

Maori Music.

By JOHANNES C. ANDERSEN, F.N.Z.Inst.

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Plates 69, 70.

SINCE publication of the paper in volume 54 more details have come to hand regarding certain of the musical instruments of the Maori.

The accompanying illustration of the *roria*, or Maori jew's-harp (fig. 1), is from a sketch sent by Mr. George Graham, of Auckland. The vibrating-strip, made from supplejack (*kareao*), was, he says, called *arero* (tongue): it gave like a spring, and stood considerable use. When it showed signs of losing its elasticity, or of cracking, it was replaced by a fresh piece. It gave rise to a pungent proverb: *He arero kareao ka whati, engari te arero wahine kaore kia whati—haere tonu ana* (A supplejack tongue will become cracked; not so the tongue of a female—it goes on for ever). Evidently even Maori gallantry suffered lapses—but truth will prevail. Mr. Graham says he last saw the *roria* in use at Kaipara about 1885.

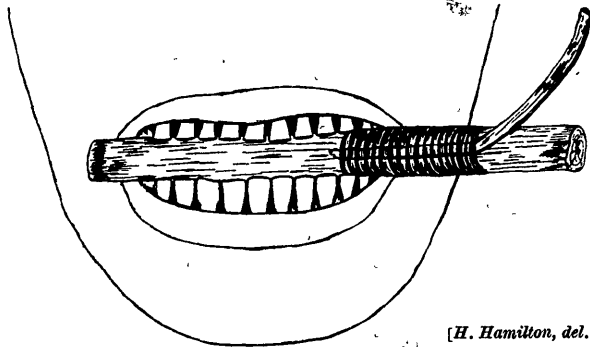


FIG. 1.—A *roria*, or Maori jew's-harp, as held.

The same correspondent says that in old days a crier (*kai-karanga*) called attention to the fact that an announcement was to be made on the *marae*, or village square, by a blast on a *pumoania*, or conch-horn (Plate 69, fig. 1). At the funeral obsequies of an old Ngati-Paoa chief of high rank, Rawiri Puhata, the call was made by means of a glass bottle, first drained of its "hard stuff."

Hamilton (*Maori Art*, p. 391) notes particulars of a "calabash trumpet" mentioned by some authors, a specimen being in the British Museum. He believed it to be "almost peculiar" to the Taranaki coast. It was made from a small carefully-selected calabash (*kahaka*), in the side of which two or three holes were punctured. It gave only a small variety of notes, and is said to have been used to summon people to meetings. Thomas Moser, from whose *Mahoe Leaves* (p. 38) Hamilton derived part of his information, says it was called *rehu*, and he called the sounds it made a "most

horrid noise." The surface of the calabash was ornamented with incised lines, made when the rind was soft. The specimen in the British Museum is about $3\frac{1}{2}$ in. in diameter and $7\frac{1}{2}$ in. in circumference.

Mention should be made of the *pahu*, though this was used only for emitting a great body of sound: as in other parts of the world, it was used for signalling (see Hamilton, *Maori Art*, pp. 98, 384).

The following particulars are from a note by the late Captain Mair. The *pahu*, *pato*, or wooden gong, was a single slab of totara (*Podocarpus*

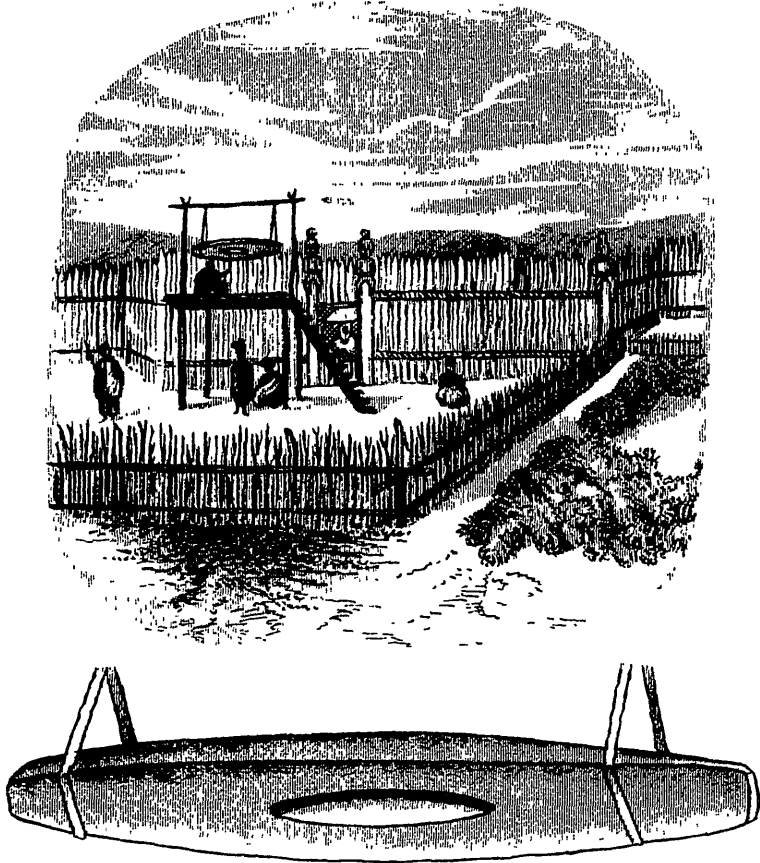


FIG. 2.—A *pahu*, or war-gong. (From White, *Ancient History of the Maori*, vol. 4, p. 128.)

totara) or matai (*Podocarpus spicatus*), sometimes 30 ft. in length, 2 ft. or 3 ft. in breadth, and 6 in. in thickness. It was suspended by two stout ropes from a ridge-pole built on a high *rangi*, or platform, in an angle of the *pa*, the platform being approached by a ladder. In the centre of the slab there was usually an elliptical hole 2 ft. or 3 ft. in length. The slab was struck with a heavy club made from maire (*Olea Cunninghamhamii*), and under favourable circumstances could be heard to a distance of from six to ten miles. (See fig. 2.)

