

NOTES ON THE NAMES GIVEN TO MINERALS AND ROCKS BY THE ABORIGINES OF TAS- MANIA.

BY FRITZ NOETLING, PH.D., ETC.

(Read 9th August, 1909.)

The enquiry into the name given by the Aborigines to their stone implements led naturally to a further enquiry into the names of rocks and minerals distinguished by that race. The result is interesting enough; in several instances the literal meaning of the words used would be ascertained, and the meaning of other words which were rather a puzzle could be made out with a tolerable amount of certainty.

Though primarily meant to be a collection of the names of minerals and rocks, it was unavoidable to discuss other subjects which apparently had no direct connection with minerals. Yet these studies throw such a curious light on the mental condition of the Aborigines, that, instead of being a mere collection of names, this paper rather deals with a number of questions connected with the life of this primitive race.

I need hardly to say that I am not a trained philologist, and some of my deductions may be wrong. If so, I shall be only too pleased if anyone who has got a better knowledge than I will correct me. The matter is of great importance. The more we learn, even about the mental capacity of the Tasmanian Aborigines, the greater will be the assistance rendered to the study of the archæolithic race of Europe.

It will perhaps be best to review the native words for minerals and rocks, irrespective of their nature, in alphabetical order, in order to establish some facts to go on with (1).

(1) It will also be noticed that a few substances such as charcoal or red ochre, the first of which is certainly not, and the second of which can hardly be called a natural produce, are included in this list. However, both being closely connected with some of the minerals, I thought it better not to omit them from the list.

1. COAL.—I can only find one word for coal, viz., “Conara,” in Calder’s vocabulary, who quotes d’Entrecasteaux as his authority; but it is apparently not contained in any other vocabulary.

Coal was of no value to the Aborigines, and it is more than probable that they took very little notice of it. As, however, coal seams crop out closely to the sea shore at the localities visited by d’Entrecasteaux, there is every probability that a specimen lying amongst the rubble on the beach was found by him or his men, and its name ascertained by questioning an Aborigine.

2. CHARCOAL.—Though not exactly a mineral, I find it convenient to include this substance in my list. According to Milligan the words are—

Eastern Tribes—Maweena.

Southern Tribes—Loarra.

La Billiardiere and Peron both use the word

Loira,

stating that this means charcoal reduced to powder, with which they cover their bodies. Now, there is no doubt that Loarra and Loira are identical, but it will be seen that this word is very different from that one as used by the Eastern Tribes.

Now, one of the most characteristic features of charcoal is its blackness, and if we look up under the heading “black” we find—

Eastern Tribes—Mawback and Mawbanna.

Southern Tribes—Loaparte.

We also find

Dirty=mawpa and mawpack.

“Dirty” and “black” are therefore synonymous, exactly as “clean” and “white.”

In the words for “black” we have undoubtedly the same words as those used for charcoal, and we may therefore take it that there existed no proper name for charcoal; it was simply called “(the) black” from its

foremost quality, and in its ordinary condition it was called

Mawee-na.
Mawi-na.
Mawba-na.
Mawback.

When powdered it was probably

Loa-ra.
Loi-ra.
Loa-parte.

It is remarkable that there is so little similarity between the words for coal and charcoal, two substances which are so very alike as far as colour is concerned. There may be a connection between

Co(n)a-ra and
Loa-ra,

but this requires further proof.

3. CLAY AND EARTH.—Milligan gives the following words:—

(a) Clay.

Eastern Tribes—Pannoga-na malittyé.
Southern Tribes—Pappalye mallee.

(b) Dirt (mud of whitish colour).

Eastern Tribes—Panoga-na maleetya.
Southern Tribes—Manna-na mallye.

(c) Dirt (mud dried).

Eastern Tribes—Penga-na rutta.
Southern Tribes—Manna-na rulle.

(d) Dirt.

Eastern Tribes—Penga-na.
Southern Tribes—Manna-na.

(e) Earth (mould).

Eastern Tribes—Penga-na.
Southern Tribes—Manna-na.

