once – with no. 31.85.14 – the first two holes have been lowered, thus diminishing the upper distances. Concerning the deviation of the sixth hole, a certain flute in the *Musée*, without a number, respects the standard measure, in that the new position is exactly half an inch lower. In no. 35.68.32, on the contrary, the sixth hole does not stick to the measure.

With these three cases, we have presented everything that can be said about intonation. All the other deviations worsen, or at least do not improve, the musical result. It is remarkable that, apart from the lowering indicated in the last paragraph, there is only one example of lowering among these nineteen flutes, with their 120 holes, while in thirty-four cases the hole has been raised.

This means that, anxious of the agility of his fingers, the flute player seems to have a tendency to move the holes closer to each other. In one case (no. 91.45.47) only the last hole has been shifted, in other cases two, three, four or even five holes have been put closer together. For all these arrangements, the reader is referred to figure 4.

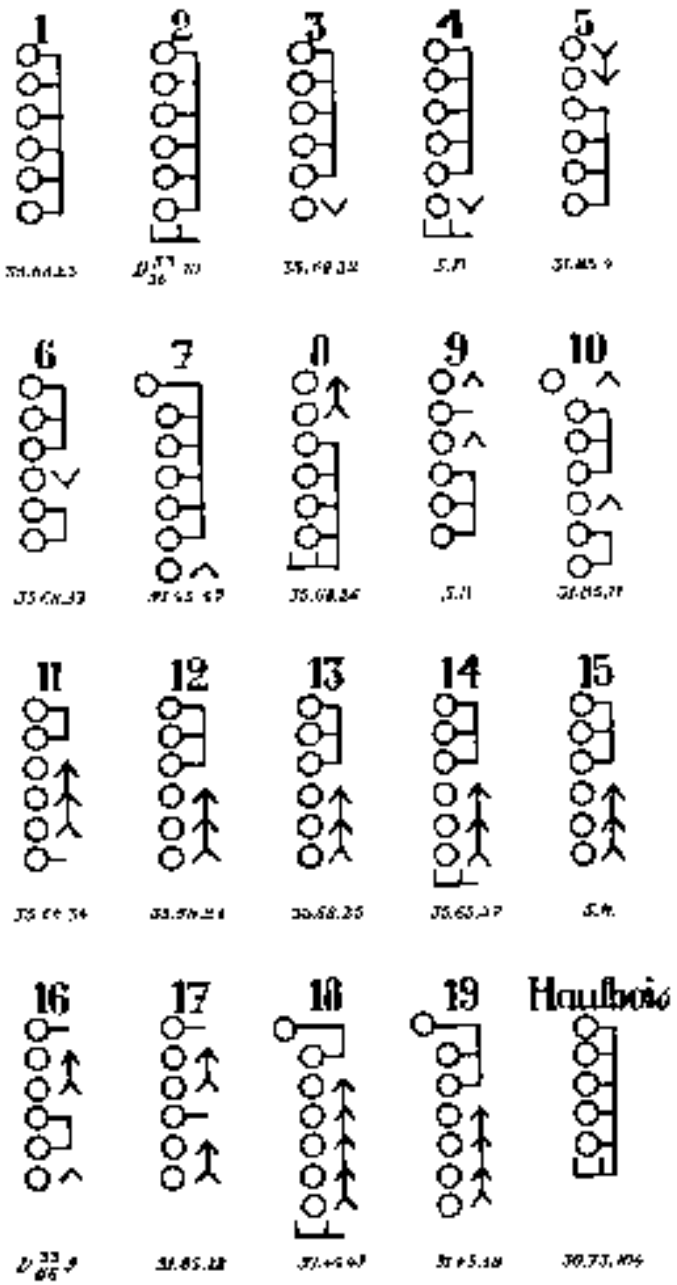


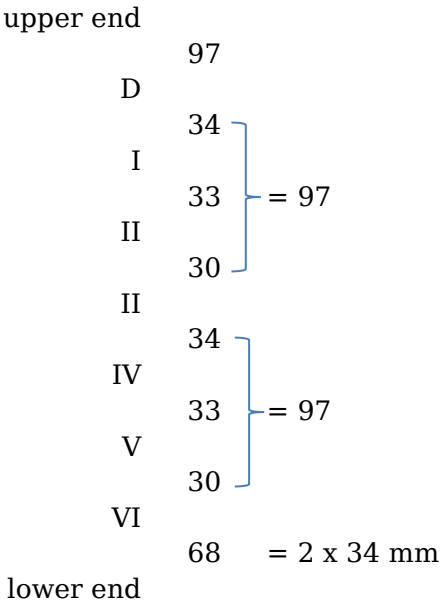

Fig. 4

In spite of the changes in the placement of the holes, the standard measure is rarely abandoned. One changes to other layouts. In the case of flute no. 91.45.49, for example, the distances between I, II, and III range from two inches to one and a half inches respectively; in the case of no. 35.68.26 the second hole has been shifted back half an inch; in the case of an unnumbered flute, the first five holes are raised by half an inch each, whereas the sixth remains in its place.

In all these variations, it is the first hole which is least affected. In seventeen flutes

- hole I stays at its place 14 times,
- hole II 12 times,
- hole III 12 times,
- hole IV 9 times,
- hole V 10 times,
- hole VI 8 times.

Finally the two flutes no. 91.45.48 and no. 91.45.49 should be mentioned. The first one, though employing the standard measure of 16.53 mm, shows a particularly interesting disposition because of its symmetry: in each of two groups [of holes] the first and the second hole are 33 mm apart, and the second and third 30 mm. Between the dorsal hole and the first of the two groups on the front there is a distance of 34 mm, between these two groups are also 34 mm, and between the last hole and the lower end of the flute 2 x 34 or 68 mm. But between the upper end and the dorsal hole the distance equals the sum of these three measures:




Finally, the nineteenth flute has a special modification, also non-musical – even anti-musical – but fitting to two-handed playing: the row of six holes is separated into two groups of three. It is this disposition which has since prevailed over the principle of equidistance in Europe, and which was only rectified here through the reform of Theobald Boehm, during the nineteenth century. No. 91.45.49, which illustrates the beginning of the separation into two groups, nevertheless respects the standard measure: the holes are 1.5 inches apart, but the distance between III and IV is two inches.

The only lowering we could notice inside the range, the one of the fourth hole of flute no. 35.68.33, could be explained as an attempt to separate the groups.

**Fipple [or duct] flute.**

Coarsely cut from soft wood, due to its bell it externally resembles the oboe known under the Arabic name *zamr*, and may merely represent an imitation of the latter.

- 15.8.14. "Madagascar". Unusable specimen. Length about 42.5 cm, diameter of the bell 5 to 5.5 cm.

**Oboe.**

In the *Musée* there is only one example of this instrument, which seems to be very rare. Cylindrical and entirely made of wood, it is remarkable due to its slenderness and broad lower end, imitating the brass bells of oboes of the Islamic world. The reed (called "double"), quite large, is fitted into a metal socket and hermetically enclosed. There are only five equidistant finger holes (plate VI, G).

- 30.73.104. Sakalava from the town Bekodoka. Height without accessories is 19 cm, with the reed and its socket 27 cm, the diameter of the bell is about 13 cm.

| | | | |
|---|---|---|---|
| I 22 | II | 45-6 | III 67-8 |
| IV 90 | V | 11-5 | total length 19… |

On the basis of these distances, one finds the inch of 22.6 mm, a very widespread measure in northern Africa[49]; I": 22.6, 2": 45.2, 3": 67.8, 4": 90.4, 5": 113 mm.

The name of the Malagasy oboe is not given, neither for the specimen in the *Musée* nor in any of the literature. However, one does find the word *anjomara* referring to an alleged "flute" in Madagascar[50]. It not only corresponds to a Swahili term, *zomari*, but both draw their origin from the Arabic radical *zmr*. The latter always designates a reed instrument. Sometimes زمارة it appears in the form *zummāra*, زمر sometimes in the form *zamr*. The first is used for single-reed instruments ('clarinet'), the second for double-reed instruments ('oboe'). The Arab *zamr* was the model for the Malagasy oboe; we believe we must claim the name *anjomara* for the latter.

In any case, the reports we received from the Central Government of Madagascar attest to the presence of this oboe in the district of Analalava and in the region of Diégo-Suarez, and confirm the name *anjomara*. In fact, in the region of Diégo-Suarez a second type of oboe besides the *anjomara* is known, and clearly identified as such by the description of district chief of Ambilobi [read: Ambilobe]: "Wind instrument shaped like a bugle, preferably made of soft wood (five to six holes), on which the mouthpiece ends with two small lamellae made of palm leaves, which produce the sound by vibrating." This second oboe is probably larger because its name, *kabiry* كبير , can hardly be anything but the Arabic word

[49] Examples in the *Musée de l'Homme*: fipple flutes from Morocco (no. 31.45.28) and of the Kabyle (no. 11.720).

[50] G[abriel] Ferrand, *Les Musulmans à Madagascar et aux îles Comores* [The Muslims on Madagascar and on the Comoro Islands], Publications de la Faculté des Lettres d'Alger, Bulletin de correspondance africaine, [Publications of the Faculty of Humanities at Algiers, Bulletin of African correspondence] vol. III, (Paris, 1902), 47.

'grand'. A report from the district of Ambanja assigning 30 to 40 cm to it confirms this. In the district of Vohémar, the *kabiry* accompanies "the games and chants of the Comorians and Sakalavas"; for the district of Ambanja we have been assured of its Comorian origin.

In the district of Ampanihi, there is "another kind of flute about 40 cm long", used in particular by young people. However, its name, *torompotsy* – undoubtedly derived from the word *trumpet* [lit. *trompette*] – cannot be reconciled with the idea of a flute. As with its Javanese homonym, it rather designates an oboe, the sound of which sometimes leads to it being confused with the trumpet.

Whether it actually is a kabiry remains to be confirmed.

**Reed pipe.**

- Called *farara* (*vava*) in Merina.
- Betsileo: *kiatsó dim-báva*.
- Sakaraha: *akata vakia*.
- Morondava: *farára*.
- Maintirano: *farára*, *foa*.
- Analalava: *farára*.
- Tsaratanana: *farára*.

It consists of a small stalk of green rice. About 1 cm below the end, and for about 3 cm, the fibers are separated and bent, so that together they form a kind of double pyramid or lantern (fig. 5).

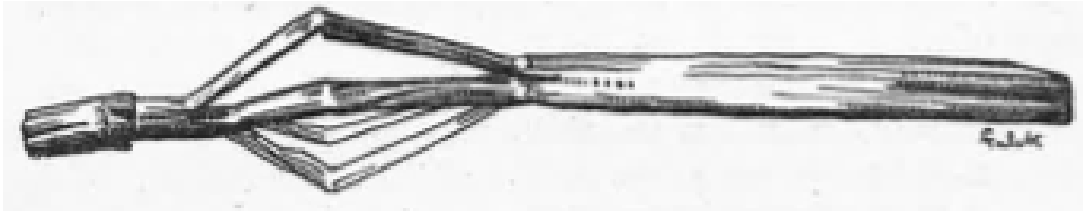


Fig. 5: Reed pipe

This toy is undoubtedly nothing else then the so-called "trumpet" of the Hova children, called *farára*, which is mentioned in the dictionaries. It is either made of rice straw or *herana*[51] leaves, or "with the bark or leaf of arums or other plants"[52].

Among the *fády*, the ritual prohibitions of Madagascar, there is the one "of playing on a certain kind of {"} flute {"} called *farára*, because it will attract a storm of hail on the rice field and surely destroy the crop"[53]. Information by

[51] P[aul] Camboué, "Jeux des enfants malgaches" [Games of Malagasy Children], *Anthropos*, vol. VI (St. Gabriel-Mödling, 1911), 669.

[52] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique), 149.

[53] A[rnold] van Gennep, "Tabou et totémisme à Madagascar" [Tabu and Totemism on Madagascar], Paris 1904., 20. The same information can be found in H .F. Standing,

Raymond Decary tells that it is even “forbidden to construct this toy before the ripening and harvesting of the rice, lest hail lash down on the rice fields”. This is one of the meteorological charms often attributed to wind instruments[54]. The Taulipang in Central Guyana also attract the rain by fashioning the very narrow leaves of a certain reed into wind instruments[55].

The Malagasy instrument is found in identical form among Wollo boys in Abyssinia. Mr. Marcel Griaule describes it as follows. ”One softly crushes a green stalk of barley, or of the *wabalo* bush, between the fleshy parts of the hands placed in the same plane and touching on the side of the little finger. In this way, the player obtains a kind of flute into which he blows by taking the node and the broken part into his mouth while the free end stays outside”[56].

The acoustic character of the instrument is not well determined. The thin bands of the split stalk seem to function as double reeds, permitting the openings to touch each other and close again immediately while blowing. Hence this should be an instrument *with an interrupted airstream*. But it is possible that the strips vibrate at the same time under the pressure of the blowing, in the manner of the *ribbon reed* [or *band reed*].

The four examples in the collection of the *Musée de l’Homme* stem from the Merina in Antananarivo.

- 35.68.67. Height 10 cm. GGM.
- 35.68.68. Height 17 cm. GGM.
- 35.68.69. Height 12 cm. GGM.
- 35.68.70. Height 11 cm. GGM.

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“Malagasy ‘fady’”, *The Antananarivo Annual*, vol. II, reprint of the years 1881-84 (Antananarivo 1896), 258.

[54] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 23 and 25.

[55] Th[eodor] Koch-Gruenberg, *Vom Roroima zum Orinoco* [From the Roroima to the Orinoco], vol. III (Berlin: Dietrich Reimer, 1916), 276.

[56] M[arcel] Griaule, *Jeux et divertissements abyssins* [Abyssinian Games and Entertainment] (Paris, 1935), 26, plate V, fig.2.

## *Membranophones.*

### Frame drum.

(*ampónga tápaka*, "cut drum"), onto which a single skin of a cow or goat is nailed or laced (fig. 6, plate VI, A). According to the report from the district of Vohémar it is beaten with two hands, and serves "to accompany the games of the Makoa, Antaimoro, and Anjouans".

Fig. 6: Nailed skin 31.85.15.

- 31.85.15. "Madagascar". Frame of hard wood, the skin is nailed (fig.6). Diameter 32, height 6 cm. (plate VI, A).
- without no. "Madagascar". The skin is sewn onto itself and laced through the holes made into the frame. The diameter varies from 30 to 35 cm.
- X.33.213. Merina. The roughly cut neck of a broken clay jar, narrower towards the bottom, forms the frame. The skin, with simple eyelets (figure 7), is tightened by very irregular cotton strings, which form a kind of star at the back in the manner of Asian shaman drums. Diameter 18, height of the frame 4 cm (plate VI, E).

This object must be compared with the drum *ampónga kély* described on page 64. On the other hand, one could relate it to the similar toy drum of the Malaysian Peninsula (Kampong Jalor)[57].

The other drums of this group are found in the southeast of the African continent. The frame drums of the Zulu Thonga [Tonga], the Vandau [vaNdau] and the Bashlengwe [baHlengwe], the two latter ones in the region of the Sabi River in the Portuguese territory [i.e., Mozambique], have the same size as the Malagasy drum. They have nails or wooden pegs and also time strings tied in the form of a star or cross.

[57] H[enry] Balfour, "Report on a Collection of Musical Instruments from the Siamese Malay States and Perak", *Fasciculi Malayenses, Anthropology, Part IIa* (Liverpool: The Clarendon Press, 1904), 4 and plate XX, fig. 4.

**Cup-shaped clay drum**.

(plate VI, B).

The border of the skin pulled over the edge of the cup has kept its fur. The leather tension laces [thongs] are threaded through the skin's eyelets (fig. 7), and a big disk of bark forms the base. The laces are entwined in groups of three or four, by a transversal thong; a final one forms a handle.

Of this drum, regarded as "ancient and very rare", the donor Mr. Raymond Decary knows of only the two specimens found in the *Musée* and a third one, in the Poirier collection in Antananarivo.

Our two objects, nearly identical, stem from Sakalava locations around Fenoarivo (Miarinarivo, Imerina). Mr. H. Wieschhoff is therefore wrong when he says that the Sakalava do not know the laced drum. This and the two following paragraphs prove the contrary[58].

- 30.73.16. Height 15, diameter 24 cm.
- 30.73.17. Height 18, diameter 27 cm.

**Kettledrum.**

(*ampónga vilány*, "kettle-shaped drum").

The body of blackened clay exhibits a slightly oval shape; its top is pierced. During the manufacturing, the lower part is covered with a cloth, which has left a mark [lit. "granulage", graining]. The skin is tightened around the neck by a strap held under the rim of the pot (*constricted skin*). Its edge is cut in the shape of a crescent, and fixed to the body. The lacing of the tension cord forms a W (fig.10) and connects the simple eyelets (fig. 7), cut in the lobes of the skin, to a disk of straw which functions as a base. A thin carrying string is knotted to the disk, as well as to the cord (plate VII, A).

- 33.52.9. Sakalava. Height 23, skin 31 cm.

Nowadays this drum is used during circumcisions in Imerina[59].

In 1834, Charles Bell drew a similar kettledrum among the Hottentots, placed on the ground and played by a squatting woman with her bare hands to accompany dancing. The bulging potlike shape, the skin, cut in a crescent shape and constricted, the eyelets and the W-patterned lacing are identical; it differs in that the flat base replaces the disk used to offset the top[60].

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[58] H[einz] Wieschhoff, *Die afrikanischen Trommeln und ihre ausserafrikanischen Beziehungen* [The African Drums and Their Non-African Relations] (Stuttgart, 1933), 33.

[59] P. Soury-Lavergne, "La fête de la circoncision en Imerina" [The Celebration of Circumcision in Imerina], *Anthropos*, vol. VII (St. Gabriel-Mödling, 1912), 628.

[60] [Percival R.] Kirby, *The Musical Instruments of the Native Races of South Africa* (London 1934), 18 and plate 6 A.