"During the Maori War," writes Captain Mair, "my Native contingent at early dawn surprised an Urewera village near Maungapohatu. Some of the enemy escaped and gave the alarm by sounding a *pahu* situated on a high hill above the settlement. The signal was immediately answered from a *pa* about nine miles down the Waimana Valley, below Tawhana. The deep thundering notes of the distant *pahu* came booming up the valley, reverberating through the wooded peaks, finally dying away in a thousand echoes among the lofty cliffs."

Sometimes *pahu* were formed out of living trees which happened to be hollow, by cutting a tongue 20 ft. or 30 ft. in length out of the standing trunk. The lower end was struck a few feet from the ground, and a scale of three or four notes obtained by striking the tongue higher or lower.

Again Captain Mair writes: "There are several celebrated specimens of this kind of *pahu*, or *pato*, in the Urewera country, some of which have been in use from time immemorial. One very famous one, called Opato, stood on a high hill overlooking the Whirinaki Valley at Te Whaiti. In 1869, when Colonel Whitmore's expedition marched through the Urewera country, the friendly Native chiefs who accompanied the force pointed out the necessity of obtaining possession of this gong. Accordingly I was sent some miles in advance during the night with ten picked men to seize this spot, and next morning a successful dash was made upon the rebel position at Harema, which was taken with many prisoners and heavy loss to the enemy."

Another instrument of percussion, whose mention follows that of the *pahu* as naturally as the mention of Venus follows that of Mars, is the *pakuru*. This instrument, too, is a perfect evidence of the Maori love of the beautiful. It consists of two strips or rods of wood, respectively 14 in. or 15 in., and 6 in. long. The longer rod is the principal part of the instrument, and is made from matai, mapara (?), or kaiwhiri (= poporo-kaiwhiri, *Hedycarya arborea*). It is nearly 1 in. in diameter, flat on one side, convex on the other: according to Captain Mair's notes, it is $\frac{1}{2}$ in. thick and from 1 in. to 2 in. deep. Sometimes it is beautifully carved, or merely has notches (*whakakaka* pattern) cut along the edges. This rod is held in the left hand, and one end placed between the teeth, flat side down. It is struck with the small rod, made from the same wood, held in the fingers of the right hand. The striking, or tapping, is done in time to the words of the song, and the movements of the lips, as with the jews'-harp, cause different sounds or notes to be emitted by the longer rod. (Hamilton, *Maori Art*, p. 385.)

According to Captain Mair, the end of the longer rod was held lightly by the extended fingers of the left hand, the other end being held near the mouth. While striking the rod so held now and again with the shorter rod, the performer breathed the words of a song or chorus upon the wood, causing the most pleasing vibrations or waves of sound. "I have watched a number of skilled performers, standing in a row," he writes, "their swaying bodies and little tapping mallets keeping the most perfect unisons. Now rising shrill, or dying away in the mournful cadence of some love-song, the effect is remarkably melodious and pleasing."

White (*Ancient History of the Maori*, vol. 2, p. 130) gives yet another slightly differing description of the *pakuru* and the manner in which the rod was held. He says it was made from matai, was about 18 in. long and 1 in. in diameter, slightly flat in the centre, and tapering a little at each end; the ends were carved, the middle left smooth. It was suspended

on the thumb of the left hand by a piece of string tied to each end of it, so that one end should be a little within the teeth when the mouth was partially open. The performer held in his right hand, interlaced between the three middle fingers, another piece of matai, about 10 in. long and as thick as a man's middle finger, and with this he struck the suspended piece gently while he breathed the words of the chant, producing the higher or lower tones by closing or opening his lips. This description was given White by the Ngati-Hau, who also gave the words of the *haka* that was sung to the accompaniment of the *pakuru* by the sisters of Tinirau when looking for Kae, the slayer of the pet whale Tutunui. Mair's description would be from the Arawa; there were probably local variations in make and method. The principle is that of the suspended *pahu* and of the modern xylophone.

Hamilton (*Maori Art*, pl. 55, fig. 1) gives an illustration of a most artistic example of the instrument. In this the end of the long rod held in the fingers is carved with a characteristic head, through which a hole has been pierced to admit a double cord of flax, on which are threaded short pieces of shells of *Dentalium*, a beautifully white cylindrical shell, used in a simile when complimenting a young woman on the whiteness of her teeth. The striking-rod, pierced at its narrower end, is also attached to this cord, which thus serves the double purpose of use and ornament.

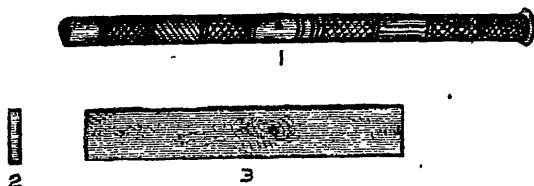


FIG. 3.—One form of *pakuru*. 1, The striking-rod; 2, 3, a plain long rod.
(From White, illustrations prepared for *Ancient History of the Maori*.)