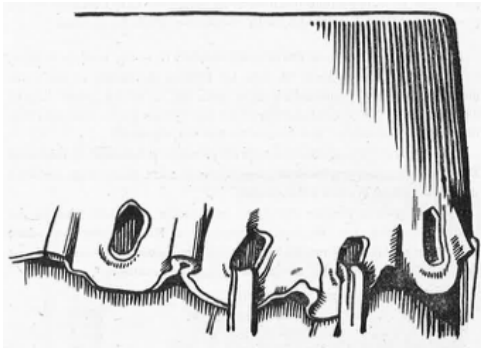

Fig. 7: Skin with simple eyelets

Simpler, i.e., in the form of a pot whose skin is constricted below the rim, the hand-held kettledrum is found in the Gran Chaco (South America). There, it is sometimes filled with water. The relation between these two kettledrums is all the closer: in both places, in the Chaco and in Madagascar, it is used for the initiation of boys[61].

**Vertical drum with nailed skin.**

According to the report from the district of Belo-sur-Tsiribihina, this drum is called *n'lapa*. The *vertical drum*, a term used for the first time here, has a single skin only. Its height exceeds its diameter, and it is generally placed in an upright position in front of the drummer. This does not mean that later forms, small and portable, could not be held more or less obliquely. By the way, under this new term we include all sorts of exterior shapes: cylinders, cones, barrels, mortars or goblets.

Contrary to the *peg*, which will be addressed in the following section, the *nail* pierces the intact skin (fig. 6).

In the *Musée* there is only one example of a vertical drum with nailed skin.

- 30.73.18. Makoa from Besalampy. Open cylinder made of smooth wood, with the skin of an amphibian (*do*), fixed with wooden nails. Height 29.5, diameter 11 cm (plate VI, C).

Note that on the African continent, the center of the distribution of amphibian skin is located between Niassa and the east coast, opposite the northern tip of Madagascar.

A photo placed at our disposal (plate VI, D) shows that the drum in question is beaten with two bare hands. The report cited at the beginning of this section confirms this.

The *tary* from the district of Maintirano seems to be the same drum.
Probably this is also the case with the *piripity* from Tuléar and Soalala and the *dabam-piripity* from Antsalova.

[61] K[arl] G[ustav] Izikowitz, *Musical and other Sound Instruments of the South American Indians*, (Göteborg, 1935), 172.

**Vertical drum with pegs.**

The term *vertical drum* has just been explained. As far as the *peg* is concerned, it differs from the *nail* in that it does not pierce the intact skin, but is passed through *eyelets* cut at its border (fig. 7). The skin is fastened in this way.

Being much more developed than the drum with nailed skin, the vertical drum with pegs is particular to Negro populations [lit. “races”] living on the isle of Nossi-Bé in the west of the northern tip of Madagascar. The wood is hard and well-wrought; the outer shape varies; the pegs are long and protrude into the inside; the skins are those of mammals, and the eyelets belong to the *tripartite* type.

By this term we mean a threefold opening made at the border of the skin by three vertical incisions in juxtaposition with each other. The two thin laces thus produced intertwine and enclose the peg. Although very special, this fastening is also found on the western and eastern coasts of the African continent (fig. 8).

In comparing the drums of this type methodically, one first of all recognizes a group with a base or stand resembling mortars. These drums are closed at the base, rounded and altogether formed like vases of pottery. Some are even decorated, as if one had worked them in clay. Finally, the skin, with a narrow border, is attached by means of a large number of pegs (twelve to twenty).

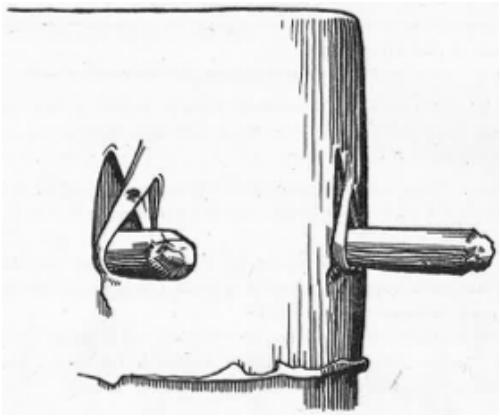

Fig. 8: Skin with tripartite eyelets.

Another group unites elements of opposed character: without stand or ornaments, these drums have few pegs (eight or nine), the base is open, the lower end cut neatly at the edge, and the skin has a broad border, covering at least a quarter of the body.

Besides these two groups which we have just looked into, there exist two other types of vertical drums. One of them forms a transition between groups I and II. If these three groups show the course of a single evolution, the fourth one is rather a tributary, which deriving from other sources flows into the stronger stream.

Here are these four groups.

I) Vertical drums with pegs,

- on a stand,
- rounded,
- closed,
- with small border (of the skin)
- with 12-20 pegs.

- 46349. The base is constricted to form a stand. There are twenty pegs of different height: the edge of the skin has been used. A part of the original line of fastening had to be abandoned, and new pegs were inserted some centimeters higher. Height 62, diameter 31 cm.
- 46350. The base, constricted, is cut to form a circular stand or, if you prefer, four feet on a disk. The twelve pegs, slightly tilted toward the inside, could easily come off. To prevent this inconvenience a double lace is braided around the pegs. One of them has been lowered to stretch it down. Height 64, diameter 35 cm (plate VII, C).
- 46351. Cylindrical drum without rounded base. A cylindrical central foot serves as stand. In the middle is a sculptured belt: two juxtaposed sticks are interrupted by three squares, two of which are pierced lengthwise as handles. Inside pieces of metal have been put for magic effect, probably coins. The seventeen pegs are held together by a fivefold cord. Height 50, diameter 34 cm.
- 46352. (Bantu) name: *goma*. The stand is cut and the base opened again. The lower half has two engraved areas. A large strip of skin, retaining its fur, covers the lower end. The skin shall precede the truncation. The number of pegs is eighteen. Actual height 45, diameter 23 cm.

2) Vertical drums with pegs,

- without stand,
- on bulky cones,
- lower end with ridge,
- closed,
- with broad [skin] border,
- with 8-10 pegs.

- 32.35.224. The torn skin exhibits an oval vessel. On one vertical line, two handles without piercings have been sculpted. Ten pegs. Height 47, diameter 28 cm.
- 32.35.121. Nine pegs. Height 43, diameter 27 cm (plate VII, B).
- 32.35.200. Eight pegs. Height 38, diameter 23 cm.

3) Vertical drums with pegs.

- without stand,
- lower end with ridge,

- open,
- with broad border,
- with 8-9 pegs.

- 32.35.197. Cone slightly concave with nine pegs. Height 45, diameter 28 cm.
- 32.35.298. Barely concave cylinder with eight pegs. Height 43, diameter 27.5 cm.
- 32.35.222. Straight cylinder with eight pegs. Height 57, diameter 30 cm.
- 35.32.223. Straight cylinder with eight pegs. In the border of the skin there is – besides the tripartite eyelets – a double eyelet with a small separating strip. This one is held up by two inserted pieces of lace. Height 46, diameter 31 cm (plate VII, D).

4) Vertical drums with pegs,

- on a straight cylinder,
- with or without pinnacle,
- open,
- with narrow border,
- with 11-19 pegs.
- 46346. Nineteen pegs. Height 41, diameter 23 cm.
- 99.18.9. Eleven pegs. Height 103, diameter 22 cm.
- 99.18.10. Indicated name: *mossoundro*. From the lower end, three posts serving as feet have been cut. Fifteen pegs. Height 129, diameter 25, height of the posts 10 cm (plate VIII, A).

The chronology within this type should not be in doubt. In the evolution of musical instruments, the larger forms are earlier than the smaller ones, and the *positives* [positive organs], as they are called in the language of organs, precede the *portatives* [portative organs]. Now one of the examples in the *Musée*, no. 46352, confirms this experience by the metamorphosis it has undergone. Its foot has been removed, amputated, truncating the instrument. Since it has also been opened underneath, we see, as the third factor of the evolution, the transformation of a closed base to an open base. Hence the group called 1 is earlier than group 3, and group 2 lies in between, an interim step in the development. Comparing the different characteristics of these three groups yields the following juxtaposition:

| Early elements | Later elements |
|---|---|
| rather larger form | rather smaller shape |
| with stand | without stand |
| closed base | open base |
| rounded lower end | lower end with ridge |
| bulky body | straight body |
| skin with narrow border | skin with wide border |
| many pegs | few pegs |

From this follows that the drum was originally built with a clay body, which by and by was transformed into a wooden tube. Our group 4, in contrast, obviously derives from trees.

In the manuscript of the Rev. Father H. Dubois on the Betsileo, a drum called *rome*, *romy*, or *tsiañe* is presented. According to the design, it seems to belong to group no. 3.

**Double-headed cylindrical drum.**

(plate VIII, D and IX).

The situation concerning drums with two skins is extremely confusing. Museum specimens are mixed, and the information about them is contradictory. The only clear distinction is between cylindrical drums, either straight- or round-bodied, and conical drums.

As far as the cylindrical drum is concerned, studying the reports reveals a main type with cowhide skins, one of which is beaten with two sticks. Sometimes there are leather thongs, sometimes braided cords, whose lacings take the forms of N, W or Y (fig. 9-11). One or two laces or cords tied transversally form the belt. The drum is put on the floor or is carried suspended from the neck. Either the women exclusively or both men and women play it. Its use is secular. The names are – if one dares to take a risk in this muddle – in

- the east: *ampónga*.
- the west: *langoro.*

and furthermore in

- Manja: *langoroa*.
- Ankazoabo: *langorona*.
- Tuléar: *daba*.
- Morombe: *ampónga*.
- Belo: *daba*, *totrobe*.
- Maintirano: *langoraony*.
- Antsalova: *daba*.
- Port-Bergé: *langroana*.
- Soalala: *langoroany*.
- Tsaratanana: *langorony*.
- Diégo-Suarez, Betsileo: *langoraony*.

In general, *langoraony* and similar names are given to a *langoro*, improved by gut strings crossing the membrane, which is not beaten like European drums.

It is necessary to distinguish two very different types of cylindrical drums: the first is characterized by what we call *direct attachment*: the laces or cords pass through the eyelets cut into the borders of the two skins without an intermediate hoop (fig.7).

Almost the same kind of drum exists among the Zulu. Like that of the Malagasy, it is struck with two sticks[62].

Fig. 9: Lacing in an N pattern.

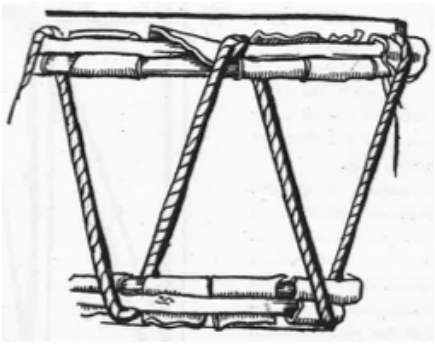

Fig. 10: Lacing in a W pattern.

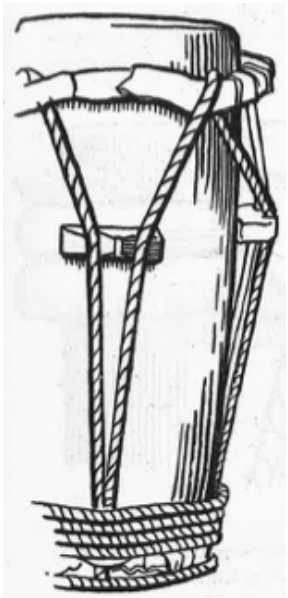

Fig. 11: Lacing in a Y pattern.

Fig. 12: lacing in a net pattern.

[62] P[ercival] R. Kirby, *The Musical Instruments of the Native Races of South Africa* (London 1934), plate 15, A and B.

- 33.9.37. Mahafaly, on the bank of the [River] Onilahy. Barrel-shaped drum of soft wood. The borders of the skins folded down the side wall retain their fur. The laces display the form of an N, with a belt and a shoulder strap. Length 44, diameter of the skins 20 and 22 cm (fig. 9).
- 35.68.61. Mahafaly (town: Ampanihi). Indicated name: *hazolahi*. Similar, but with cords strung like a net in an N pattern. Length 36, diameter of the skins 26.5 and 29 cm (plate VIII, D). GGM.
- 91.45.139. Sakalava. Straight cylindrical drum with cowhide skins; the implementation is very irregular. The laces are strung in an N pattern, with four transversal interlacing thongs. Length about 36, diameter of the skins 48, the stick 32 cm.
- 33.1.33. “Madagascar”. Probably a child’s toy; small straight cylinder. The eyelets in the skin are replaced by simple hoops of rattan. The cord is strung in a W pattern, and accompanied by an interlacing thong. Length 12, diameter of the skins 10-11 cm.

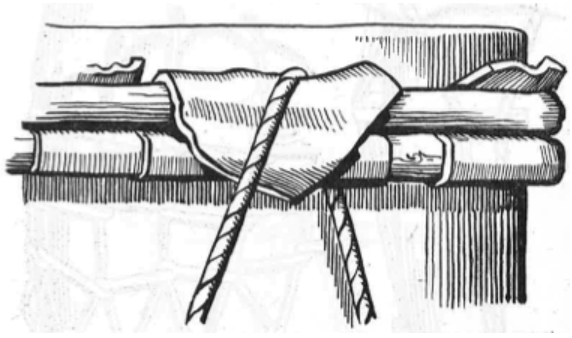

Fig. 13: Indirect attachment.

This last drum represents perhaps a degraded form of the second group. Might this be the *torovoka*, played in the district of Sakaraha?

*The second group* is characterized by what we call *indirect attachment*: the skin is wrapped around a first ‘circle’ or hoop. The border goes up again and is pressed by a second hoop (fig. 13).

- 31.85.1. Town of Manakara (east). The cylinder is straight, and the laces form a W and are strung over supports. Length 22, diameter of the two skins 19-20 cm (plate VIII, B; fig. 13).
- 31.85.6. “Madagascar”. Barrel-shaped. The laces form a Y, and are intertwined with eight transversal thongs. The strap is also made of leather. Length 40, diameter of the skins 29 and 31 cm (plate IX, B).
- 31.548. Bézanozano (east). Indicated name: *amponga*. The cylinder is straight, and the laces, strung in a Y pattern, are intertwined with four thongs, forming a belt. Length 35, skins 30 cm.
- 32.88.91. “Madagascar”. Barrel-shaped, of rather rough manufacture; the W formed by the cords is very open. Length 33, diameter of the skins 37-38 cm.

- 31.85.4. “Madagascar”. The barrel forming the drum is covered with a white mud. Inside there are some grains or small stones. On the hoops, the skins form, in the Indian manner, very pronounced bulges. The strong band which ties them together is laced in a W pattern. One of its ends, knotted to one of the laces, serves as strap. There is no transversal cord. Length about 50, diameter of the skins 30-31 cm. (plate IX, A).

Among the Betsimisaraka, at least, the white clay, called *tany fotsy*, is believed to keep away evil spirits[63].

Under the name *adabo* Mr. H. Deschamps mentions a large, flat drum, bringing to mind those of the army. Put on the floor and slightly inclined, it is beaten with two sticks and forms the bass {for two double-headed conical drums}[64].

We add the several names, gathered from the reports from the various districts, without being able to characterize the shapes they take.

- *Ampónga*, drum on a stand, played with both hands by a man. District of Bealanana. In the district of Maintirano a drum of the same name would be played with a single stick.
- *Ampóngabé,* a “large drum” said to be played by singers with one hand and one stick in the district of Diégo-Suarez. In the district of Beroroha, an *apongobe*, of cylindrical shape, would have two goat skins and be played with two sticks by a woman during familial ceremonies and sacrifices.
- *Ampónga láhy*, in the district of Tsaratanana, is perhaps identical to the *hazoláhy*, even more so as the latter is not mentioned among the instruments of this district. One strikes it with the hand and a stick.
- *Bingy* is a cylindrical drum with two cowhide skins in the region of Majunga, 60-70 cm long and 35-40 cm wide. It accompanies fights.
- *Daba,* in the district of Antsalova, seems to be the *langorona*, played by a man with one hand and a stick during fights.
- *Denaka* is believed to be a shorter *hazolahy* in Manja, which the Tanala children play in the land of the Sakalava. In Tuléar it is given a cylindrical form, and the young Sakalava beat it either with both hands or with two sticks. In Morombe it is said to have straps, be worn in front of the upper body, and be beaten by a man with both hands during fights. Thus, nothing is really clear.
- *Dory* is the name of a double-headed drum of the Sakalava in the district of Mitsinjo. It has a diameter of about 60 cm, is not permitted to leave the enclosure of the graves of the Sakalava kings and is only used during very big celebrations. Its ‘son’ *anakidory* has a diameter of only 20 to 25 cm. The *anakidory* are always played in pairs, during less important ceremonies. Although they may be moved, they may not be removed from the dominion

[63] Guillaume Grandidier, “A Madagascar, anciennnes croyances et coutumes” [Ancient Beliefs and Customs on Madagascar], *Journal de la Société des Africanistes* [Journal of the Society of Africanists], vol. II, no. 2 (1932), 190.

[64] Henry Deschamps, *Les danses antaisaka* [Antaisaka Dances], [1934], 32, and the unpublished manuscript by the same author.

of the grand *dory* to which they belong. The report from the district informs us: "*Dory* and *anakidory* may only be touched by men. No woman should ever dare touch them." These rites bring to mind the ceremony of the sacred drums in the Great Lakes region of southern [south-eastern] Africa.

- *Langorony* is the name of a drum with two cowhide skins in the district of Maevatanana, which is played by a man with both hands for family reunions.
- *Manandria* seems to be synonymous with *hazolahy*.
- *Moraingy* or *morengy* is the name of several drums, with obvious differences, which accompany the indigenous fights of the same name.

**Conical drum.**

In general the name is *hazoláhy*, "male wood (tree)". This word is also used to designate a coffin lid. But according to the descriptions, it seems that the term *manandria* in the districts of Marovoay, Soalala, Ananalava and Nossi-Bé is synonymous with *hazolahy*.

The Malagasy conical drum is made of hardwood. It has a slightly vaulted body and two markedly different skins. The smaller one is surrounded by a ring of straw. As with the second group of cylindrical drums, the attachment is indirect: the skin is wrapped around a ring; the border goes up again and is pressed by another ring. The intertwined cords, strung in a W pattern, are tightened to form a Y by means of movable wooden wedges [lit. bridges] with two notches. Near the small drumhead, there is a belt made of several loops of cord (fig. 11, plate VIII, C and X).