This rod is about 6 in. long—the principal rod is 14 in.—and is slightly cone-shaped, the base being inlaid with a neatly-cut ring of *haliotis*-shell. The principal rod is carved on the rounded face, and a diagonal banded pattern slightly burnt on the flat surface—the pattern looking as if it were a spiral encircling the rod. The whole appearance of this *pakuru* is extremely beautiful. Hamilton quotes a pretty *pakuru*-song, obtained from Captain Mair:—

*Whakarongo mai taku hine,
Ki te tangi pai o taku pakuru
Taoro haere ana ki Pari-karangaranga,
Hei kawē atu i te aroha,
Rere tomairangi i runga o te rau,
Tiororo ana ki runga puke,
Hei whakoho i to moe,
E te hoa whakaipo e—i.*

Listen now, my lady-love,
To my sweet sounding *pakuru*,
Sending forth its melody,
In echoing cliffs resounding,
Breathing forth my love to you,
As soft as dew on leaves,
Sounding from hill and dale,
Arousing from sweet sleep
She who fills my nightly dreams.

A finely carved example of the *putorino*, recently (1923) acquired by the Auckland Museum, is shown in Plate 70, fig. 4. This instrument was bought from Pora Taki, of Rapaki, Lyttelton, by J. Martin, about the year 1873: Pora Taki said it had belonged to his grandfather. Captain Mair writes that the instrument was sounded by the performer blowing obliquely into the wide upper aperture, raising or lowering the pitch by stopping the aperture at the small end with his forefinger. "It required a vast amount of wind to produce the loud booming or toot-tooting sound." There are specimens without the aperture at the lower end; the sound of these could evidently only be modified by the changing position of the hand over the central aperture.

When last year's paper was written there was no genuine example of a *putorino* available in the Dominion Museum. The instrument tried was known to be of modern trade manufacture, so could not be relied upon, and the cast of the double *putorino* in the Museum (Plate 70, fig. 2) is of no use for experiment. A most perfect specimen has, however, recently been found in the Museum. It is of undoubted genuineness, as it and a double *putorino* (Plate 70, figs. 1 and 3) formerly belonged to the old-established Lord St. Oswald collection, and is believed to have formed part of the collection taken from New Zealand by Captain Cook. This *putorino* measures 52.5 cm. in length, and 5 cm. across the widest part, 25 cm. from the upper end. The aperture at the upper end is oval in shape, 2 cm. across, 1.75 cm. in depth. The lower end tapers to a width of less than 1.5 cm., and is pierced with a hole about 3 mm. in diameter. It is not clear what purpose this hole serves; it possibly helps to purify the quality of the notes emitted. The mouth-opening in the middle of the instrument is 2.75 cm. across, constricted in the centre as in Plate 70, fig. 1, where two views, side view and full view, are shown. The binding is of very finely-split kiekie-root: it is not tied, but the ends are drawn under the binding as in the binding of a cricket-bat. It also seems to have been bound over a cement, of which, too, there are traces at the joined edges of the wood. The protruding tongue of the figure at the top of the *putorino* (see the side view of Plate 70, fig. 1) is caught in a prong springing outwards and upwards from the body of the instrument. On the opposite side (the back), at the lower end, is a smaller carved head. The side view shows the outward-arching figure of the blower at the sound-hole, carved in high relief. The dark-brown wood of the instrument is beautifully smooth and polished, like the wood of an old violin. No attempt has been made to carve the portions between the bindings, as in the Auckland instrument.

A fine clear trumpet-note is produced by blowing bugle-fashion into the upper aperture; and by closing less or more of the central mouth with the forefinger, resting on the side edge, the note, which is F sharp, a fourth below middle C, can be lowered to E very slightly flattened—not so much as quarter flat. This gives a range of slightly over a tone. The range seems much more, and the writer, after evoking a Maori melody from the long-silent instrument, was surprised on taking the pitch to find that the range was so small.

A remark by Hare Hongi on this point is significant. He had been singing a Maori melody for Alfred Hill, who remarked that the whole was within the compass of a tone. "Surely not," said Hare Hongi. "Yes; sing it again." He sang it again. "Yes, it is within a tone." "Do you know," remarked Hare Hongi, "I felt that I had been ranging

over an octave." So it is; these minute subdivisions of a tone do not after a time, seem minute at all.

The tone of the Auckland instrument is not so clear; its pitch is just on middle C, and it can be raised or lowered slightly by tightening or loosening the lips while blowing. The instrument has a pronounced bend at the neck.

The pitch of the double *putorino* is also F, but slightly flattened. Neither on it nor on the Auckland instrument are the notes produced so freely as on the *putorino* of fig. 1. Once the pitch is struck, this instrument seems to draw the note from the blower, so that it can be played *pp* as easily as *ff*. The other instruments appear to resist the blower. No apparent differences were produced in the tone of the double *putorino* when the two apertures were differently covered. There are smaller *putorino* in the Auckland Museum, and these are higher in pitch than these larger and better instruments. These smaller *putorino*, like the double one, are plain compared with the other two; it may be that greater care was lavished on these two because of their finer speaking qualities.

It is certain now that the *koauau* and *putorino* could be played in unison—one a female voice, one a male.



FIG. 4.—A flute, *porutu*, made of wood.

Captain Mair mentions a kind of flute, *porutu*, generally made from a young straight branch of *kaiwhiri*, hollowed out by means of fire. Its length was from 1 ft. to 16 in., its diameter $\frac{3}{4}$ in., and it was elaborately carved, as in fig. 4, from a rough drawing by Mair. The name *porutu* is apparently a Maori form of the word "flute"; and, judging by this and the general appearance of the instrument, it would appear to be a modification of the flute or of the fife.

The long ordinary flute, adapted from the European flute, might on occasion be played with the nose. I learn from Te Rangi Hiroa of a Niue woman whom he saw using a long flute in this way. It was held with the lower end towards the right. Between the right finger and thumb she held a stick the length of a pencil, blocking the right nostril by pressing it with the end of this stick, and blowing with the left nostril. The flute was held with the left hand. The holes were covered by the free fingers of both hands. This would be a kind of trick performance, but it suggests that the nose-playing was not considered seriously. The nose-flute was, however, commonly known through the Pacific.

Captain Mair's notes on the *koauau* are good. He writes that it was the most prized of all the Maori musical instruments. It was often made from the arm-bone or thigh-bone of an enemy slain in battle, was from 5 in. to 6 in. in length, and sometimes finely carved. It was generally carried suspended from the neck by a piece of string, a loop at one end being passed over a toggle at the other end. This toggle, called *uhi*, was a small piece of white albatross-bone. A hole was pierced on one side at the middle, the cord passed into the hollow of the bone and knotted so as to prevent its slipping out again. Mr. Graham, above referred to, says the toggle was called *poro*; and, the albatross being *toroa*, the full name was *poro-toroa* when the bone of that bird was used. Human-bone and moa-

bone were also used. He has seen one specimen of wood, beautifully carved. It was made in the same way that the *putorino* was made, the wood being split, hollowed out, lashed together again, and carved. This unique *poro* perished, like many another Maori treasure, in a house-fire. It should be noted that the bone artifact shown on plate 85, fig. 6, *Trans. N.Z. Inst.*, vol. 54, p. 752, 1923, and recorded as "Bone *koauau* (?) in British Museum," is not a *koauau* at all, but a bone toggle that evidently belongs to the *koauau* of fig. 1. Captain Mair writes that there are several historical *koauau* in the Auckland Museum, the most notable one being named "Te Murirangaranga." It is said to have been made from the arm-bone of a *tohunga* named Te Murirangaranga, who was slain by Whakaue for an affront put upon his son Tutanekai. It was upon this instrument that Tutanekai is said to have played when he lured Hinemoa to swim from the mainland to the island of Mokoia. A *hapu* of Ngati-whakaue called Ngatitutanekai take special pride in being descended from Tutanekai, and they are skilled in music, as he was said to be. Quoting from the notes, "The writer has often, on a clear summer evening, sat on Pukeroa, a hill above Ohinemutu village, and heard the clear piccolo strains of a *koauau* wafted across from Mokoia Island, a distance close on four miles."

Since the above paragraph was written the writer has visited the Auckland Museum, and has elicited music from the long-silent *koauau* mentioned. It may be the historic flute of Mokoia, or it may not—this honour is claimed for about ten different flutes—but the sounds emitted are most sweet and pleasing; they are mellow and flute-like, not shrill like those of the piccolo. The bone is brownish-yellow with age, the interior partly honeycombed, the edge on which the lip rests ragged and sharp to touch, but the sweetness of the notes remains. The *koauau* is 133 mm. in length; the bore, which is rough and irregular, is 16 mm. across the upper end, 12 mm. across the lower. There are three holes pierced in the side, their centres being respectively 23 mm., 45 mm., and 91 mm. from the top. There is a raised ridge on the back, pierced with a hole for suspension, 48 mm. from the top. There is a little incised carving at the two ends, and the pattern, two double rings with cross-cuts and connecting cuts front and back, is the same as that on the wooden mouthpiece of the shell trumpet "Te awa a te atua." The lowest note of this *koauau* is high B, the three following being B a quarter (almost half) sharp, then C a quarter sharp, and D.

There are other noteworthy specimens of the *koauau* in the Auckland Museum. One, named "Ngarangikakapiti," was made from the arm-bone of an Urewera chief of that name who was slain by the Tuhourangi in the fight at Pukekahu about the beginning of the present (? nineteenth) century, and was given to Captain Mair in 1866 by Tuhotoariki, a noted old Tuhourangi wizard, who was entombed for several days under a fallen *whare* during the Tarawera eruption. Another was made from the leg-bone of the notorious Peka te Makarini, the executioner under Te Kooti, who fell in the fight at Waikorowhiti on the 7th February, 1870. An old chief from Mohaka fashioned it, and sent it to Captain Mair. The old man was a connoisseur, saying it was the sweetest instrument he had ever played upon.