The drum is suspended from the [musician's] body by a cord and kept in an almost horizontal position. The small end is raised a bit; the large skin – *ambáviny*[65] – is on the right. In general it is struck with a very simple stick, while the small skin is beaten with the bare hand. As explained by Mr. H. Deschamps, one "pats the small side with the hand, in a continuous precipitate rhythm" and one "beats the bigger side with a wooden mallet, with strokes which vary in intervals and power and guide the dance"[66]. Hence the Malagasy saying addressed at a biased person: "You take us for a drum. On one side you tap softly with your hand, while you strike hard with a beater on the other side"[67].

The conical drum exists only in pairs, different in shape and sonority such that one pair produces four tones. According to the report from the district of Ambanja, the big one is called *hazoláhy reniny*, big *hazoláhy,* and the small one *hazoláhy zanany*, little *hazoláhy*. The difference does not lie in the length, but only in the diameter. Incidentally, everywhere in the world where pairs of instruments

[65] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique); 2nd edition (from which we are citing the pages in brackets) of 1899.

[66] Henry Deschamps, *Les danses malgaches* [Malagasy Dances], 32.

[67] P. Callet, "Nouveau dictionnaire malchage-francais" [New Malagasy-French Dictionary], *Bulletin de l'Academie malgache*, vol. II. (Antananarivo, 1903), 208.

exist, one is originally is considered male and the other female[68]: the name 'male wood' may be a relic thereof.

It is true that there could be another explanation: the *hazoláhy* is never found in the hands of a woman, and several observers even confirm that women are formally banned from touching it. In any case, the *hazoláhy* – as opposed to the *langoro* – is a ritual and often sacred instrument. Its place is in the royal ceremonies, circumcisions[69] and funerals[70]. However, it seems that when the diverse information is compared, the instrument is also used on more profane occasions, and even the manner of playing is not always the same. Thus, the report from the district of Soalala tells us about both the drum *manandria*, reserved for royal ceremonies and "beaten with two hands", and the *hazoláhy*, "beaten with one hand and one stick" during the *moraigny*, the indigenous fights. But all these questions should be reviewed on-site.

- 35.68.1. Tanala west of Manakara. Length 41, diameter of the skins 16 and 12 cm. GGM.
- 35.68.2. Tanala west of Manakara. Length 39, diameter of the skins 15 and 11.5, the stick 10 cm. GGM.
- 29.1.41. Antaisaka in Farafangana. Length 39, diameter of the skins 15-16 and 12, the stick 20 cm (plate VIII, C).
- 31.85.5. Antetsimara in Manakara. Length 35, diameter of the skins 16 and 10-11 cm.
- 31.85.3. Farafangana. Indicated name: *langoróny*. Less accurate and without disk. Length 40, diameter of the skins 16 and 12 cm.
- 31.85.2. Farafangana. With straight walls and without disks. The wedges [lit. bridges] are missing. Length 39.5 cm, diameter of the skins 15 and 13 cm.

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[68] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 254f.

[69] Étienne Flacourt, op. cit., ch. XX, 64; however, Cauche, op. cit., 78, claims to have seen a *woman* beating a drum during a circumcision in 1642, which according to his description can only be the conical drum. Callet, op. cit., 209, mentions under the name of *ampóngatary* a second circumcision drum, similar to the first one but smaller, upon which the child to be circumcised is placed. Cf. Guillaume Grandidier, op. cit., 167; and P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique); 2nd edition (from which we are citing the pages in brackets) of 1899.

[70] For example Lavau, op. cit., 64.

## *Chordophones.*

### Ground zither.

(Merina *ampónga fandrotrárana* 'couch grass drum' {*Triticum repens*} or *ampónga tány* 'ground drum').

Mr. Raymond Decary writes us about this instrument: "Two deep holes, of about 20 cm in diameter and 15-20 cm in width, are dug into the ground at a distance of 50 cm. Flat disks, 2-3 cm thick with a diameter of 20 cm and made of dried mud, are placed on these holes. A piece of wood 15 cm long is stuck into the middle of each. A stalk of couch grass 1-1.5 m long rests horizontally on the upper ends of these wooden sticks and is tightened at its ends, which are attached to small stakes stuck into the ground."

The ground zither is an entertainment for the children of the Merina and the Betsileo, who built it while herding animals. They pluck the string with their fingers.

- 35.68.74. The *Musée* possesses two disks of dried cow pat and about seven meters of pieces of couch grass. GGM.

Besides this first form – two bridges over two pits – the Merina know another form, in which a single bridge divides the side of the couch grass leaf serving as string in the proportion of 1 : 3. Here the string is not plucked, but beaten with two sticks.[71] The same toy has been reported – without mention of sticks – from in the district of Soalala, under the name *dobokilangaia*.

While the zither with a simple bridge is known in Fernando Po as well as in Malacca[72] and Annam[73], the zither with a double bridge is Indonesian: it is only found on the island of Madura near Java[74]. The African continent has neither of these two forms.

### Ground bow.

(Tanala *pitikilangy*).

Mr. Raymond Decary writes us about this instrument: "A deep hole of about 30 cm is dug in the ground. Over the opening a piece of *harongana* bark is placed, held fast by pieces of bamboo tied together and pierced in their middle with small holes of 2-3 cm in diameter. This bark is fixed firmly to the ground by dowels stuck in the

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[71] [Paul] Camboué, "Jeux des enfants malgaches" [Games of Malagasy Children], *Anthropos*, vol. VI, (St. Gabriel-Mödling, 1911), 670f.

[72] H[enry]. Balfour, "Report on a Collection of Musical Instruments from the Siamese Malay States and Perak", *Fasciculi Malayenses*, *Anthropology*, Part IIa (Liverpool, 1904), 16.

[73] G[aston] Knosp, *Rapport sur une mission officielle d'étude musicale en Indochine* [Report on an Official Mission of Musical Investigation in Indochina] (Leyden, 1911), 64. Nguyen Van Huyen, *Les chants alternés des garçons et de filles en Annam* [The Alternating Chants of Boys and Girls in Annam], (Paris, 1934), 29.

[74] J. S. Brandts-Buys, "De toonkunst bij de Madoerezen", *Djawa* [Music among the Madurese, Java], vol. VIII, 1928, 61. C[urt]. Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 59f.) André Schaeffner, *Origine des instruments de musique* (Paris: Payot, 1936), 146f.

ground. One meter away from the pit, a thin, flexible piece of wood about 2 m long is stuck into the ground, with a string attached to its end. The other end of the string is equipped with a dowel, which transversally pulls the flexible pole into the form of an arc over the central opening".

The dimensions which Mr. Ralph Linton has reported are slightly different: one and a half meters for the rod, about 12 cm for the depth of the pit, and about 20 cm for its diameter. According to him the string is made of twisted raffia.

Mr. Linton also describes the way the ground bow is played. The right hand plucks the string while the left hand, gliding on it, presses onto it at different positions and thus determines the intonation[75].

The distribution is not limited to the Tanala children and their neighbors of the east coast.

In the region of Tuléar, in the south-east of the island, the children in the village and on the fields make an identical zither. The report from the district of Sakaraha refers to it as *tipakalangay*, and the one from Ankazoabo calls it *tsipakilangay*. In the first of these districts, the rod measures only 50 cm, the string is made of a fiber extracted from the bark of *sely* or *aviavy* and the soundboard is made of a large *fandra* leaf. "The player sits in front of the instrument, fixes the leaf with the sole of the foot and threads the string between the first two toes. With a small stick, he sets the string into vibration". In the district of Ankazoabo, in contrast, "the string vibrates under the fingers, and produces different sounds while the bow is bent more or less under the pressure of the other hand". The soundboard is a "mat" fixed by stones.

Across the African continent, rare examples of the ground bow can be found, from the area of the Washambala [waSambaa, Shambaa] in the east (Great Lakes region) to the Fulbe in the west. Outside of Africa there is no direct evidence of it. In former times, however, it must have been known in India as well as in Indochina. The principle still exists here, though the bow would have been detached from the ground and relocated[76].

- 35.68.5. The bark fixed on a double frame with interspaces to serve as the soundboard [lit. harmony board], measures 42 x 32, the bow 164, the string 89, and the split poles holding the bark 19 cm. GGM.

**Musical bow.**

The name is the same everywhere: *jejiláva* (*dzedzilava*), in Sakalava country sometimes *jénjilava* or *jejolava*, also abbreviated to *jejo*, *jejy*. We will discuss the latter word later. *Láva* signifies nothing else but long[77]. Mr. Deschamps notes: *jejolava*.

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[75] Ralph Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 253.

[76] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 60f. André Schaeffner, *Origine des instruments de musique* (Paris: Payot, 1936), 160.

[77] The name *bobre*, given by Mr. Henry Balfour on pages 32 and following of his work *The Natural History of the Musical Bow*, Oxford 1899, referring to *Relation sur la faune de*

The musical bow of Madagascar belongs to the type *bow with calabash and loop* and measures about 140-200 cm. The wood, freshly cut from *voakarepoka*, is carefully debarked and left round. The ends decline. A thin liana of *vahijanaha*, also debarked, or the inner filament of a palm leaf is used as a string. The calabash resonator is placed near the lower end (left side) of the bow. It is tied to the string with a loop made of raffia.

Manga [read: Manja] in the region of Tuléar is the only district form where a wooden wedge (instead of a loop) has been reported.

Once again, we owe detailed information about the playing method to Mr. Raymond Decary. The musician, he writes us, "holds the bow in the left hand, the index finger placed between the wood and the string; the opening of the gourd is attached to the left side of the upper body, which is naked. While the string is vibrating, the distance the musician leaves between the gourd and his upper body allows obtaining lower or higher notes".

We interrupt Mr. Decary to state that contact with the upper body is not obligatory, neither on Madagascar itself nor elsewhere. The report from the district of Ankazoabo mentions the belly, and the one from Befandriana says that either the belly or the upper body can be used. But the most interesting phenomenon is reported from the district of Vohémar in the region of Diégo-Suarez: there, two different bows are used, one pressed against the belly and called *jenjilava*, the other pressed to the upper body, in contrast, and called *jenjifohy*.

We turn to R. Decary again: "With the right hand holding the stick and the basket of the *fandrana* (cf. p. 7) at the same time, the musician hits the string. Also, with the index finger of the left he can modify the pitch of the vibrations by touching the string at the desired moment". In contrast to the latter remark, Mr. Ralph Linton does not speak of the index finger, but rather of the left hand[78].

Here, however, a little clarification is in order. This is how it happens: in the bow with a loop, the string is divided by the latter into two sections, which produce two different fundamentals. In addition, the player produces one or more other fundamentals when shortening the lower section of the string by applying one or more fingers, in the manner of a violinist or guitarist. With these two to four fundamental tones, one perceives harmonics quite well. Hearing them depends on the material, the thickness, and the tension of the string. The calabash pressed against the upper body can only resonate in unison with one of the fundamentals. Therefore it is necessary to lift it the moment one of the others is played[79].

Regarding the strange combination of the musical bow with a rattle in the hand of the same musician, the reader is referred to the references on page 7.

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*Madagascar* [Report on the Fauna of Madagascar] of F. P. L. Pollen and D. C. van Dam, Leiden 1861, is not listed in the Malagasy dictionaries.

[78] L. [?] Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 265.

[79] The process has been described at length by P. R. Kirby, op. cit., 198f. and quite recently by the same author in "The Musical Practices of the Auni and Khomani Bushmen", *Bantu Studies*, vol. X, no. 4 (1936), 378f.

The musical bow is used among all tribes of the eastern and western coast of Madagascar, and less frequently among the Merina and Betsileo of the Central Highlands.

It makes, Mr. Raymond Decary writes us, “a kind of music for the family. It is played near the house, when relaxing, especially in the evening. This music often accompanies the dancing of the younger children. Bernardin de Saint-Pierre mentioned it in one of his letters as early as 1769. He reports that the Blacks “draw a kind of sweet harmony from it, with which they accompany the songs they compose. Love is always their subject. The girls dance to the songs of their lovers: the audience claps the rhythm and applauds”[80].

In certain places, the musical bow is now merely a toy for children. Its ritual and magical origins, on the contrary, are almost effaced. Leguével de Lacombe observed it in 1823 among the Betsimisaraka, accompanying funeral songs[81]; and the report from the district of Analalava only mentions as the bow’s role the accompaniment “in ritual songs” of “narratives, speeches, invocations, and panegyric songs or praises of certain incidents and exploits of the king or his ancestors.”

- 35.68.44. Betsimasaraka [read: Betsimisaraka] (Mananjary). The end of the bow is given the shape of a tenon (fig. 14). The lace is wrapped around the wood several times. Length 166 cm. GGM.

Fig. 14: Tenoned end.

Fig. 15: Pointed end.

Fig. 16: Forked end.

- 35.68.45. Betsimisaraka (Mananjary). The end is pointed (fig. 15) and the lace is twisted. Length 146 cm. GGM.

[80] J. H. Bernardin de Saint-Pierre, “Voyage à l’île de France”, Œuvres … mises en ordre, par L. Aimé-Martin (Paris, 1833); and in Collection des ouvrages etc., vol. V, lettre XII du 25 avril 1769.

[81] Leguéval De Lacombe 1840, 111.

- 35.68.46. Betsimisaraka (Mananjary). The end is forked (fig. 16) and the string is of fiber. Length 151 cm. GGM.
- 35.68.47. Betsimisaraka (Mananjary). The end is forked and the string is of fiber. Length 160 cm. GGM.
- 35.68.48. Betsimisaraka (Mananjary). The end is pointed and the string is of fiber. Length 164.5 cm. GGM.
- 35.68.49. Betsimisaraka (Mananjary). The end is forked and the string is of fiber. Length 151 cm. GGM.
- 35.68.50. Betsimisaraka (Manakara). The end is tenoned and the lace is twisted. Length 143 cm. GGM.
- 35.68.51. Betsimisaraka (Manakara). The end is tenoned and the lace is twisted. Length 153 cm. GGM.
- 35.68.52. Betsimisaraka (Manakara). The end is tapered in a way almost forming a tenon. The lace is twisted. Length 151 cm. GGM.
- 35.68.53. Betsimisaraka (Manakara). The end is forked and the lace is twisted. The bow and the string are colored wine-red. Length 127 cm. GGM.
- 99.56.31. Betsimisaraka. The name given by the collector, *zavamaneno*, is just the generic term for 'musical instrument'. Tenoned with twisted lace. Length 148 cm. GGM.
- 2749. "Madagascar". Tenoned with twisted lace. Length 151 cm.

In spite of the importance of this collection of musical bows from Madagascar, it is not yet possible to outline their morphology. Thus, our catalog rather follows the geographical order.

**Raft zither.**

The Merina name is *valiha véro*, zither of *Andropogon*; but it is necessary to compare the term *marovány*, which will be dealt with in the following paragraph (p. 49).

Several stalks of *Andropogon* grass in decreasing lengths are juxtaposed, but leaving space in between[82], in contrast to other raft zithers. Two transversal stalks connect them. On each longitudinal stalk, keeping the adherent ends, a fiber has been cut to serve as string. Two small converging sticks are inserted on both sides under each of these strings, to function as bridges.

The instrument is a toy for Merina and Betsileo children.

- 35.68.62. Antananarivo. With seventeen stalks. 21 x 13.5 cm. GGM.
- 35.68.63. Antananarivo. With twelve stalks. 28 x 18 cm. GGM. (plate XI, D).

It is with a certain reserve that we refer to the *dombólo* in this context, which the Rev. Father Dubois has described, rather obscurely, as a "small musical instrument composed of pieces of bamboo of varying lengths[83]". The raft zither can be related with much more certainty to the object called *lokánga hisatra*, defined

[82] Except the one from Cameroon: Schaeffner, op. cit., plate XIII, 128.

[83] Henry Dubois, *Essaie de dictionnaire betsileo* (Antananarivo: Imprimérie off. Oblong, 1917), 52.

as a fragile instrument, made from the bark of the Zozoro by children, who amuse themselves by plucking the strings[84].

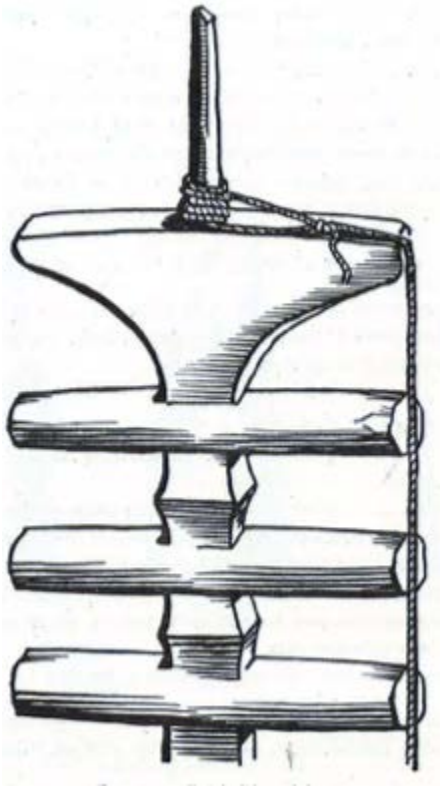

Fig. 17: Thorn-shaped end.

Outside of Madagascar, the raft zither is found all over Africa, as well as in Asia, among some aboriginal tribes of India. The exact distribution can be found in our work *Geist und Werden der Musikinstrumente* at page 140.

**Stick zither.**

On Madagascar it is known under two names: In Merina it is called *lokángo voatávo* 'instrument with calabash'; Swahili knows it as *dzédzy*, *jéjy* or *jéjo*, a word which seems to date back to one of the names of the harp of ancient Egypt: *dede*[85]. In the west, one even finds the corrupted form *dzédzivoatávo*.

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[84] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique); 2nd edition (from which we are citing the pages in brackets) of 1899, 372(397). Cf. [Paul] Camboué, *Jeux des enfants malgaches*, Volume VI. (St. Gabriel-Möldling: Anthropos, 1911), 669. According to Abinal and Malzac, the word *hisatra* signifies the action of moving, gliding slowly, to move by small jolts, with inhibition, while scraping like a pirogue touching the ground."