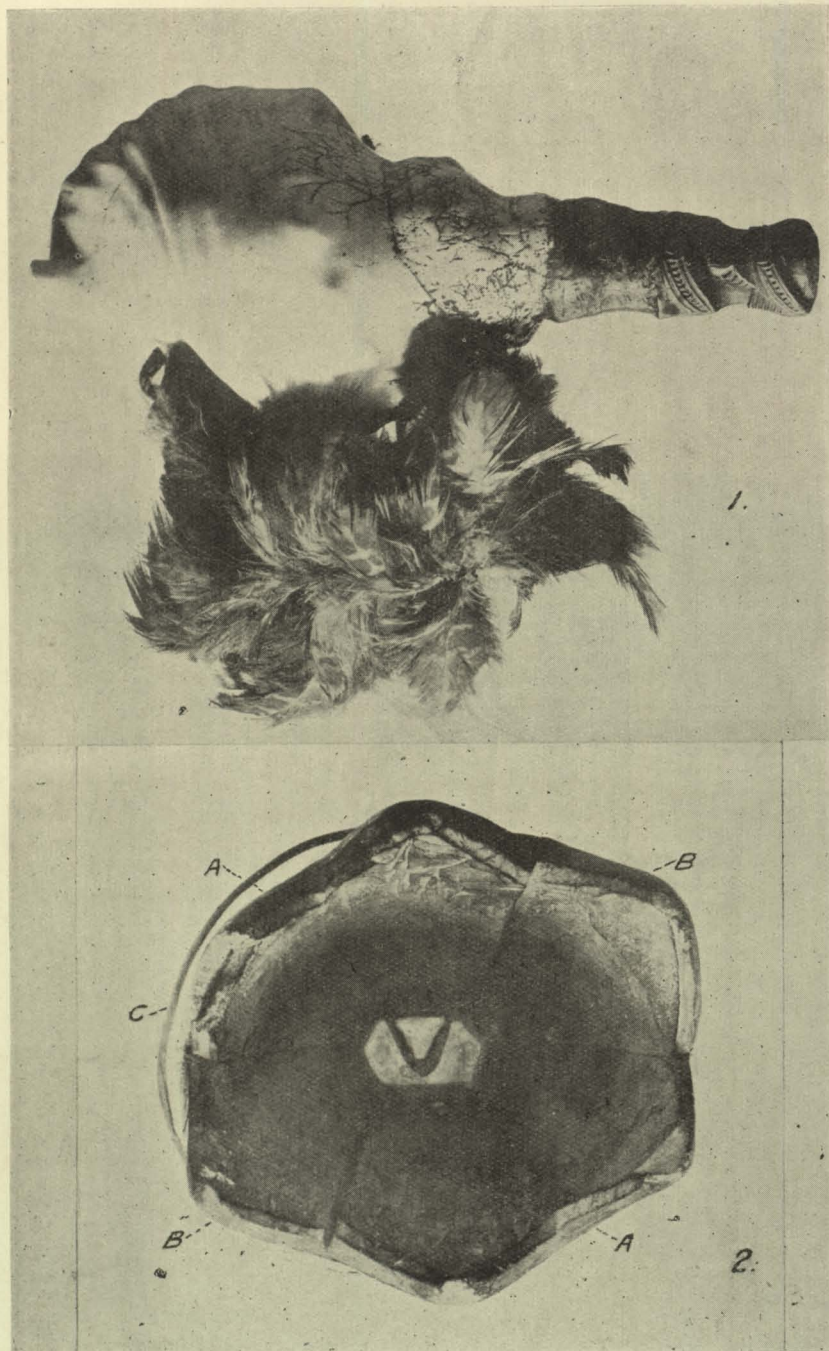
Captain Mair calls the *nguru* a "snorer or nose-flute"; it was made from matai, sometimes stone, was from 4 in. to 5 in. in length, $1\frac{1}{4}$ in. in diameter, tapering internally in exact ratio to the outer surface. The small upcurved end was placed in the nostril when used, the aperture at this end being about the diameter of a lead-pencil. The exterior was fancifully carved, and there were three holes for the fingers of the right hand.

If the *nguru* were played as stated, on what did the air impinge to produce a sound? or what formed a reed? The only way in which the writer is able to sound a *nguru* is by blowing across the wide end as if it were a *koauau*; a clear sharp whistle, almost of piccolo quality, or boatswain's pipe, then sounds, and covering and uncovering the holes gives notes of varying pitch and irregular intervals. The odd hole at the back of the bend altered the pitch, which was high C sharp in an Auckland instrument, about a semitone.

In a note on the *pumoana*, or shell trumpet, which he calls *pukaea* (Plate 69, fig. 1), Captain Mair writes that the wooden mouthpiece was bound to the shell with bark from the hoihere (houhere), or lacebark (*Hoheria populnea*), steeped in a tenacious gum made from the seeds of *Pittosporum*. There is a very old specimen of this trumpet in the Auckland Museum. It is called "Te awa a te atua," and according to tradition was found on the beach at Matata or Te Awaateatua by Tuwharetoa, one of the crew of the "Arawa" canoe. After the birth of the sons of Tuwharetoa his tribe attacked and destroyed the numerous prehistoric people then living about Putauaki (Mount Edgumbe)—namely, the Kawerau, Te Marangaranga, Te Rauo Ngaoheohe, Te Tinirau, Te Aruhetawiri, &c. A remnant, known as Te Heke o Maruiwi, fled to Taupo, whither they were pursued by the sons of Tuwharetoa, who, having exterminated the Ngati-Hotu, another ancient tribe, finally occupied all that country and are now known at Ngatituwharetoa. Elsdon Best notes that the Maruiwi were never located at Taupo. They migrated from the Heipipi pa at Petane, marched up the coast, and across the ranges to Opotiki, then on to the Waimana district, where they settled. In later times they were expelled, and returned to Heretaunga via Waiohau and Kaingaroa. They were attacked by the sons of Tuwharetoa near Te ahi a nga tane, on the Napier-Taupo road. In panic, they fled in darkness, and are said to have perished in a cañon near Te Pohue, a few survivors reaching Heretaunga. The trumpet "Te awa a te atua" used to be sounded only on the birth of a first-born male child. When Te Heuheu and his tribe were overwhelmed at Te Rapa by a landslide, in 1846, the trumpet was lost, but after many years was found again, and in 1880 given by the late Te Heuheu to Captain Mair. The pitch of the note sounded by "Te awa a te atua" is a shade above lower C sharp; the tone is loud and clear, like that produced from a well-blown cow's horn.

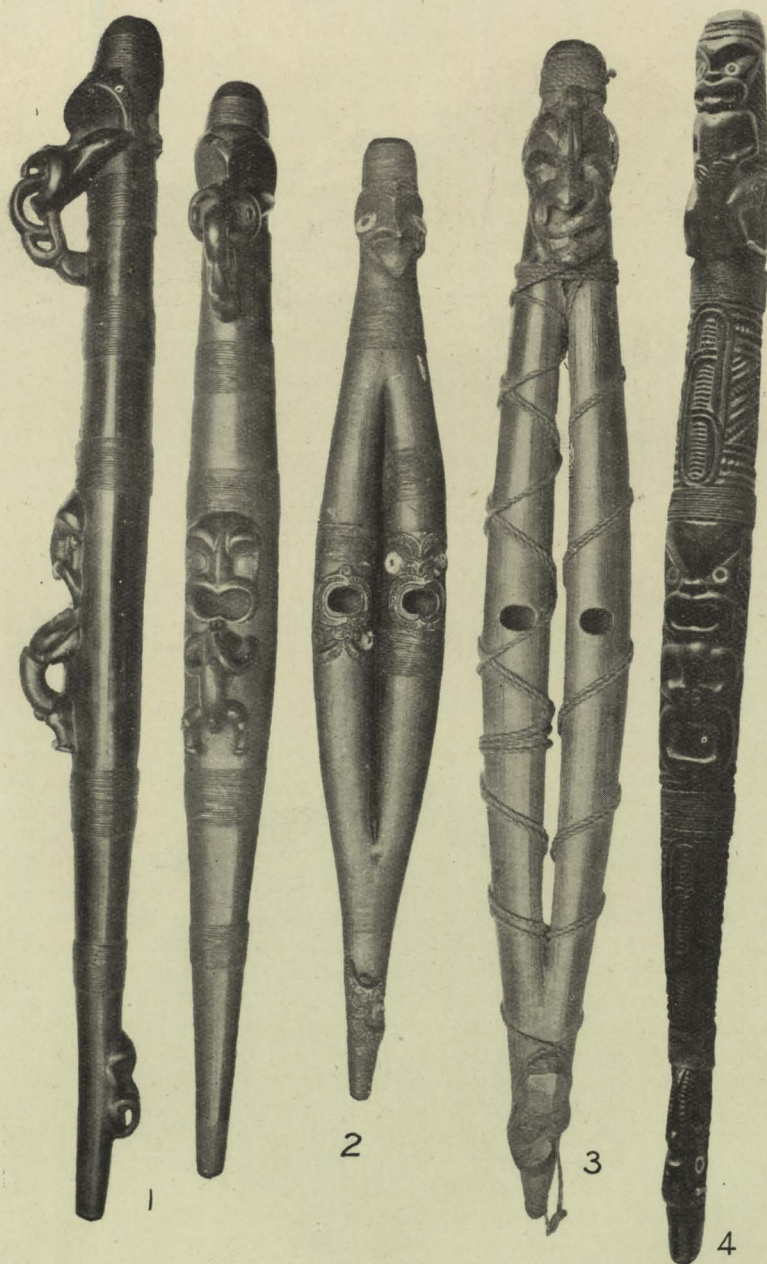
The *putara*, which Captain Mair calls *putatara* or *putatere*, was, he writes, from 5 ft. to 7 ft. in length, and was made of from two to five thin strips of matai hollowed and closely fitted together and strongly bound with kiekie-roots. The mouthpiece was a finely carved human figure, and about 3 in. inside the cylinder was a tongue or valve of wood called *tohotohe* (tongue). In an example now in the Dominion Museum the tonsil is at the bell end, 11 in. from the extremity (see Plate 69, fig. 2). This trumpet is 56½ in. long, ¾ in. in diameter at the mouth end, 4 in. at the bell.

It is of ingenious construction, the main portion consisting of two pieces of wood (Plate 69, fig. 2, A), being the two parts of a single piece split and hollowed out as described by Captain Mair. To form the belled end, two other pieces of wood (Plate 69, fig. 2, B) have been hollowed and fitted in between the two main pieces like gores. These two pieces are 2 in. in width at the mouth of the bell, and taper to a point at about 17 in. up the side. The rim of the bell has been cut so that it forms a zigzag pattern. (See Plate 69, fig. 2.) At 11 in. from the mouth of the bell a kind of tonsil arrangement has been cut, as shown in the plate. The simple tonsil



[H. Hamilton, photo.]

FIG. 1.—*Pukaea* (shell trumpet with feather ornament), in Dominion Museum.
 FIG. 2.—Belled end of *putatara* (war-trumpet), looking directly into the instrument, showing *tohetohe* insertion: A, the two pieces of which the main part of trumpet is made; B, the two gores; C, the finer vine binding.



[H. Hamilton, photo.]

- FIG. 1.—*Putorino* in Dominion Museum: side view and full view.
 FIG. 2.—Cast of double *putorino* in Dominion Museum; original in British Museum.
 FIG. 3.—Double *putorino* in Dominion Museum.
 FIG. 4.—*Putorino* acquired in 1923 by Auckland Museum.

projects from one side of one of the broad pieces, the double tonsil projecting from the opposite side of the other broad piece. The right wing of this double tonsil, originally part of the broad piece, has been cut free, so that the double tonsil is connected only at its base, as is the single tonsil. It cannot be determined from inspection if the tonsils have been cut from the original piece of wood, or if they have been set in grooves subsequently to the two pieces being hollowed out; but it looks as though they are actually part of the wood.