[85] C. Sachs, *Die Musikinstrumente des alten Ägyptens* [The Musical Instruments of Ancient Egypt], Berlin 1921, 67. The name *sauly*, given to the stick zither in 1642 by François Cauche (p. 81), is more than doubtful, as it is hardly different from the one for the flute:

A stick, whose shape varies between a flat slat taken from the field and a rectangular beam, is sculptured to form three thick, columnar protrusions near one end, which function as a fingerboard. On this side, the end is pointed (fig. 17) or forms a pegbox, with one or two lateral pegs (fig. 18).

Fig. 18: End with pegs

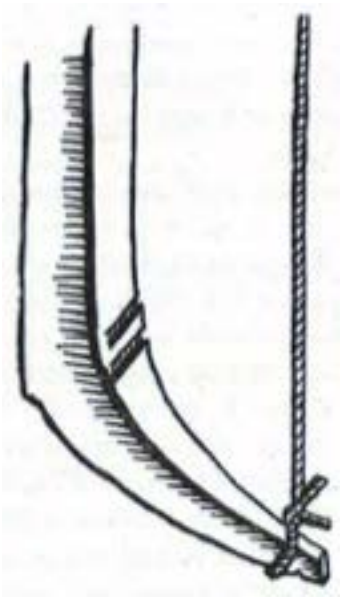


Fig. 19: Curved end

The strings are wound either around the pointed end or around the pegs, following two different paths. The main string, sometimes doubled or – among the Betsileo – even tripled, passes over the stick to be pressed against the protrusions (fig. 17, 18), and is knotted again at the opposite end, where the shape is curved (fig. 19) or forked (fig. 20). Some centimeters before this knot, the string rests on a small piece of a feather which the musician bends around the wood so that it serves him as a bridge, and which he raises to tune the instrument (fig. 20)[86]. Another string, however, knotted at the same points, runs alongside the side of the stick at a lower plane than that of the first string. Its musical role has never been

*sóly*. The travel report of this adventurer does not enjoy a particularly good reputation. The origin of the name *bobre,* which appears in the alphabetical index of the modern edition of this work, is unclear.

86 Cf. Stéphen-Chauvet, 101.

pinpointed. Does it serve only as a replacement in case of a broken string? The second string, which sometimes passes over the bridges, is tuned differently: sometimes to the third, sometimes to the fifth or even to the octave of the first string. “Each player seems to suit his own taste”[87] [English original]. For the three strings of the zithers of the Betsileo, the Rev. Father Dubois indicates the low fifth [lit. “dominante basse”, i.e. a fourth below the fundamental], the fundamental, and third.

The calabash resonator, open at the base, is decorated with a hood made of the same fruit; the suspension cord is passed through it, and it serves as mounting for the stick. Some zithers possess a second calabash resonator, considerably smaller and suspended from the other end, near to the columnar protrusions (plate IV, B).

A photo taken in Androy (plate IV, D) shows us, how the zither is played. The calabash is pressed against the upper body and the stick points down at an angle of 40°, so that the three protrusions are offered to the index, the middle, and the ring finger. While these fingers determine the melody by pressing the string against the protrusions, the right hand holds the stick near the calabash and plucks the string with the middle finger.

If, as Mr. Sichel claims, the succession of the protrusions “produces a complete scale on *G* (*G* to *G*) and contains an $F^{\#}$“, it can only be the zither with two strings, because the empty string pressed against the three protrusions could only produce four degrees of the scale. Incidentally, this scale is excessively vague. The smallest change of pressure and a minimal displacement of the finger on the fairly broad surface of the protrusion can produce anything one wants. The principle, if there is one, can only be deducted from the geometrical position of the protrusions. The result of this evaluation is that, on average, the first protrusion produces the major second, the second the minor (!) third, and the third one the fourth.

According to Mr. Decary, this instrument is found among all the coastal populations, alone or accompanying songs.

Although the stick zither seems to be clearly determined as a type, it is by no means uniform. A comparison shows:

| sometimes | sometimes |
|---|---|
| pointed end | peg(s) |
| one calabash | two calabashes |
| flat slat | rectangular beam |
| forked end | curved end |

Organology teaches us that a string tightened by a peg is a later development than a string wound around a pointed end. This is the first insight.

[87] G[eorge] A[Andrew] Shaw, “Notes on the National Musical Instruments of the Malagasy,” *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 268.

Now, all zithers with two calabashes have pegs. Hence, as a second insight: the double calabash is an advancement over the single calabash.

In two of three cases, the specimens with peg(s) and two calabashes have a rectangular beam and the third one nearly has it, while the flat slat is universal in the zithers regarded as more primitive, due to theirs pointed end. Hence, as a third insight: the rectangular beam is more modern than the flat slat.

Finally the paired [characteristics] forked and curved. First of all we find that all [zithers with] rectangular beams have a curved end. In addition, the examination of the forked ends indicates, too, that the fork is earlier than the curved end: of the fork's two branches only the one in the plane of the string is used. Furthermore, the other branch is often removed, yielding something very close to the curved end (fig. 21). Thus, all qualities listed above on the left of our comparative table are earlier than those on the right.

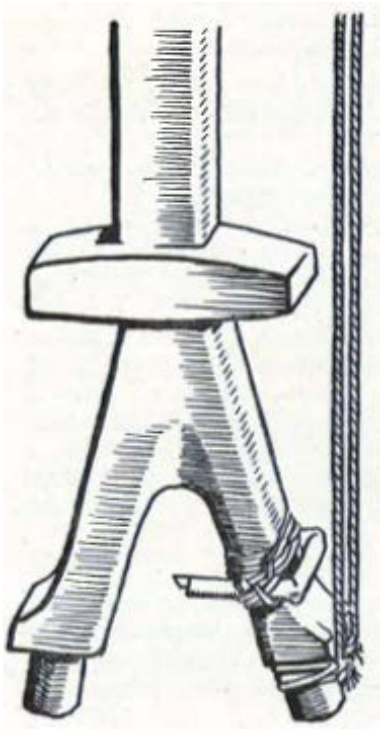


Fig. 20: Forked end.

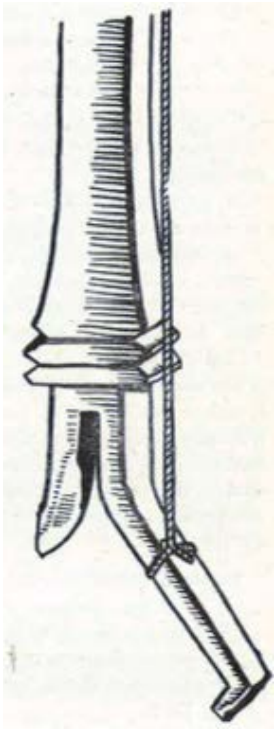


Fig. 21: Cut fork.

We thus arrive at the following classification.

1) Pointed zither (with a single calabash).

- 91.45.223. Forked end, with a feather. Near the protrusions the slat is cut with openings, so that they form two small rods. Two strings pass over the bridges. Length 58.5 cm; the slat, measured – like all the following – at the cross-section in the middle, is 3 x 0.8 cm (plate IV, C).
- 22.13.8. Forked end, with a feather. Length 72, cross-section 2.5 x 1.1 cm.

- 31424. Broken forked end, with a feather. Length 52, cross-section 2 x 0.9 cm.
- D 33/36 13. Forked end, with a feather. Two strings pass over the bridges. Length 62, cross-section 2.7 x 1.3 cm.
- 31.85.16. Broken forked end. Length 69, cross-section 2.1 x 1.1 cm.
- 31.85.10. Miarinarivo. Forked end, with a feather. Length 52, cross-section 2.4 x 1.5 cm.
- 01.10.4. Fort-Dauphin. Forked end, pyrographed. Length 65, cross-section 1.5 x 1 cm.
- 01.10. Fort-Dauphin. Forked end. Length 61.5, cross-section 1.6 x 1.1 cm.
- 48784. Sakalava. Curved end, with a feather. Two strings pass over the bridges. Length 74, cross-section 2.5 x 0.9 cm (sketch in Schaeffner, op. cit., 196).
- X.33.196. Curved end, the strings are missing. Length 69.5, cross-section 2.2 x 1.1 cm.
- Without no. Curved end, with a feather. Length 70, cross-section 2.5 x 1.7 cm.

2) Zithers with peg(s) and a single calabash.

- 22.13. Bara. Forked end, with a feather and two scale-shaped pegs in an open European-style pegbox. Two strings pass over the bridges. Length 70, cross-section 2.7 x 1 cm.
- 35.68.3. Tanala (Vohipeno). Curved end. Length 70.5, cross-section 2 x 1.5 cm. GGM.
- 35.68.30. Betsimisaraka, town of Manakara. Curved end. Length 50, cross-section 1.5 x 1.5 cm. GGM.
- 35.68.31. Betsimisaraka, town of Manakara. Curved end. Length 51, cross-section 1.5 x 1.5 cm. GGM.

3) Zithers with peg(s) and two calabashes.

- 35.68.4. Tanala (Vohipeno). Forked end. Length 70, cross-section 1.9 x 1.5 cm. GGM.
- 35.68.57. Antaisaka, town of Vangaindrano. Curved end. Length 67.5, cross-section 1.6 x 1.6 cm. GGM.
- 35.68.58. Antaimoro, town of Farafangana. Curved end. Length 60, cross-section 1.6 x 1.6 cm. GGM (plate IV, B).

**Tube zither.**

(plate II, XI, XII, XIV)[88]

The main and generally known name is *valíha*. One zither of the museum, however, carries the inscription *vádiha*, the liquid [consonants] *l* and *d* being

[88] In contradiction to the information in the catalogue (vol. III, part I, 18) no. 1489 of the *Crosbie Brown Collection of Musical Instruments* at the *Metropolitan Museum of Art* in New York stems from the islands of Timor or Flores, but certainly not from Madagascar.

interchangeable in the Malagasy language. In addition, the sketch in the manuscript of the Rev. Father Dubois on the Betsileo presents the name *vadihaña*. This variation perhaps shows the etymology of the name: in Sanskrit *vâdya* means 'musical instrument'.

A second name, *marovány*, is composed of *máro* 'several' and *vany*, the part between two nodes[89]. If this translation is correct, the name once must have been used for another instrument, composed of a quantity of "parts placed between two nodes". It would hence suit the raft zither, which exists in central Madagascar, better than the tube zither.

The names of the strings are *tády* in Merina, Betsileo, Betsimisaraka, and Taimorona, *tály* (with the same mutation of the consonants *l* and *d*) in Tanosy and Sakalava, and *hosiny* in Tankarana.

The tube zither consists of a big piece of bamboo between two nodes, beyond which usually a certain portion of tube (which we will call *transnode* in analogy to *internode*) has been kept on both sides. Between the nodes and in the longitudinal direction, small strips have been detached from the bark and serve as strings. Their ends are not cut, though, and they are protected by cords wrapped around the whole tube. Each string is tightened and tuned by two small wooden wedges inserted underneath, instead of bridges.

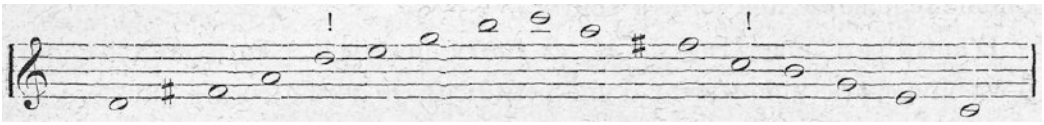
Concerning the chord, in all published reports there is only one indication by Mr. A. Sichel, which we reproduce here.

Instead of a succession of notes in diatonic order, as on the harp, he writes, the notes "are arranged in thirds from each side of the instrument. At his right hand side and in the order of the strings the player has *D-F-A* etc. in front of him and on his left the strings *E-G-B* etc. The semitones *B-C* and *D-E* {?} [read: *E-F*?], placed next to each other, make the only exception. Therefore, to play the entire ascending scale the player shall place his hands as described above and use both of them alternatingly. The low strings are in front of him, the high ones on the other side of the instrument. The thumbs pluck the low strings, which in this way play the role of true harmonic basses. The result of this disposition is that the musician naturally tends to play frequent chords of thirds and sixths, which unceasingly surprise an impartial listener. The most complete examples of this instrument have twenty strings, yielding a diatonic scale of three octaves minus two notes, from *D* to *B*. These instruments always have *G* as a compulsory tonic {according to the records recorded at the Colonial Exposition of 1931, this should be nearly $A^b$}, and as a consequence contain an $F^{\#}$. The strings do not allow alterations. The simpler instruments only have thirteen strings, and ranging from *D* to *G* which, here again, is the tonic. From *G* onwards, the major scale continues without interruption. The playing is very fast, mixing melodic figures and

[89] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique); 2nd edition (from which we are citing the pages in brackets) of 1899, 751 (777).

embellishments consisting mainly of numerous broken chords which make any notation impossible"[90].

Even in the *Musée*, the chord of thirds is confirmed by a modern specimen (no. 29.2.1), which, written in pencil, carries next to the strings the French names of the respective notes. There we see two series of separated thirds, each of which occupies half of the tube's circumference. One part starts with *C*, the other one with *D*. Thus, together they yield the diatonic scale. However, there is a little anomaly in these series: on one side there is a *C* instead of a *D* between *B* and *F*, on the other side there is a D instead of a *C* between *A* and *E*.



The manuscript of the Rev. Father H. Dubois on the Betsileo indicates the same disposition, with insignificant differences at positions which we have marked (*).

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | C | E | G | B | E* | F | A | C |
| G | | | | | | | | |
| | D | F | A | C | D* | G | B | |

The quasi-symmetric disposition of these series of thirds brings to mind the distribution of the *male* and *female* notes that descend on both sides from the middle of the Chinese pan pipe.

The few bars we transcribed from a Malagasy record recorded in Paris in 1931 during the Colonial Exposition by the Institute of Phonetics of the University show exactly this playing in thirds.

But no doubt there has been a strong European influence. The succession of alternating major and minor thirds corresponds all too closely to the scales of the West. Our opinion, incidentally, is confirmed by Mr. Ralph Linton's recent book, which reports that the Merina and the Betsileo, in the middle [of the island], tune the European way; they do not understand the tuning of the Tanala, and believe that everyone does it according to his own taste[91].

In addition, the district chief of Ambanja reports that there is "no regular scale from one string to the other".

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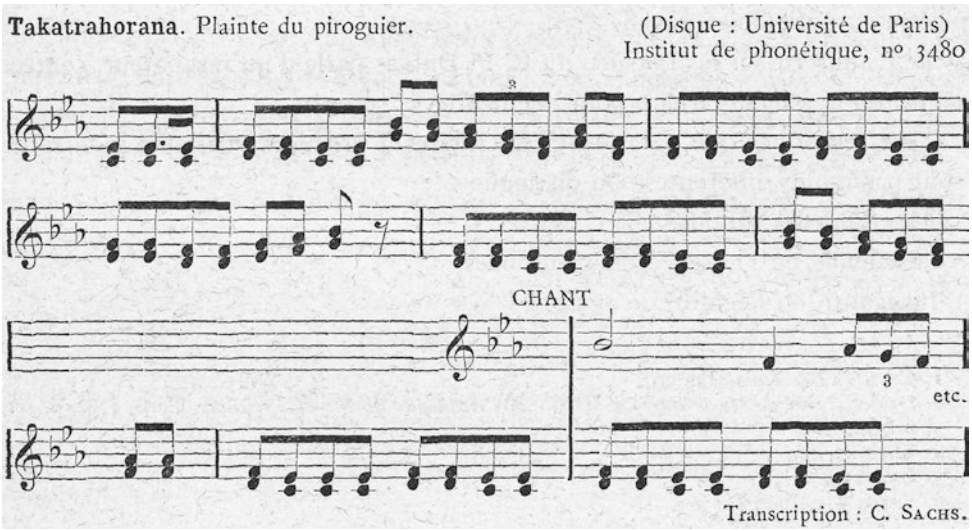
[90] A. Sichel, "Histoire de la musique des Malgaches," in Encyclopaedie de la musique et dictionnaire du Conservatoire, Volume IV, edited by A. Lavignac (Paris: Ch. Delagrave,1922), 3228.

[91] Ralph Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 267.




Takatrahorana: Lament of the boatsman.
(Record: University of Paris, Institute of Phonetics, no. 3480)
Transcription: C. Sachs.

On the other hand, a *Letter of Mr. de Barry* printed in Paris in 1764, which admittedly only speaks of a small zither with five strings, says that "it can be tuned diatonically in the major scale in a way that the five strings represent the first five notes of the scale"[92].

Concerning its playing, Mr. A. Sichel reports that the musician "squats on his heels and, with the instrument in front of him and its lower end gripped between his feet, he places one hand on each side"[93]. This position is not the only one, though. Mr. R. Linton, for his part, describes a sitting player with the instrument upright and slightly inclined on his knees[94]. A series of photos taken in Antananarivo and at the Colonial Exposition in Paris further depicts musicians, some standing and some sitting, clasping the end of the instrument between their knees or under their arm (plate II, A; XII, A; XIV, A); whereas de Barry, speaking in 1764 of the small zither with five strings, specifies the belly as the point of contact[95].

The zither is played with the fingernails; especially that of the little finger is allowed to grow[96]. One of the cited photos from Antananarivo shows us a remarkable phenomenon: in the manner of the Far East, the zither player is wearing a ring as a plectrum on the left little finger.

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92 Barry, *Lettre de M. de Barry à M. G... de l'Académie Royale des Sciences* [Letter of Mr. M de Barry to Mr. G... of the Royal Academy of Sciences], (Paris, 1764), 18.

93 Sichel, op. cit.

94 Ralph Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 267.

95 Barry, *Lettre de M. de Barry à M. G... de l'Académie Royale des Sciences* [Letter of Mr. M de Barry to Mr. G... of the Royal Academy of Sciences], (Paris, 1764), 18.

96 G[eorge] A[ndrew] Shaw, "Notes on the National Musical Instruments of the Malagasy," *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 269.

In the manuscript about the Betsileo, the Rev. Father Dubois talks about a resonator against which the zither is pressed to amplify its sound.

As uniform as these zithers seem to be at first sight, they could in fact hardly be more diverse. One distinguishes:

- the total size
- the presence or absence of transnodes,
- the inequality or equality [of these transnodes],
- the length of the transnodes in relation to the internode,
- the closure or opening of the nodes,
- the number and material of the strings.