The whole trumpet is bound with a split aka-vine of dark-brown colour, a rebate at the mouth end preventing any chance of the binding slipping over the end. The bell is bound with a finer unsplit vine of a much lighter colour (Plate 69, fig. 2, C). The note the writer is able to produce is the bass E. It is not known what purpose the tonsil served. It may vibrate and increase the resonance, but such Maori opinion as can be gathered inclines to suppose that it made the note purer—less of a blare. It is said the old performers could almost speak on the trumpet; it is certainly recorded that through it they hurled curses at the enemy with sufficient clearness for the curses to be understood and resented.

There is a fine specimen of the *putara* in the Auckland Museum. It is 76 in. in length, and the chief note it gives is C sharp in the bass. This note is exceedingly vigorous and reverberant, and unless the lips are firmly held it gambols in lively fashion both above and below C sharp. This instrument, too, assists the blower to produce the note, and it encourages a vocalization that may well have given the name *putara* or *putatara*.

It is not easy to arrive at an idea of what the Maori thinks of song; nor is this to be wondered at. For one thing, it is a little late in the day to begin questioning. Again, how many Europeans could give definite or satisfactory replies if questioned on the technique of music or song? Writers like Helmholtz, on the analysis of sound, or Plunket Greene, on the analysis of song, came at a late period in the development of musical taste—at a date when there is something settled and definite in men's ideas of music and their utterance of it. What can be expected of the Maori, who had not yet reached to the evolution of harmony, to say nothing of counterpoint—who had hardly even reached the stage at which our own enharmonic primitive folk-song evolved?

If we can examine an old poem or song that has escaped the modernizing touch of a Percy, we shall find the phrases of indefinite lengths. In a modern poem or song the phrases are of fairly definite and equal lengths, the full phrase occupying a full verse of eight or seven beats, usually broken into two lines of four beats, or of four and three—the "long measure" and "common measure" of church hymns. Since music followed the words, the four-bar and eight-bar themes in music have their origin in the four and eight accented lines and verses of poetry.

In the old poems, most of which were songs, the lines and verses were not so definitely regular—the regularity finally crystallizing into the stanza of four or eight lines, or of sixteen or thirty-two bars. In singing, the lines took on the character of Gregorian chants, where there are short melodic phrases separated by conventional breves to which an indefinite number of syllables may be sung. The general trend in singing seems to have been towards the evolution of phrases that could be sung in one breadth, or in two breaths. In church music the old and the new live side by side in the Gregorian chants and the hymns, ancient and modern.

Even in church music, however, the melody is modern throughout in its definiteness—in its being confined to steps of tone or semitone; in the folk-songs the melody, as the rhythm, and the length of the phrases, was *ad lib.* throughout. The introduction of metre and harmony resulted in the standardizing, more or less, of melody, rhythm, and phrase-length.

There is evidence of similar evolution, or trends towards similar evolution, in Maori music. There is also a vigorous survival of what is probably a yet older character—a character that has quite disappeared from modern music. In many if not all the Maori *karakia*, usually sung or intoned in a rhythmical monotone, the whole is delivered on one breath. This would, of course, be impossible for one person, so where two take part one sings as long as his breath will carry the sound, the second takes up the words on the same note just before the breath of the first is expended, so that there is an unbroken flow of sound. When a company of people is singing one of their monotone songs of welcome the break in the general body of sound is quite perceptible when one or other stops to take breath. The one particular voice ceases for a moment or two, then resumes; another ceases, and resumes, and so on, the general murmur never ceasing till the close, where there is usually a drop in the *hianga* through one tone to four or more. The breath may be taken at any place—even in the middle of a word; and, in resuming, the singer may start again in the middle of a word. There seems to have been an aim to make the breath last as long as possible, and there were particular songs for practice in holding the breath.

Dieffenbach writes (*Travels in New Zealand*, vol. 2, p. 32: Lond., 1843): "A very common sport amongst children consists in opening and shutting the fingers, and bending the arm in a certain manner, when the following words are said, the whole of which must be completed in a single breath: '*Katahi ti karua ti ka hara mai tapati tapato re ka rau ua ka rau ua ka noho te kiwi ka pohe wa tautau to pi to pa ka hua mai ka tako te rangi kai ana te wetu kai ana te marama o te Tiū e rere ra runga e tepe ra peke o hua kauere turakina te arero wiwi wawa ke ke ke te manu ki tauipiri.*'"

The division of a song or *karakia* into definite lines, and verses (a definite aggregate of lines), and stanzas (a more or less definite aggregate of verses, usually two or four) is a stage of evolution to which Maori music had not yet attained, but indications of which can clearly be seen. It is a natural evolution to which the poetry and music of all peoples are subject, for the same forms both in poetry and music have evolved independently among the various peoples.

In Maori songs the stanzas are of all manner of lengths, like the old "batches" or "tirades" in songs such as the "Romance of Roland." Among the Ngāti Porou these stanzas are known as *whiti*, the divisions within the stanza, the irregular lines, being each called *te upoko*: they are heads. Every song has its principal note, *oro*, the melody rising and falling a little above and below this note. The little drops in fractions of a tone are *whatiinga*. There are often, especially in laments and love-songs—*waiata-tangi* and *waiata-aro-ha*—curious and affecting breaks, noticed more often on the letter *h*; emotional breaks, introducing a grace-note. This break is called *hotu* ("a heart-note"). It is very noticeable in the songs of Caruso, and with his emotional power behind it it always produces a powerful effect.

The resting-place, or breathing-place, is called *whakataanga*, and there is here often a slight drop, an incipient *hianga*.

The act of starting a song is called *takitaki* or *hapai*. In a song that is sung on one breath the leader will carry on the dominant part or theme, the *tahu*, the chorus coming in before his breath is exhausted. If the song lags, the leader urges the singers by adding volume to his voice—that is *whakarewa*. If a leader or chorus forgets a song, and the *tahu* is broken, that is *ka whati*; the break is *whati*, and is an evil omen. Sometimes, when all is going well, the leader will raise his pitch and sing a tenor harmony: that is *hi*. At Whareponga, on the east coast, a company of women were singing; the song was going briskly and without restraint, and one of the singers raised her pitch, singing very softly a fifth above the others. This was very effective.

There is a word, *irirangi*, which I first heard at Palmerston North when speaking of music to Dr. Buck (Te Rangi Hiroa). He remarked casually that the people often thought they heard a floating voice, or spirit-voice, singing with them; they called it *irirangi*. It was a chance remark, but I remembered it when, at Whareponga, I first heard, as it were, a faint voice sounding above the voices of the women singing. I asked the Hon. A. T. Ngata, who was present, if the faint voice, to which I drew attention, was what they called *irirangi*; he said, Yes; and soon one of the women, who also must have heard it, raised her pitch and sang the same note as the faint voice. Speaking to Dr. Buck again later on, he remarked that the old people would often sing together to get the voice, *te reo irirangi*, and, when they heard it, would sing the song over and over, listening to it. In *Williams's Dictionary*, under *irirangi*, is a quotation,* "*Mehemea ka waiata tatou ki roto i te whare, a ka rangona te waha e waiata ana i waho, he waha wairua, he irirangi tena*" (If we are singing in the house and a voice is heard singing outside, a spirit-voice, that is an *irirangi*). It was said to be an evil omen; but it certainly was not always so regarded. The note heard is a harmonic, and may occasionally be heard when singing on an *ng* sound. At Te Araroa, Bay of Plenty, a woman struck in now and again a third above the others, maintaining the soft harmony not only on the principal note, but also on intricate embellishments. Incipient harmony is indicated, and no doubt all harmony had such simple beginnings; the ear perceives the harmonics before science teaches what they are, and the ear finds them, pleasing or otherwise before science explains why. Probably harmonics are heard more commonly than is realized; they may be heard occasionally in the notes of birds, and it is no doubt the harmonics that form the basis of at least some of the morning choruses of the bellbird and tui.

A mellow voice is meant by the expression *puwhawhango*—a voice that sounds as if slightly muted, with just a trace of the effect of singing through a comb—a slightly nasal, resonant quality. The restricted *i* sound (*ee*) is avoided as much as possible, as it makes the sound thin; it is made *e* (as in "net") or *a* if it cannot be avoided, or is preceded by *a* to make *ae*: this is especially observed at the head-ends (line-ends).

The motion of the hands during singing is *aroarohaki*, or *aroarokapa*. There is a saying, *Ka kawea e te manamanahau ka aroarohaki* (The singer was so elated by the song that he broke into the appropriate accompanying gestures). There is an infinite variety of these gestures, and great trouble is taken in perfecting these, certain movements seeming to the Maori to go better with certain types of music. The hands are moved now here, now there, now bending at the wrists, now trembling with the wrists as pivots, now held to the right, now to the left, now close to the body or head, now at arm's length; the knees are bent in rhythmic time,

* Obtained from Elsdon Best.

the foot taps, the head is inclined, the shoulders and the hips sway, the eyes are expressive, the lips—not a portion of the body but enters into the movements. As different songs are sung, one is astonished at the variety of the gestures, and the difference of the gestures accompanying the different songs, at the unison of the performers. They give whole-hearted expression to their feelings, whatever they may be, and the listener-observer is continually tempted to join in, so powerful is the effect of the rhythm and the movements and the expression of the music.

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The Early Reclamations and Harbour-works of Wellington.

By HERBERT BAILLIE, Librarian, Wellington Municipal Library.

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Plate 71.

THE story of the discovery, rediscovery, and settlement of Port Nicholson has been fully told by Mr. Elsdon Best and others. It is proposed here to record what was done in the way of introducing shipping facilities and creating the port as at present existing.

The first official mention of Port Nicholson was in a parliamentary paper laid before the House of Commons on the 31st August, 1835, in connection with the recovery of British subjects who had been detained by the Maoris when the barque "Harriet" was wrecked near Cape Egmont on the 29th April, 1834. Captain Guard, of that vessel, with part of his crew and some Maori friends, was allowed to leave the locality to obtain assistance on the 20th June, arriving at Port Nicholson by way of Blind Bay and Queen Charlotte Sound on the 30th June. Here he found the schooner "Joseph Weller," on which he secured a passage to Sydney, where he laid his case before the Governor, Sir Richard Bourke. This resulted in H.M.S. "Alligator" being sent to New Zealand to recover the prisoners. Wellington, or Port Nicholson, only bears on the subject by providing a means for Guard reaching Sydney, but the episode gave Port Nicholson its first advertisement in the British Parliament.

Captain Hobson, later Governor of the colony, visited Cook Strait in H.M.S. "Rattlesnake" during 1837, but he does not even mention the port.

Port Nicholson thus took an insignificant part in the story of New Zealand until 1840; but with the advent of the New Zealand Company the Cook Strait districts and the port showed promise of future