The comparison of the different zithers shows that

1) the closed zithers are the largest; they have substantial and considerably unequal transnodes; they have sixteen strings;

2) zithers with equal transnodes (and with comparatively insignificant length) have a medium size and pierced nodes;

3) all modern zithers, with added [heterochord] strings, are pierced as well.

Thus, there is a practical reason for the length of the transnode: the largest zithers, held under the left arm and downward or clasped between the knees pointing upwards, need to have a sufficiently long handle to counteract the internode's weight, while the opposite transnode needs to be reduced in order not to increase this weight. Among the shorter examples this necessity does not exist.

In Indonesia, the homeland of the tube zither, the zithers with transnodes are found in the east of the archipelago, and do not exist (or no longer exist) in the west. Consequently, they must be earlier than the zithers without transnodes[97]. We should add that, according to general experience, larger forms precede smaller ones[98], and that on Madagascar the zither with sixteen strings is judged to be the classical zither.

One day, this number will perhaps allow us to link the Malagasy tube zither to the Chinese zither *chêng* in its primitive form, made of bamboo with two unequal transnodes, and to its relative, the *cai dan thap luc* of the Annamites [Vietnamese][99].

Among the museum's specimens, the Malagasy zithers with sixteen strings are the largest, and the only ones with two closed nodes. The fourth-longest has 17 strings, and one of its nodes is pierced, while keeping the asymmetry and relative length of the transnodes. The fifth- and sixth-longest, incidentally of the same type, already have two pierced nodes. So one has started with sixteen strings, and

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97 C[urt] Sachs, *Die Musikinstrumente Indiens und Indonesiens*, Handbücher der Staatlichen Museen, 2nd Edition (Berlin, 1923), 96.

98 Cf. C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 44.

99 Cf. A. C. Moule, "Chinese Musical Instruments", Journal of the North China Branch of the Royal Asiatic Society, vol. XXXIX (1908), and G[aston] Knosp, *Rapport sur une mission officielle d'étude musicale en Indochine* [Report on an Official Mission of Musical Studies in Indochina], (Leiden, 1911).

subsequently this number has been raised and lowered. The west is mainly the region of smaller forms; the strings are few in number and made of steel. The zither is often held against an empty gas can to amplify the sound.

1) Zithers with large transnodes.

- 32.88.87. Ambohutrao. Sixteen strings, large transnodes and closed nodes. Total length 154, those of the sections 56-65-33, diameter 6 cm.
- 96.67.1. “Madagascar”. Similar to the previous one. Total length, those of the sections 53-66-31, diameter 6.5 cm.
- 91.45.193. Merina. Similar, with a rectangular hole. Total length 146.5; of the sections 49-70-27.5, diameter 7.5 cm.
- 91.45.139. Seventeen strings, large unequal transnodes, one of the nodes open. Total length 143, of the sections 55-65-23, diameter 7 cm (plate XI, A).
- 99.56.35. Merina. Eighteen strings, large unequal transnodes and both nodes open. Total length 90, of the sections 34-38-18, diameter 7.5 cm (plate XI, B).
- 34.79.1. “Madagascar”. Similar, but with twenty strings. Total length 120, of the sections 37-62-21, diameter 8-9 cm.
- 8946. Similar, but with sixteen strings. The transnodes are considerably curtailed. Total length 90, of the sections in their present condition 23-49-18, diameter 8-9 cm.
- 61.657. Similar and also curtailed. There are twenty-three strings and traces of strings, but the latter perhaps only indicate broken strings which have been replaced by some of the former ones. Total length 70, of the sections 9-50-11, diameter 9 cm.
- D 33/36 7. “Madagascar”. With nine strings and relatively large and unequal transnodes. One of the ends is closed by a disk, the nodes themselves are pierced. The zither has a noticeable decoration of blue cotton, black leather, and red lace Total length 35.5, of the sections 13-17-5, diameter 3.5 cm.
- D 33/36 8. Similar, but with ten strings. Identical length, the diameter slightly bigger (3.5 cm).

2) Zithers with small transnodes.

- X.33.186. Merina. Eight strings, the transnodes are unequal and the nodes are pierced. Total length 56, of the sections 7-45-4, diameter 4.5 cm.
- 99.56.33. Nossi-Bé. Eleven strings, the rest similar. Total length 54, of the sections 7.5-42-4.5, diameter 5 cm.
- 31.85.9. ”Madagascar”. Twelve strings and small equal transnodes; the nodes are open. Pyrographed inscription. Total length 68, of the sections 11-49-9, diameter 6.5 cm.
- 8945. Eleven cords, the rest similar. Total length 66.5, of the sections 8.5-49.5-8.5, diameter 7 cm.
- 35.68.29. Betsimisaraka from Manakara. Similar. Total length 63, of sections 11-40-12, diameter 7 cm. GGM.

- 34.54.1011. “Madagascar”. Eight strings; one of the nodes is closed, the other one slightly pierced; the rest similar. Total length 74, of the sections 3-67-4 cm.
- 30.54.109. “Madagascar”. Eight strings; the transnodes are completely cut. Length 53, diameter 6 cm.
- 30.54.1010. “Madagascar”. Similar. Length35.5, diameter 5 cm.

3) Modernized zithers.

- X.33.185. Merina. The transnodes are small and unequal; one of the nodes is closed. On one side there are seven strings cut from the bark itself; on the other side three metal strings are tied on the inside, drawn over two bone nuts and threaded back inside, where they are tightened by three frontal pegs shaped like a shovel. Between the two nuts the bark is removed and replaced by a red and black cloth decorated with bones nailed onto it. Near the upper end the name *Antananarivo* has been pyrographed. Total length 43, of the sections 5-16.5-21.5, diameter 4 cm.
- without no. Similar except for the number of six strings of bark. Total length 41.5, of the sections 20-17.5-4, diameter 3.5 cm.
- D 33/36 5: Girded with dark purple and red cotton. There are fifteen strings of bark, three metal strings, and five pegs made with a lathe. The nodes are pierced. Furthermore, a very slim longitudinal slit has been cut; it is enlarged at the ends into circular holes, bringing to mind certain slit drums [lit. wooden drums]. Total length 87, of the sections 22-46-19, diameter 8 cm. (plate XI, C).
- D 33/36 6 . Identical.
- 29.2.1. Merina from Antananarivo. The transnodes are large and unequal, the nodes are pierced and the slit ends in circular holes. The fifteen strings of bark are marked with a pencil *ré fa la ré mi sol si do la fa do si sol mi do* [*D-F-A-D-E-G-B-C-A-F-C-B-G-E-C*] and three long vegetal strings *fa do sol* [*F-C-G*]; a little bit farther, two short strings without indication of the tuning. The added [heterochord] strings are sustained by bridges and tightened by large frontal pegs. Total length 63, of the sections 17-33-13, diameter 7.5.

4) Retransferred [lit. “rétrocessive”] zither

- 30.73.103. Sakalava from Bukarafa, east of Bekodoka. The bamboo tube is imitated by plain raffia. Only four strings are preserved. Their original number is doubtful. Length 53, diameter 6 cm.

In the west bamboo is effectively quite rare. Therefore it is replaced by raffia. Chapelier mentions this fact as early as 1804[100]. In the districts of Port-Berge and of Antsalova, for example, there are even zithers put together of two juxtaposed raffia stalks.

[100] Chapelier, *Lettres* (1913), 306-308.

The tube zither is everywhere an instrument reserved for men, and in general is used for simple entertainment. Only in the district of Sakaroha [read: Sakaraha] can an example be found that helps in the healing of illnesses.

**Box zither.**

The box zither is an imitation of Balkan and Nordic zithers of the genre *Hommel*, *Langleik*, *Spitzharfe*, and *Zither*[101].

The very flat box is straight on one side and curved, cut out, and declining on the other. A leather handle is nailed to the straight rib. The strings, made of iron wires, are arranged in two planes on the upper side and the underside of the box. On the top, characterized by a round or triangular sound hole, there are twelve strings, of which four are wound; seven basses – called *ambáviny*[102] – occupy the whole length of the soundboard, and five sopranos end at the indentation of the curved rib. On the backside there are eleven or twelve strings. The pegs and tuning wrench are of iron.

- 29.1.3. Merina from Antananarivo. Eleven strings on the back, the sound hole is round. Height 78, width 2, thickness 7.5 cm.
- 29.1.4. Merina from Antananarivo. Twelve strings on the back, the sound hole is triangular. Height 60, width 19, thickness 4.5 cm.

**Viola-violin.**

(Pl. XI, XII).

The general name is *lokánga*. In the Sakalava region, the name *bemaola* or *bemola* can also be found. In addition, the report from the district of Belo-sur-Tsiribihina provides *tabosa*, a name which is certainly nothing else than *kabosa*, if it is really applied to this instrument.

Devoid of artistry, in a rather primitive manner, the Malagasy cut a body like the one of the European violin or viola out of a block of wood. They attach its soundboard with nails and add some decorative lines with a red-hot iron, which resemble the purfling [lines near the edges of the soundboard and on the back] of Western luthiery, incidentally without worrying about coloring or varnish. In any case, it is generally not a true violin that has served as a model. The contour with non-projecting linings, the sound holes shaped like ) ( and the considerable height of the ribs rather imitate the *treble viols* [lit. “dessus de viole”] of the 17th and 18th centuries. However, the violin proper has not remained unknown to Malagasy instrument makers. One of the objects in the *Musée*, the no. 01.10.12., is almost an exact copy of the style of the great luthiers of Brescia [lit. “Bresse”], of *Gasparo da Salo* [Salò] and [Giovanni Paolo] *Maggini*. It has two straight, pointed, *f*-shaped sound holes and a scroll resembling the well-known lion of the first masters of the violin.

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[101] Cf. C[urt]. Sachs, *Beschreibender der Staatlichen Sammlung alter Musikinstrumente* (Berlin: Julius Bard, 1923), 42f.

[102] [P. Antoine] Abinal and [P.V.] Malzac, *Dictionnaire malgache-francais*, 2nd edition (1899).

One more time we find ourselves pointed to the 17th century. This is, it seems, because Europeans brought the models that are still imitated today.

On Madagascar, the region of distribution definitely includes the land of the Merina, the north, the west, and the south. The information accompanying the objects of the *Musée*, the reports, and the oral communication by Mr. Raymond Decary leave no doubt about this. In addition, both the *Musée* photo no. 37.235, showing a circumcision in Imerina, and our plate XII, B confirm its use among the Merina and the Bara respectively.

- 01.10.12. Fort-Dauphin. Imitation of a violin of the first luthiers of Brescia. The sound holes, in the shape *f f*, are very straight and pointed, and the scroll brings to mind the lion of ancient luthiery. The wooden tailpiece holds four strings. But the construction is raw: a single hollowed-out block forms the back and the rib, whereas the soundboard is glued onto it. However, there is nothing European about the bridge, with its very high supports. Length 58, maximum width 19, height 13.5 cm (plate XI, E).
- 30.73.105. Sakalava from Ambato-Boéni. Imitation of the *pardessus de viole* [smaller than the treble viol]. The back and the rib are made of a single piece of soft wood, the sound holes forming, with pyrographed decoration. Three vegetable strings, tailpiece made of leather. Like all the viols which follow, the soundboard is not glued but nailed. Total length 57, length of the body 27, width 14, height of the ribs 6; the bow (called *fikasihan* in Malagasy) measures 51.5 cm (plate XI, F).
- 31.85.8. Bara. Similar, but the edges and the linings protrude in the manner of a modern violin. Total length 62, length of the body 36, width 17, height of the ribs 5, length of the bow 47 cm.
- without no. Similar, but made of mahogany wood [lit. “acajou”]. There are four strings. Total length 67, length of the body 37, width 29, height of the ribs 14, length of the bow 59.5 cm.
- without no. Similar, but made of soft wood, with straight edges, rectangular, and with a curved back. There are three strings. Length 62, length of the body 30, width 16, height of the ribs 6 cm.
- 31.85.7. Province of Ambovombe, in the south. Similar; the sound holes are angular and the pegbox is egg-shaped. Total length is 58, length of the body 31, width 16, height of the ribs 7 cm.

# 2. Instruments lacking in the Musée de l'Homme

## *Idiophones.*

Despite the wealth of its Malagasy collections, the *Musée de l'Homme* is not entirely free of lacunae. Consequently, one must resort to printed literature, manuscripts, photos, and oral communication to complete the catalog.

### Concussion sticks

are struck against each other between the hands of a single person. On a photo of the Sakalava taken by Dr. Teissonière, about twelve women or less accompany their dancing with them (plate XII, C). This usage is also confirmed in the districts of Kandreho and Soalala: in the former, the name is *lamako*; in the latter *ambio*. In the district of Analalava, the women use them, under the well-known name *faray*, for exorcism songs and dances. In contrast, only in the district of Morondava are they used by men.

### The stamping tube

consists of a gourd[103] and a "hollow bamboo of 0,60 m with which one strikes the ground for dancing". It is called *doka*[104]. The distribution is indicated nowhere.

### The percussion stick [lit. "verge frappée"]

is found among Tanala children under the name *kididedra*. It is a bamboo of which one half is slit longitudinally into strips. The second, fourth, sixth etc. strips are removed in order to isolate the remaining ones. To play it, the child holds the intact part under the arm and strikes the strips with two sticks[105].

### Percussion plaque.

During exorcism ceremonies, the Englishman G. A. Shaw saw a woman accompanying the magic dance by striking the rhythm with a piece of iron, the blade of a spade, suspended by a cord[106]. The Rev. Father Dubois speaks about the same device among the Betsileo and calls it *kekem-by*[107].

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[103] [P. Antoine] Abinal and [P.V.] Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique); 2nd edition (from which we are citing the pages in brackets) of 1899, 108 (107).

[104] Alfred and Guillaume Grandidier, *Ethnographie de Madagascar* [Ethnography of Madagascar], vol. III, (Paris, 1908-1917), 144.

[105] Ralph Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 271, plate 28f.

[106] G[eorge] A[Andrew] Shaw, "Notes on the National Musical Instruments of the Malagasy," *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 266.

[107] [Henry] Dubois, [unpublished] manuscript.

**A castanet**

is made of two cows' jaws knocked against each other, and is said to have existed among the Betsileo under the name *lamako*[108].

**Slit drum** [lit. wooden drum].

A wooden drum with slits is only found among the Mahafaly, in the far south-west of the island, and even in that region it seems to be rudimentary[109].

**Leg xylophone.**

It is known under different names:

- Sakahara: *antranatra*.
- Ampanihi: *atragnatra*, *atranatra*.
- Beroroha, Ankazoabo: *atranatrana*.
- Morombe: *bakilo*.
- Betioky: *hatranatra*.
- Morondova [read: Morondava]: *katiboke*.
- Manja: *kilangay*.
- Morondova [read: Morondava]: *valihambalo*.

The stick is called *famango*.

Outside of the regions of Tuléar and Morondova [read: Morondava] the xylophone is found in Androy[110].

A photo in the *Musée* shows a Sakalava xylophone (plate XIII). It consists of seven rough keys placed in groups of one, two, and four on the stretched legs of a woman sitting on the ground. This woman and another one – sitting at a right angle to the first – both strike [the keys] with two small round sticks.

Reports of the higher administrators of the regions of Tuléar and Morondova [read: Morondava] provide very interesting details. Here are the most important of their indications: there are six to twelve keys in general – like the sticks – cut from *sely* or from camphorwood *hazo malany* [*Cinnamomum camphora*], varying in length between 20-40 cm. As the photo shows, these keys are strictly separated from each other. The report from the district of Manja states: "the first woman produces a variable sound and the other a monotonous sound", which could signify that the first one plays the melody and the second a sort of drone. The report from Ampanihi is more difficult to understand. Of twelve keys, it assigns two to the first voice, three to the second, four to the third, and three to the basses. In contrast, the report from Sakaraha is extremely valuable. The instrument it describes has eight to twelve keys. Three of them "produce the main motif of the melody one wants to play. Each of them has a name: *tsibilo*, *sindry homana*, and *varinera*

[108] Ibid.

[109] Ralph Linton "Culture Areas in Madagascar". *American Anthropologist*, new series, Volume XXX, no. 3 (Menasha, Wisconsin: George Banta Publishing Company, 1928).

[110] Raymond Decary, *L'Androy*, Volume II (Paris, 1933), 141.

*katao*. The first two are a bit shorter (from 35 to 40 cm) and are put towards the end [of the legs] and a bit apart from the others. The *varinera katao* has its place in the middle". "The second player faces the first one, and strikes only two keys". In our photo, the two keys of the second player can be distinguished very well from one of the keys assigned to the melody, "a bit apart from the others".

Concerning the tuning, we learn from the report from the district of Manja that the keys can be replaced depending on the scale of the melody to be played. In other places, the reports assure us, the xylophone is tuned to the scale of the tube zither.

Everywhere this instrument seems to belong exclusively to women, and especially to young girls. However, there is no report on magical procedures.

**Resting bell** [lit. bowl].

In 1686 R. Everard has taken part in some circumcision festivities on the island of Assada near Madagascar where one hit "the drums and a brass pan with full force which produced an infernal noise"[111], the usual racket accompanying a "rite of passage", in the words of Mr. van Gennep.

**Water drum** [lit. swimming bowl].

The report from the district of Belo-sur-Tsiribihina informs us that a cast iron pot filled with water [contains] "half a calabash with its convex side facing up, so that the calabash floating on the water is filled with air. In general three or four of these drums with calabashes are used. They are of varying sizes and so emit sounds that range from muffled to high. These drums are used by the descendants of the Vazimba when singing songs not understood by the Sakalava. Indigenous name: *hazolahimbazimba*".
The Vazimba, whom this report concerns, are the legendary Aborigines of the central plateau. The swimming calabash – but contained in a bigger calabash, instead of the pot – struck with a stick or the bare hand is not alien on the African continent. Mr. Michel Leiris, who has seen it among the Kita, tells us that the water devils "enter the calabashes filled with water on which a smaller calabash is put upside down, sounding from the beats of the sticks of the women who strike them. They rise from inside the liquid into the heads of the dancers, the male devils into the heads of the women and the female devils into the head of the men..."[112]. Mr. André Schaeffner, who quotes this passage, adds that the Dakar-Djibouti mission saw these calabashes being beaten during eclipses among the Mandara in the north of Cameroon[113].

[111] Robert Everard, *Collection des ouvrage anciens*, ect. Volume VIII (1913), 415.
[112] Michel Leiris, *L'Afrique fantôme*, (Paris: Gallimard, 1934), 73.
[113] André Schaeffner, *Origine des instruments de musique* (Paris: Payot, 1936) 99, footnote.

**Calabash rattle.**

The Blacks, wrote J.-H. Bernardin de Saint-Pierre in 1769, "dance in the shelter of some rock to the gloomy sound of a calabash filled with peas"[114]. The custom, nearly universal in the zone of the calabash, still exists today in the western part of the island. These rattles are called in the district of:

- Morondava: *tsikatray*.
- Soalala: *mahea*, *namolokolokoma*.
- Analalava: *mohea*.
- Ambilobe: *mouhaia*.

**Various scarecrows.**

In regions where bamboo is rare, the sliding tubes are replaced by something else. In the district of Ampanihi, for example, by cans, *rohirohy*, or large shells, *akora*. In the district of Sakaraha, a rattle, *ka-trà*, is "made with the dried skin of the leg of a cow sewn in the form of a bag, into which a certain number of small stones is put. When shaken energetically, this instrument produces a noise that scares away the birds or cattle. The women and the children use the ka-trà to defend the rice on its stalks against birds. The men use it to make the cattle move when they crowd around the rice fields". Concerning scarecrows to chase off birds, Mr. Raymond Decary wrote us in a letter of August 12, 1935: "There exist in particular those which are made of clavator shells, which the wind shakes against each other". The Larousse du XXe siècle [of the 20th Century], vol. II, 1929, page 292, says that the clavator "is a kind of pulmonate gastropod mollusk, of the family of Achatinidae, previously classified under Bulinus. The clavators have a large shell of elongated shape, with numerous spires …". They are "animals specific to the island of Madagascar".

**Strung rattle.**

Shells filed on a string and worn around the hips are called *mahea* by Makoa dancers in the district of Antsalova, and – though their immediate intention is not to produce noise – we mention as rattles some amulets in the form of small pieces of wood roughly cut and tied together in a bundle[115].

**Small bells.**

The professional Antaisaka dancers wear them hanging from the belt[116].

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[114] Bernardin de Saint-Pierre 1907, letter XII, of April 25, 1769. There is general information about the calabash rattle in C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 27; and in André Schaeffner, *Origine des instruments de musique* (Paris: Payot, 1936), 40.

[115] Ch. Renel, "Les amulettes malgaches". *Bulletin de l'Académie malgache*, Nouveau série, Volume II, plate VIII (Antananarivo), figure 23.

[116] Henry Deschamps, *Les danses malgaches* [Malagasy Dances], 31.

**Elastic clapper** [split idiophone].

Such a bell, used by older Tanala boys living in the eastern mountains, is described by Mr. Linton[117]. They take a bamboo of about one and a half meters and slit it to a length of about 60 cm. The halves are held apart by a small wooden nail extending into the inside. A cord attached to this nail emerges from a lateral hole in the bamboo. When jerked, it moves the nail and with the noise of a gunshot clashes both halves against each other.

**Spoon clapper** [lit. “cuillers arrachées”].

A photo, taken in Paris during the Colonial Exposition of 1931, shows spoon playing accompanying the tube zither (plate XIV, A). The Sakalava, shown here, use it in exactly the same way as the ancient Russian *lozki* and its southeastern European counterparts: two spoons, held back to back in the left hand, are violently deflected by the handle of a third one held in the right hand[118]. The resulting sound can be heard on the records no. 3817-3820 of the Institute of Phonetics at the University of Paris.

The reports from the regions of Majunga and Diégo-Suarez confirm the existence of the spoon clapper in this part of Madagascar. In the districts they are called:

- Bealanana and Nossi-Bé: *faray*.
- Diégo-Suarez: *faray sotro*.
- Kandreho: *sotro telo*.
- Soalala: *takoratsaky*.
- Mitsinjo: *tsikirity*.

The use of the spoons is by no means reserved to either of the sexes. They accompany the tube zither, and any kind of song.

**Pre-Jew’s harp.**

According to the Rev. Father P. Camboué a precursor of the Jew’s harp proper called *lokánga váva* (‘play with the mouth’) is made by Hova children “with a strong stalk of grass, set in motion by one hand while beating the chest with the other, replacing the accompaniment by a big drum”[119]. Is this one of the rare prototypes of the Jew’s harp with a long reed and without a frame, of which we have provided more details elsewhere[120]? Under the term *ampónga hórona*, the

[117] Ralph Linton, “The Tanala, a Hill Tribe of Madagascar.” Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 253.

[118] Cf. C[urt]. Sachs, *Handbuch der Musikinstrumentenkunde*. Handbücher zur Musikgeschichte, edited by H. Kretschmar, 2nd edition (Leipzig: Breitkopf & Härtel, 1930), 61.

[119] Paul Camboué, *Jeux des enfants malgaches*, Volume VI. (St. Gabriel-Möldling: Anthropos, 1911), 669.

[120] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 91.

dictionary of Abinal and Malzac presents “a kind of wooden Jew’s harp made of a single reed plucked between the teeth”[121], *hórona* being “a herb growing in bunches”.

## *Aerophones, Membranophones, Chordophones.*

### Bullroarer.

Removed from its domain, the world of magic, it seems to be extremely rare on Madagascar and is no longer found in the hands of adults. It has become a simple children’s toy or, at best, a scarecrow for birds menacing the seeds. The bullroarer of the Tanala is a flat piece of bamboo, pointed at both ends, approximately 13 cm long and 2 cm wide. The cord which moves it is fixed to a stick[122]. The Sakalava use bamboo, dry bark, pieces of calabashes or *hazomalany*, camphorwood. The indicated names are *kitambovo* in the district of Beroroha and *tambovo* for the district of Sakaraha.

**Animal horn** [lit. “cow horn”].

Rarely mentioned in literature about Madagascar[123], it appears frequently in reports from the various districts. A photo taken on-site and kindly made available to us shows a Makoa holding an antelope horn approximately 70 cm long in his hand (plate XIV, B). Everywhere men are the only users. With this horn, one gives signals for reunions, marks the solemn return from the rice field, and in former times robbers used it to scare the villagers they attacked. The following names are reported to us:

- Manja: *antsiva*
- Morondava: *anjombo*
- Antsohihy: *anjombona*.
- Soalala, Ambato-Boéni: *ampondokaka*.
- Nossi-Bé, Ambilobe: *tandrokaka*.

It is important to mention that in the latter district, the horn is used before a king or a higher chief to pay homage to him[124].

### Bamboo horn.

The one of the Tanala is 15 to 20 cm long, has a diameter of 2.5 cm, and has neither mouthpiece nor bell[125]. However, there are some on the west coast, unless

[121] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 2nd edition (Antananarivo: Imprimerie de la Mission catholique, 1899), 32.
[122] Ralph Linton, “The Tanala, a Hill Tribe of Madagascar.” Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 253.
[123] Joseph Aubry, *A Madagascar* (Épinal, Imprimerie Lorraine, 1910), 28.
[124] G.H. Smith *Among the Menabe* (London,1896), 101.

it has been confused with the curved horn in the reports. It is called *bingo* in the district of Beroroha, *antsiva* in Belo-sur-Tsiribihina, *anjombona* in Antsohihi, *anjomara* or *barakoma* in Soalala.

**Whistle.**

The professional Antaisaka dancers "have a whistle on their necklace and use it sometimes to mark the rhythm or to increase the noise in moments of passion"[126]. The *Crosbie Brown Collection of Musical Instruments* in New York possesses a Malagasy whistle, pierced with a red-hot iron into a wooden stick. It has no hole and is of 1' 2.5" (37 cm) long[127].

**Iron Flute.**

In 1883, G. A. Shaw saw a straight iron flute with three holes near the lower end and a length of 2' 9" (84 cm) among the Betsileo, the Ikongo, the Bara, and the Taimoro [128].

**Globular flute/vessel flute.**

In the district of Soalala children fabricate "an instrument made of dried mud and shaped like a small jar. It has one blowing hole and two other holes which produce sounds resembling those of an end-blown flute". They call it *tahitahia*.

**Pot drum.**

A simple pot drum sometimes replaces the cylindrical drum. Regarding funerals in the small town of Ampamata, in the southeast of the country, Mr. Raymond Decary writes: "for want of a real drum, a convenient musical instrument can be made by stretching the skin of a sheep over a pot"[129].

**Drum with three beaters.**

The drum with three beaters, found among the Kachin of Burma[130] and in the northeastern part of Celebes[131], exists identically on Madagascar. Mr. Walter Kaudern has seen it in a Betsina village south of the lake Kinkony, in the northern

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[125] Ralph Linton, "The Tanala, a Hill Tribe of Madagascar." Field Museum of Natural History, Publication no. 317. *Anthropological Series* vol. 22 (Chicago, 1933), 267f.; plate 30f.

[126] Henry Deschamps, *Les danses malgaches* [Malagasy Dances], 31.

[127] No. 526. Cf. the catalog of this museum, vo. III, 1st part, 18.

[128] G[eorge] A[Andrew] Shaw, "Notes on the National Musical Instruments of the Malagasy," *The Antananarivo Annual* (Antananarivo, vol. II, reprint of the years 1881-84, 1896,1883), 266.

[129] Raymond Decary, *L'Androy*. Volume II, (Paris, 1933), 194.

[130] Sachs 1917, plate 9, figure 24; specimen in the Museum of Ethnography in Munich, n° Ns 246.

[131] Walter Kaudern, *Ethnographical Studies in Celebes*. The Hague, Volume III. Musical Instrument in Celebes (1927), 286.

part of Sakalava country. It is an elongated double-headed barrel drum, suspended obliquely and beaten by one musician with two beaters on the lower skin and with one stick by the other on the upper skin[132].

This specimen is not unique, though. The drum with three beaters exists in the two regions of Morondava and of Majunga under the names of *hazolahy* (Morondava, Soalala) and *moraingy* (Kandreho, Tsaratanana). In general, the instrument is used for boxing (*moraingy*), from whence it has its name. In the district of Morondava, on the other hand, it accompanies royal ceremonies; it may not be touched by women there. Mr. Raymond Decary writes us in this respect: "About fifteen years ago, in Maromandia among the northern Sakalava, I happened to find myself in trouble with the Indigenes because during a Djoro [joro] ceremony which my wife and I were attending, she touched the drum without meaning any harm".

**Clay tambourine.**

The Merina children have an *ampónga kély* of which, according to the Rev. Father Camboué, "the body is the neck of a broken jar, and the skin a piece of cow rumen or bladder, which is tied around the neck of the broken jar with a strip of *raffia* or of *taretra*"[133]. It has been mentioned on page 27. The Rev. Father H. Dubois calls the same toy among the Betsileo *kiapóngapónga*.

**Toys with strings.**

The report from the district of Belo-sur-Tsiribihina registers a child's toy whose nature is not completely clear. It is an object with "strings tightened over a flexible stick of 40 cm, fixed in a small empty tin can". Indigenous name: *bibokalanga*.

**Arab fiddle.**

The Arab fiddle seems to have disappeared from Madagascar except in one district, Analalava. Here it is called *heravoa*, and is played during all sorts of festivities in the family – for marriages, circumcisions, etc. However, the Malagasy literature of the 17th century mentions the rhapsodist who accompanies himself on a bowed monochord, called *herrauou* or *herravou*[134]. This name is nothing else than a regional deformation of the Arabic word *ar-rabāb* الرباب , which designates – among others – a trapezoid lute with an iron spike and a single string, used – this one, too – to accompany the performance of epic singers[135]. If the instrument itself has nearly disappeared on Madagascar, its manner of playing has left its traces. Even today, the Malagasy sometimes still holds the European violin in the Arab manner, i.e., in a vertical position.

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[132] Ibid.

[133] Paul Camboué, *Jeux des enfants malgaches*, Volume VI. (St. Gabriel-Möldling: Anthropos, 1911), 669.

[134] Étienne Flacourt, *Histoire de la grande isle Madagascar*. Paris, Clouzier 1661, 471 pages and in the Collections des ouvrages anciens, ect. Volume VIII (1913), 115, 159, 160.

[135] Cauche 1910, 81.

**Short[-necked] lute.**

The reports from the region of Majunga refer to an instrument with several strings – two to five – over wood or calabash, played by men and called *kabosa* or *kabosy*. When Mr. Walter Kaudern was on Madagascar, he saw a specimen and was struck by its astonishing resemblance to a certain lute which he knew from Celebes[136]. However, both of these instruments bear no difference to the short[-necked] lute of the Near East, with lateral pegs and strings fixed at the lower end. Now this is sometimes called *qāwūz*, sometimes *gūbūz*, *qūpūz* or *qūbūz*, قوبوز . The name is probably of Turkish origin, and is spread across the Islamic world. It goes without saying that the Malagasy form of the name represents the same word. The instrument in question is cited in Arab literature since the end of the Abbasid dynasty, at the beginning of our millennium, and was introduced in Egypt under the Ayyubid dynasty (1171-1260)[137].

There are examples of the Malagasy instrument in several European museums. We know those in the *Musée des Colonies* [Museum of the Colonies] in Paris-Vincennes, in the *Burgmuseum* [Imperial Museum] in Vienna[138] and in the collection of the late Mr. Carl Claudius in Copenhagen[139]. Although these two latter lutes have three two-string courses [i.e., six strings], the one in Vienna (plate XV, A, B) has four. Its body is a part of a calabash, encrusted with small points of white clay. Mr. Henri Biron in Paris, the former officer bearer of Madagascar who bestowed the instrument on the *Musée des Colonies* with, gave us this valuable information: “Bought in 1912 from an indigenous Sakalava in a house on the banks of the Tsiribina between Antsirabe and Ambasitra [read: Ambositra] (on the road from Antananarivo to Fianarantsoa). Used during festivities (*lanona*) and dances (*mpilalo*) in the Sakalava villages”. Mr. Biron added verbally that the instrument is also played during circumcisions of the district.

**Lyre.**

The *Musée des Colonies* in Vincennes possesses a second instrument bought and offered by Mr. Biron. A lyre employing a begging bowl is shown in our plate XV, C, D. But we have the impression that, in this case, we are dealing with a specimen of the East African lyre gone astray.

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[136] Walter Kaudern, *Ethnographical Studies in Celebes*. The Hague, Volume III. Musical Instrument in Celebes (1927), 196.

[137] Henry G. Farmer, *A History of Arabian Music* (London, 1929, 209; and 1931), 72 and plate on p. 76.

[138] Julius Schlosser, *Alte Musikinstrumente* (Wien: Anton Schroll, 1929), plate I, fig. 2.

[139] Carl Claudius, “Carl Claudius’ Samling af gamle Musikintrumenter. Koben-haven”. *Collection des ouvrages anciens concernant Madagascar*, publiée par Alfre Gran-Didier et autres. Vol. 8. (Paris: Comitées de Madagascar), 8 Volumes 1903-1920.1931, 385, and plate on p. 388.

## 3. An attempt at chronology

In the attempt at a chronology – at least a relative one –of the musical instruments of Madagascar, two established chronologies lend themselves: that of musical instruments worldwide [lit. “de l’univers entier”], and that of the musical instruments of Africa. The worldwide chronology has been presented by the author himself in his work *Geist und Werden der Musikinstrumente*, published in 1929 by Dietrich Reimer in Berlin. The history of musical instruments in Africa has been published by Erich M. von Hornbostel – our late and deeply lamented friend and colleague – as a critique of the book, under the title “The Ethnology of African Sound-Instruments” in the journal *Africa*, vol. VI, nos. 2 and 3, London 1933.

To enter into the issue of a chronology, we first present a list of instruments of Madagascar in a systematic order, with the numbers of the respective strata of African civilization according to Hornbostel and of global civilization according to Sachs.

Idiophones struck directly

| | Hornbostel | Sachs |
|---|---|---|
| Concussion sticks | I | 3 |
| Percussion beam | I | 3 |
| Percussion stick | I | 5 |
| Slit drum | III | 6 |
| Stamping tube | IV | 7 |
| Leg xylophone | | 10 |
| Percussion slat | | |
| Water drum | | |
| Resting bell | | |
| Percussion plaque | | |

Indirectly struck idiophones

| | | |
|---|---|---|
| Scraper without slit | I | 3 |
| Tube rattle | I | |
| Calabash rattle | II | 3 |
| Basket rattle | II | 9 |
| Wind chime [lit. “sonnailles éoliennes”] | VIa | |
| Raft rattle | | |
| Sewn rattle | | |
| Sliding tubes | | |
| Scraper with slit | | |
| Elastic crotales [?] | | |
| Jingles | | |
| Spoons | | |

Plucked idiophones

| | | |
|---|---|---|
| Pre-Jew's harp | | |
| Iron Jew's harp | | 22 |

Aerophones

| | | |
|---|---|---|
| Bullroarer | I | 2 |
| Short horn | I | 4 |
| Side-blown conch | VIa | 7 |
| Animal horn | VII | 13 |
| Oboe | IX | 17 |
| Reed pipe | | |
| Curved horn | | |
| End-blown flute | | |

Membranophones

| | | |
|---|---|---|
| Vertical drum | II | 6 |
| Kettledrum as hand drum | II | |
| Cup-shaped drum | V | 13 |
| Drum with three beaters | VIa | |
| Double-headed cylindrical drum | VII | 15 |
| Frame drum | | 16 |
| Conical drum | | 20 |

Chordophones

| | | |
|---|---|---|
| Ground bow | II | 6 |
| Ground zither | VI | 6 |
| [Musical] Bow with calabash and loop | VI | 13 |
| Raft zither | VI | 13 |
| Stick zither | VI(a) | 16 |
| Tube zither | VIa | 18 |
| Arab spike fiddle | XI | 22 |
| Arab short-necked lute | XI | 22 |
| Box zither | | |
| European viola-violin | | |

On Madagascar, a considerable number of peoples [lit. races], civilizations, and influences have clashed with and been superimposed upon one another. Permanent migrations across the Indian Ocean and the Mozambique Channel have formed the general character, and along with it the musical appearance of the island. Negroes, Polynesians, Malays, Arabs, Hindus, and Europeans have brought their instruments, and in a single region the stone-age rattle, the Arab lute, the 17$^{th}$-century European viola and the modern accordion can be found side by side.

It is extremely difficult to disentangle this jumble, to recognize the influences of creative value which have had an impact on its structure, and to pinpoint the different civilizations involved. For it is not only on Madagascar that they met,

clashed with and were superimposed on one another. The whole south of Asia, as well as the east of Africa, have seen similar mixtures. The Malay civilization is composed of Polynesian, Malay, Hindu, and Arab elements. In India, the Hindu or even pre-Hindu basis is covered by an Arab-Persian layer. Africa itself has undergone strong Malay, Polynesian, Hindu, and Arab influences. Thus, any object having, let us say, an Arab appearance must not necessarily have been imported to the island by a direct migration of Arabs. It may have arrived via a detour from a non-Arab Islamized region, be it Malaysia, India or Africa.

Hence it is with all caution that we address this difficult issue.

In the face of this dilemma we draw on the old scientific method, which forbids establishing far-reaching relations whenever a more proximate one is available. In the case of the ethnology of Madagascar, it imposes the following rule on us: Malagasy objects which are found on the African continent are not to be attributed to direct importations from Malay, Hindu, Arab or European lands.

In consequence, we divide the musical objects of Madagascar into two categories: African instruments – from Black Africa, it should be noted – and non-African instruments, including those from North Africa.

### *The African instruments*

For this study, we mainly follow the African chronology of Erich M. von Hornbostel. We have all the more right to do so since, in his own account, the comparison of his 'groups' "with Sachs's 'strata' shows, on the whole, a remarkable degree of correspondence"[140]. We leave them their numeration in Roman numerals, omitting the titles he has given them in solidarity with Leo Frobenius; the latter are of no import in this context.

Unavoidably, Hornbostel's list contains some gaps. It claims no greater status than that of a summary – and is indeed just that – and its author abstains from including certain instruments whose case seems questionable to him, such as the pre-Jew's harp among others[141].We will keep these problematic instruments in view as a side issue of the chronology.

In addition, this list indicates the approximate age of each instrument, but not in any way the moment of its entrance into Madagascar. It is quite possible that recent immigrations, of Negroes for example, may have brought in instruments of a relatively ancient type.

Here is the list of Malagasy instruments known on the African continent.

[140] Erich Moritz von Hornbostel, *The Ethnology of African Sound-Instruments.* Volume VI, n° 2 and 3, (Africa, London), 301.
[141] Ibid., 296.

| | |
|---|---|
| I | Bullroarer |
| | Scraper without slit |
| | Percussion beam |
| | Percussion stick |
| | Concussion sticks |
| | Tube rattle |
| | Short horn |
| | |
| II | Calabash rattle |
| | Vertical drum with nailed skin |
| | Ground bow |
| | Basket rattle |
| | Hand-beaten kettledrum made of clay |
| | |
| III | Slit drum |
| | |
| IV | Stamping tube |
| | |
| V | Cup-shaped drum |
| | |
| VI | Ground zither |
| | Raft zither |
| | Bow with calabash and loop |
| | |
| VIa | Wind chime |
| | Stick zither |
| | |
| VII | Animal horn |

Two remarks are required here, first regarding the tube rattle: not so many years ago, only highly developed forms of it were known. For that reason, it has been assigned to quite a young layer: *Sachs 12*. Recent publications about much more primitive forms have forced our friend Hornbostel to relocate it to a much earlier layer: *Hornbostel V*. That being said, Madagascar, as an area of distribution, is notably absent from this layer; Hornbostel did not yet know that this instrument did exist there.

The second remark concerns the necessary supplement to Hornbostel's list:

- Water drum (French Sudan, North Cameroon)
- Raft rattle (Mangbetu, Kaffirs of Mozambique, Uganda, Belgian Congo, ancient Peru)
- Sewn rattle (Bushmen)
- Scraper with slit (French Sudan)
- Pre-Jew's harp (Kasai)
- Reed pipe (Abyssinia)
- Curved horn (southern Africa, Burma)

- Vertical drum with doweled skin (attributed by Mr. H. Wieschhoff to a South Eritrean layer, likewise the following:)
- Frame drum
- Double-headed cylindrical drum with eyeleted skins (West and East Africa)

Closely examining the Afro-Malagasy list regardless of the supplement, one notices a most important fact: the layers I-V, and also VII according to Hornbostel's chronology, are only present in the west and the east of the island. The layers VI and VIa, on the contrary, are common among the Malay populations of Imerina and the Betsileo as well as the Black indigenes.

Starting from this fact, it should perhaps be allowed, with strict reservations, to assign the pre-Jew's harp and the reed pipe to the group VI-VIa.

## *The Malay instruments*

Among the non-African instruments of Madagascar, Malay, Arab and European imports can be distinguished more or less easily. Exchanges with India, it seems, have left no direct traces except – perhaps – the drum made of white clay, no. 31.85.4 (plate IX, A), of which the material and form resemble certain models of the aboriginal tribes of India.

As a Malay instrument we claim first of all the *small beaten bamboo*, whose existence in Nias we have been able to demonstrate (p. 5).

The *percussion slat* (p. 5) placed on a rice mortar seems, by this proximity alone, closely connected to the cultivation of rice and the musical use of its mortar in Indonesia. The rhythmical (if not poly-rhythmical and quasi-melodic) pounding of the mortar is frequent there[142].

The *leg xylophone* (p. 58) without wooden support appears in northern Melanesia and in the Malay world, from the isle of Celebes to the peninsula of Malacca; its simultaneous playing by two persons is known there, as it is on Madagascar. However, the number of keys – seven – documented in a photo taken on that island [Madagascar], exceeds the usual number [of keys] of Malay xylophones, and even more so of Melanesian xylophones[143].

The *elastic clapper* (p. 61) brings to mind more primitive rattling devices of the Malay Archipelago[144].

The *sliding tubes* evoke the rustic world of the Malay islands, by their very form and [in their function] as a musical scarecrow of bamboo. Incidentally, among all these musical scarecrows of the archipelago, this device in particular represents – as we have discussed on page 9 – the long sought-after prototype of

[142] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 206.
[143] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 104.
[144] Ibid., 40.

the *angklung*: the rattling device of West Java, whose two or three moveable tubes, tuned in octaves, slide in a trough of the frame which encloses them[145].

The *side-blown conch* (p. 12) exists neither in Africa nor on the Asian continent. It belongs to the Malay and Polynesian archipelagos[146].

The long *drum beaten with three sticks* by two musicians (p. 63) exists, outside of Madagascar, only on Celebes and among the Aborigines of the Burmese hinterland.

The *neck of a broken jar* forming a frame drum (pp. 27, 64) is found among the Malays of the Malacca peninsula.

The *conical drum* with Y lacing, struck with the bare hand on one side and with a stick on the other, (p. 37) is characteristic of the Malay world[147].

Even more this is the case with the classical instrument of Madagascar, the *tube zither* (p. 48)[148].

While browsing this list, we observe a significant phenomenon: the youngest of these instruments do not go beyond the layer Sachs 19, which can be dated to the beginning of the Christian era. In contrast, layer Sachs 20, dating from the second half of the first millennium AD, has not contributed any instruments to Madagascar, and this island knows neither gongs, nor the various metallophones, nor the brilliant gong chimes [lit. “carillons”] which make for the musical glory of Java and its neighboring islands. Might this be due to a lack of metal and smithies in the emigrants’ new land? But were that the case, there would be substitutes – as wood and calabashes have so often replaced bronze on the archipelago itself, when the need arose. The only acceptable conclusion is that the Malay instruments on Madagascar were brought by the first Malay migration, at the beginning of the Common Era. The Mérina or Hova, if indeed they arrived as recently as the middle of the second millennium, no longer play a role in the musical development of Madagascar.

On the other hand, if the Batak character of the Malagasy language turns our attention towards the Batak lands, the result is entirely disappointing. Of all the numerous musical instruments used there, only the tube zither exists on Madagascar. And even this unique correspondence does not count, since the Sumatran zither, equipped with a lateral hole and four strings struck with a stick, is very different. The reader wishing to inform himself about this instrument will find a detailed description in the *Encyclopedia of Dutch India*[149] and a good sketch of it in the monograph about the Batak by Modigliani[150].

[145] Ibid., 209.
[146] Ibid., 85
[147] Ibid., 227.
[148] Ibid., 202.
[149] *Encyclopaedie van Nederlandsch-Indié*, Vol. II (1918), 826.
[150] E. Modigliani, *Fra i Batacchi indipendenti* (Roma, 1892), 31.

### *The Arab instruments*

The *end-blown flute* is called *sódina* and on the coast *antsódy*, *antsóly*, the *o* being pronounced *ou*. Mr. A. Sichel thought to derive these names from an Arabic word *metsolu*, 'whistle'[151]. However, the end-blown flute is called *nây* in Arabic, not *metsolu*. We should rather think of the Malay name of this flute, *suling*, and above all the Malagasy language has a certain tendency to replace the Malay *l* with a *d*[152].

In any case, there can be no doubt about the Malay origin of this flute. The instrument, imported, was forced to adopt a name which already existed in the Malagasy language.

However, the very distinct trace of another Arabic name is found on Madagascar, although it seems it has never completely asserted itself. The dictionary of Abinal and Malzac quotes *sobába* as the name of the flute. Now, this word is none other than the Arabic word *śabbāba*, شبابة, 'young flute', a name for the small end-blown flute in all Arabic-speaking countries[153].

Indeed: the Malagasy flute with 6 + 1 holes is none other than the Arab *śabbâba*. When comparing one of the Tunisian flutes of the *Musée* (no. 2793, named *schebaba* by the collector) with the Sakalava flute no. 91.45.49., we recognize that they have in common the reed as material, the beveled end, the number and the position of the holes, the metric principle, and the distances. Based on the inch of 18.2 mm, the distances are compiled in the following table:

| Theoretical measure | | Tunisian flute | | Malagasy flute | |
|---|---|---|---|---|---|
| 8'' | 145.6 | I | 145 | I | 145 |
| 9.5'' | 172.9 | II | 172-3 | II | 172-3 |
| 11'' | 200.2 | III | 200-1 | III | 201-2 |
| 15'' | 273.0 | VI | 269-0 | V | 267-8 |
| 16.5'' | 300.3 | total | 300 | VI | 298-9 |

The metric agreement of the two flutes is even more impressive, as the penultimate measurements deviate in unison – so to speak – from the theoretical measure.

The dorsal holes are indeed differently placed: on the Malagasy flute, the hole is fitted above the level of hole I (high dorsal), whereas on the Tunisian flute it is pierced between levels I and II (low dorsal). But this difference does not constitute any morphological quality: it depends only on the length of the flute and

[151] A. Sichel, "Histoire de la musique des Malgaches," in *Encyclopaedie de la musique et dictionnaire du Conservatoire*, Volume IV, edited by A. Lavignac (Paris: Ch. Delagrave,1922), 3227.

[152] Cf. also: Aristide Marre, *Vocabulaire des principals racines malaises et javanaises de la langue malgache* (Paris: E. Leroux, 1896), 26.

[153] P. Antoine Abinal and P.V. Malzac, *Dictionnaire malgache-francais*, 1st edition (Antananarivo: Imprimerie de la Mission catholique); 2nd edition (from which we are citing the pages in brackets) of 1899. Gabriel Ferrand, "Les Musulmans à Madagascar et aux Iles Comores," 3 Volumes in *8° Publications de la Faculté des Lettres d'Alger, Bulletin de correspondence africaine* (Paris: E. Leroux, 1891,1893, 1902), 59.

the position of the hand involved. The flutes of up to approximately 30 cm demand the low dorsal [position]. Beyond 30 cm, the hand stretches and prefers the high dorsal position. Now, the Tunisian flute with the low dorsal [hole] measures only 300 mm, while the Sakalava one with a high dorsal [hole] has an entire length of 354-355 mm.

The inch of 18.2 mm, as we have just stated, as well as the other inches on which the Malagasy flutes are based – 16.53 mm, 19.386 mm, 22.04 mm, and 28.2 mm – are very common among the flutes of northern Africa[154].

On the other hand, the Malagasy flutes with bells are entirely identical with the flutes of Dahomey [Benin]. There one finds again the reed as material, the beveled end, the bell made from an animal horn – which, by the way, is also known among Greek shepherds[155] –, the six equidistant holes at the front side (without dorsal hole), and the same metric standard: inches of 16.53, 18.2 and 22.04 mm. Dahomey indeed belongs to Black Africa, but for quite some time now it has been under the influence of the Islamic civilization of the north.

In contrast, if we disregard the flutes which the Arabs later brought to Malaysia[156], none of the Malay flutes that the author was able to measure to date follows the metric standards employed in Madagascar.

Let us remember, as a final argument, that the first historian of Madagascar, Flacourt, saw the flute in Matatane. Now, this town is the capital of the Arab settlements [on Madagascar], from whence the Musulman migration started towards the east[157].

The list of instruments of Arab origin on Madagascar is limited to the following four:

- The *oboe* of the Sakalava (*anjomara*) corresponds exactly – as does their *kabiry*, most likely – to the *zamr* of the Arab world[158].
- The *spike fiddle*, called *herraucu* [read: *herravou*] is equivalent to the lute *rabāb* of Egypt[159]:
- The *short-necked lute* of the Sakalava (*kabosy*) is identical with the Arab-Turkish *qūpūz*[160].

---

[154] Specimens in Paris, at the Musée de l'Homme: 16.53 mm, nos. 32.377 and 33.165.177 (Egypt); 18.2 mm, no. 33.165.168 (Egypt); 19.836 mm, no. 33.165.115 (Egypt); 22.04 mm, no. 33.165.115 and 33.165.116 (Egypt); 30.384 (Kabyle); 31.45.29 (Morocco); 28.2 mm, no. 33.165.165 (Egypt).

[155] Specimens in the collection of musical instruments of the University of Ann Arbor, Michigan, USA, no. 499 and 500.

[156] Like the flute [lit. "flute à biseau"] from the island Nias in the *Musée*, no. 59948, whose distances correspond exactly with the standard measure of 16.53 mm. In every other detail this flute is clearly different from the flutes of Madagascar.

[157] Gabriel Ferrand, "Les Musulmans à Madagascar et aux Iles Comores," 3 Volumes in *8° Publications de la Faculté des Lettres d'Alger, Bulletin de correspondence africaine* (Paris: E. Leroux, 1891,1893, 1902), 57.

[158] C[urt] Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Dietrich Reimer, 1929), 198.

[159] Ibid., 234.

[160] Ibid., 234.

- Finally, one instrument has to be added: the *double-headed cylindrical drum with two hoops*.

All these Arab instruments seem to date from an era contemporaneous to the Middle Ages in Europe.

By the way, the remarkable fact should be pointed out that, except for a single flute that marks a kind of transitional stage, the Malagasy flutes do not yet know the arrangement of the holes into two symmetrical groups, as is generally the case in North Africa. If it is possible one day to date this innovation within the Arab world, we will have an additional datum for the era of the introduction of the Arab flute on Madagascar.

### *The European instruments*

European Instruments on Madagascar are:

- Spoon clapper,
- Jew's harp,
- Box zither,
- Viola-violin.

The origin of the spoons is not entirely certain. All these European instruments could have entered Madagascar in the 18th century, maybe even in the 17th century. Here is a chronological list of non-African instruments on Madagascar:

| | |
|---|---|
| Malays | small struck bamboo |
| | percussion slat |
| | leg xylophone |
| | elastic clapper |
| | sliding tubes |
| | side-blown conch |
| | neck of a broken jar |
| | drum with three beaters |
| | conical drum with Y-lacing |
| | |
| Hindus? | drum made of white clay |
| | |
| Arabs | end-blown flute |
| | oboe |
| | drum with double hoops |
| | lute |
| | spike fiddle |
| | |
| Europeans | spoon clapper |
| | Jew's harp |
| | box zither |
| | viola-violin |

The encroachment of European-made instruments is not incorporated in this study. Needless to say, the landslide of pianos, violins, accordions, and military musical instruments flooding Madagascar since the beginning of the last century[161] is near to destroying the remainders of indigenous music.

The attempt to construct a chronological summary of the instruments themselves should be completed by an attempt to chronologically summarize the island's main regions from the organological point of view. If we rest on the division into three cultural areas, established by comparative ethology, thus:

I. The east
II. The center
III. The west and south[162]

One recognizes on average the following order for the musical instruments:

1. The instruments confined to the east.
2. The instruments common in the east and the west.
3. The instruments confined to the west.
4. The instruments confined to the center.
5. The instruments common in all three areas.

[161] On the extremely curious effect of European military music on King Radama when he first heard it, cf. B.-F. Leguevel de Lacombe, *Voyage à Madagascar* (1823-30). 2. Volume. (Paris: L. Desessart, 1840) 129f.

[162] Ralph Linton, "Culture Areas in Madagascar", in *American Anthropologist*, new series, Volume XXX, no. 3 (Menasha, Wisconsin: George Banta Publishing Company), (1928), 363-300.

## Peoples, regions, and towns of Madagascar cited in the text

Ambanja: district of Diégo-Suarez.

Ambato-Boéni [today: Ambatoboeny]: district of Majunga.

Ambilobe: district of Diégo-Suarez.

Ambovombe: town in the far south.

Ampanihy: district of Tulear.

Ananalava: district of Manjunga.

Androy: region in the south.

Ankazaobo: district of Tulear.

Antaimorona: ethnic group of the east, southern part.

Antaisaka: ethnic group of the east, southern part.

Antalaha: district of Diégo-Suarez.

Antandroy: ethnic group of Androy.

Antananarivo: capital of Imerina and seat of the Central Government of Madagascar.

Antatsimatra: ethnic group of the southeast.

Antsalova: district of Morondava.

Antsohihy: district of Majunga.

Bara: ethnic group of the south.

Bealanana: district of Majunga.

Belo-sur-Tsiribihina: district of Morondava.

Beroroha: district of Tuléar.

Betioky: district of Tuléar.

Betsileo: ethnic group and region of the southern part of the central plain.

Betsimisaraka: region and ethnic group of the eastern coast.

Bezanozano: ethnic group of the hinterland of Betsimisaraka.

Comoros: archipelago in the north of Madagascar.

Diégo-Suarez [today: Antsiranana]: region and district of the very north.

Farafangana: town on the south-eastern coast.

Hova: synonym of Merina.

Imerina: region of the northern central plain.

Kandreho: district of Majunga.

Mahabo: district of Morondava.

Mahafaly: ethnic group and region in the southwest.

Maintirano: district of Morondava.

Majunga [today: Mahajanga]: region in the northwest.

Makoa: slaves from Africa, having come to Madagascar in recent times.

Manakara: coastal town north of Farafangana.

Manja: district of Tuléar.

Marovoay: district of Majunga.

Matatane: town in the southeast.

Merina: Malayan ethnic group of Imerina. Other name: Hova.

Mitsinjo: district of Majunga.

Morombe: district of Tuléar.

Morondava: district and wider region in the west.

Nossi-Bé [today: Nosy Be]: big island to the northwest of Madagascar. The Malagasy word *nossi* means “isle”.

Port-Bergé: district of Majunga.

Sakalava: great black people in the west.

Sainte-Marie: island east of Madagascar.

Sakaraha: district of Tuléar.

Soalala: district of Majunga.

Taimorona: region of the Antaimorona in the east.

Tanala: region and ethnic group of the eastern central region.

Tanosy: region in the southeast.

Tsaratanana: district of Majunga.

Vagaindrano: coastal town in the southeast, south of Farafangana.

Vezo: region and ethnic group of the Sakalava on the west coast, north of Mahafaly.

Vohemar: district of Diégo-Suarez.

Vohipeno: Tanala town.

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| | 82.63 |
| Mr. Ferlus | 01.10 |
| Central Government of Madagascar | 35.68 |
| Mr. Langlois | 29.2 |
| Mr. Leblond | 27.1 |
| Mr. Mathé | 34.79 |
| Mr. Petit | 61877 |
| | 22.13 |
| | 33.9 |
| Mr. Reichenberg | 07.2 |
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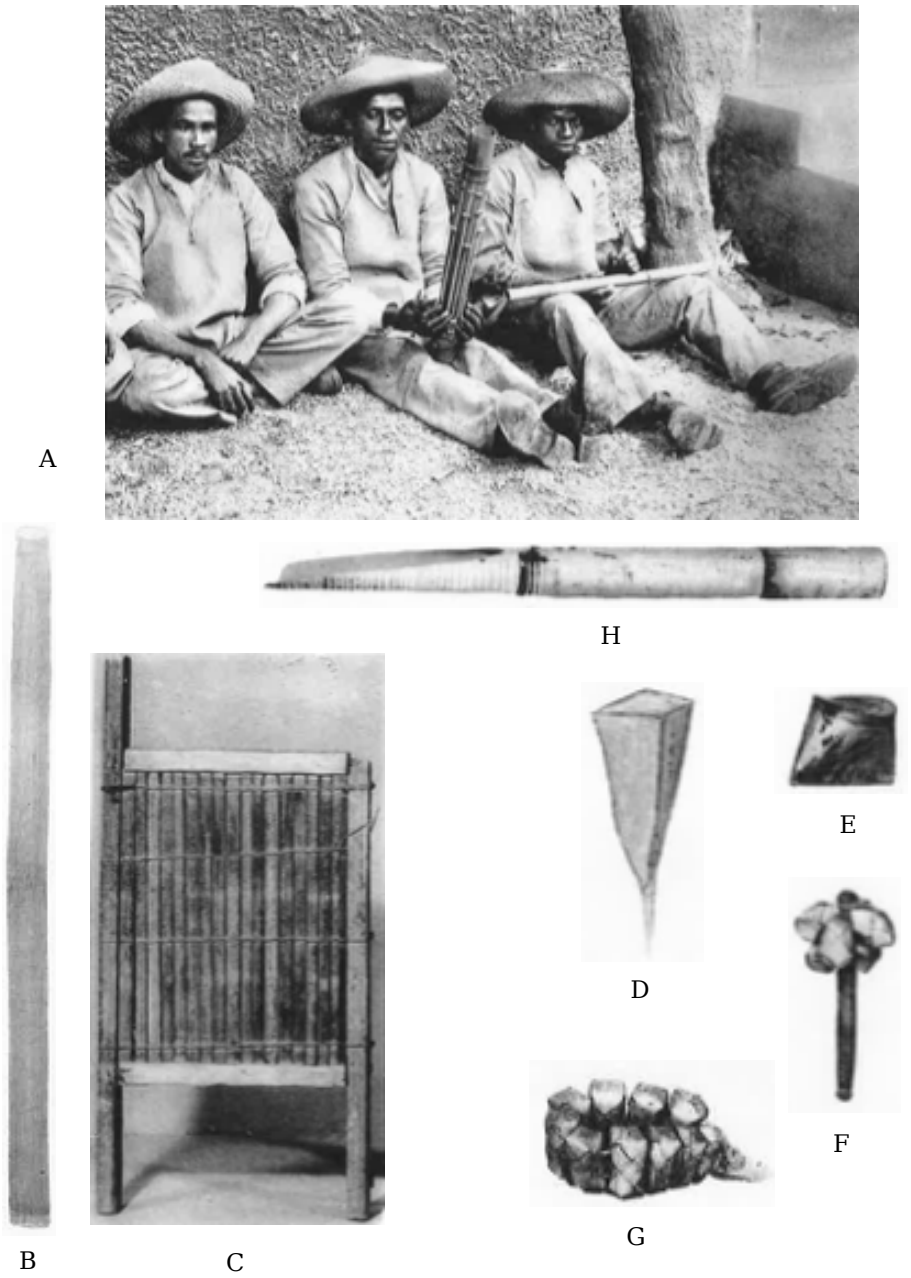


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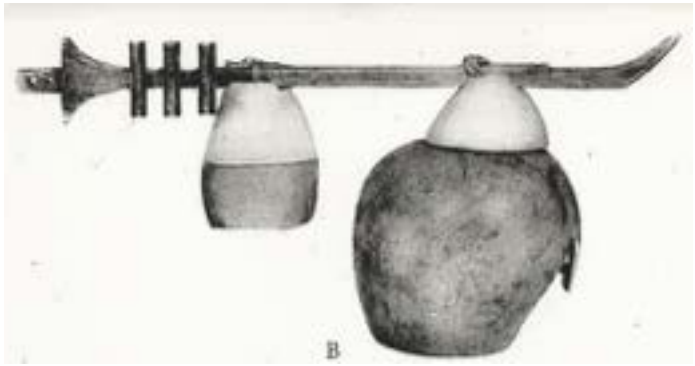

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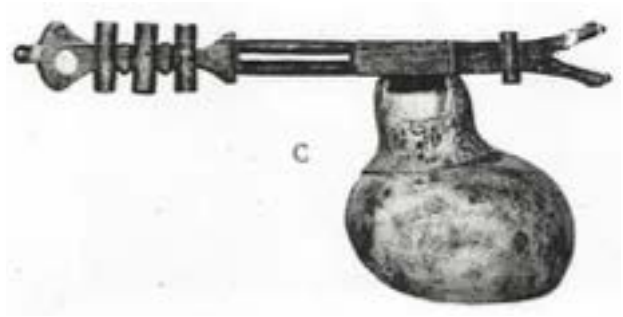

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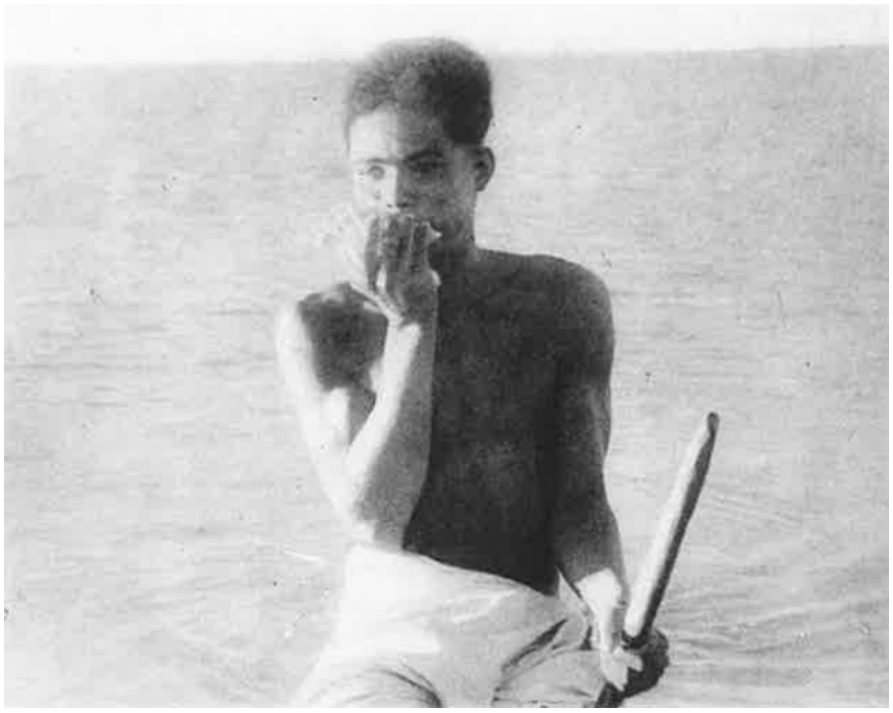

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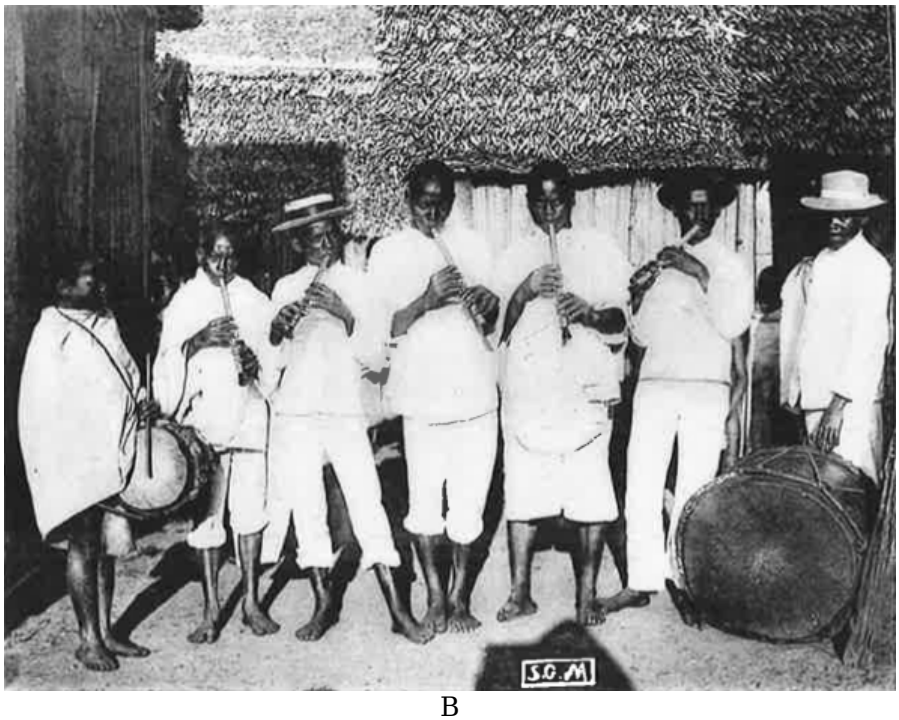


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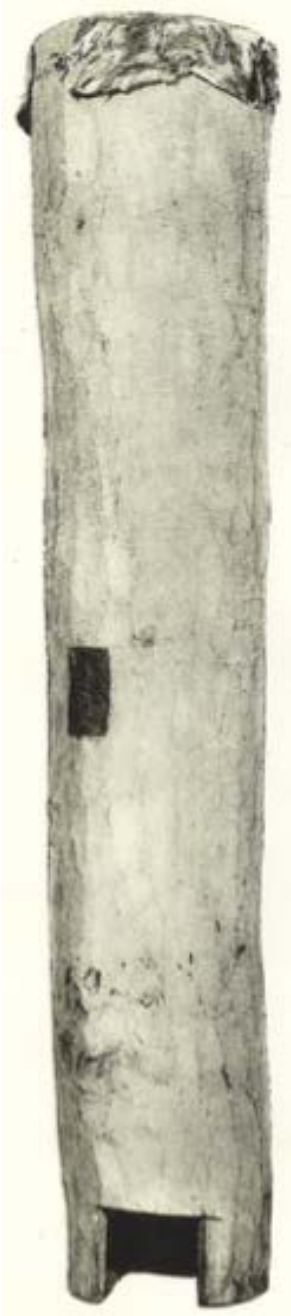

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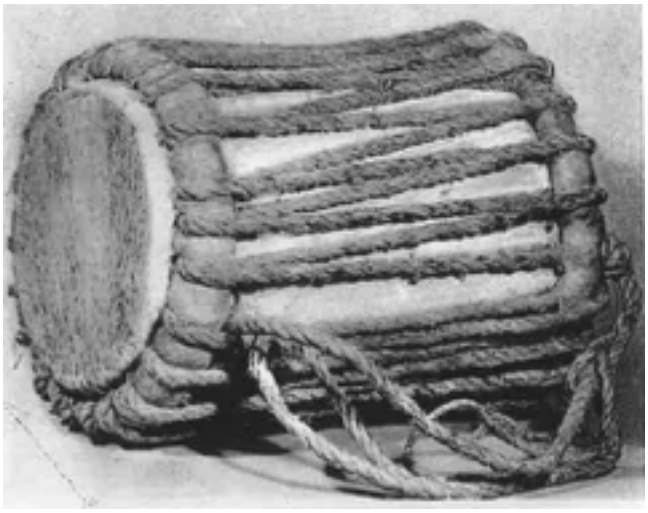

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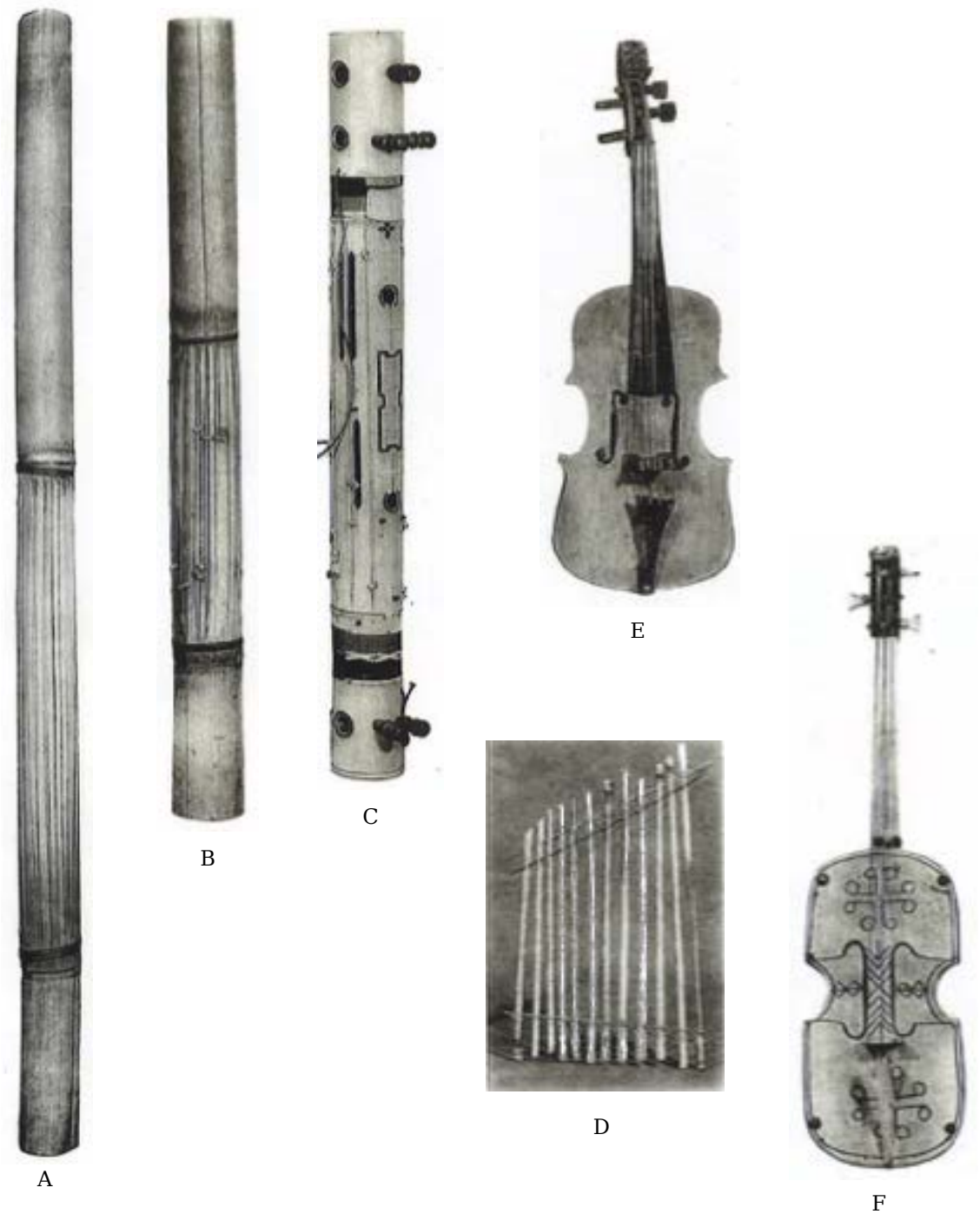

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A


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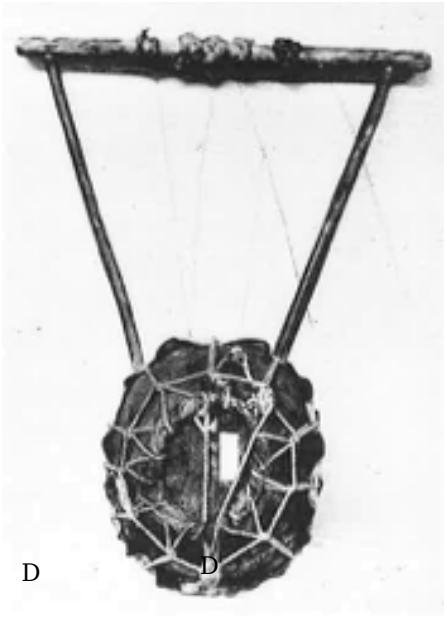


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