Two more words for earth, viz.,

Gunta (Dooe)
Natta (M'Geary),

are quoted by Ling Roth. In the Tasmanian English Dictionary it will be found that "gunta" does not mean earth in the sense of a mineral, but rather the ground on which men are standing. the word "nata," or "natie" is given with the same meaning, and we may therefore omit both, not representing a mineral. From the above list it will be seen that the primary words are

Penga-na,
Manna-na,

from which all the others are derived. They apparently mean "surface soil" of any kind. The Aborigines did not know the meaning of the word "dirt;" everything was "earth" to them, hence we find dirt and earth as synonymous.

If we examine the derived words we have a

Panoga-na	} maleetya
Pen(o)ga-na	
Manna-na mallye.	

As the second word means white or whitish, these words mean a clay or earth of whitish colour, and a reference to the vocabulary shows that the word "rulle" means "rough."

Literally, Pengana rutta or Manna-na rulle means "rough earth," and as dried clayey soil is pretty "rough," it may also stand for dry "mud."

The words which stand for clay show at once that they mean a whitish substance, and in the word Pannoga-na we have no trouble in recognising the word Pen-ga-na. It is more than probable that Pappa-lye is the same word as Manna-na.

We therefore come to the conclusion that the surface soil in general was called by the

Eastern Tribes—Pen-ga-na,
Southern Tribes—Man-na-na.

If dried and rough it became rutta or rulle, and a special kind of argillaceous soil or rock—a white clay—was distinguished under the names

Pan-(o)ga-na maleetye
Man-na-na mallye.

It is very probable that the heavy loamy soil resulting from the weathering of volcanic rocks was the *Pen-ga-na* or *Man-na-na*, considering its wide distribution all over Tasmania. The whitish clay, the *Pan-oga-na* malleetye and the *Man-na-na* mallye most probably represent the pipeclay so frequently found. It is therefore unquestionable that these words refer solely to an argillaceous soil.

4. CRYSTAL.—In Calder's Vocabulary two names are given under the heading crystal, viz.,

Southern Tribes—Keeka.

Northern Tribes—Heka.

There can be no doubt that both words are identical, but it is impossible to say what kind of crystal they refer to. The most probable theory is that they stand for quartz-crystal, though crystallised quartz is by no means of frequent occurrence in Tasmania. We must, therefore, leave the meaning of the word an open question.

5. FREESTONE.—This is the popular name given to that kind of rock which is geologically known as "sandstone." The sandstone of Tasmania is almost exclusively, if not all, of Permian age, and some of its varieties form an excellent building stone. In fact, before the introduction of the kiln-burnt brick it was the only building stone used in Tasmania. The houses were either constructed of wood or the more substantial ones of freestone. This rock played therefore an important part in the life of the early settlers, and it is hardly to be wondered at that they enquired for its native name.

Milligan gives the following names:—

Eastern Tribes—Boatta or potha malleetye.

Southern Tribes—Potta mallya.

North and West Tribes—Ponin-galee.

We see at once that it is a compound word, and the word as used by the Eastern and Southern tribes leaves no doubt that the attribute means "white" or "whitish." "White potta," the freestone was called by the Aborigines, and as far as colour goes this attribute is quite correct.

I am afraid, however, that it will be impossible to arrive at the meaning of potta, or po-ta. The suffix "ta" is frequently found in other words, and probably the correct spelling of the freestone would be

Po-ta-male and
Po-nin-galee.

Though the suffix "nin" in the word used by the Northern and Western tribes differs from that used by the others, there can be no doubt that po-nin-galee is practically the same word as po-ta-malee.

6. IRON ORE.—Iron ore is fairly common in Tasmania. Large pieces of limonite occur at numerous places in the weathered diabas—for instance, on the Brighton Plains, near Shene. Layers of impure sandy ore are pretty common in certain permian sandstones—for instance, near Baskerville, on the Macquarie River; and last, but not least, the fine haematite ore on the Penguin River, is well known. Iron ore was apparently greatly valued by the Aborigines as the substance which they turned into red ochre by roasting.

Milligan gives the following words:—

Eastern Tribes—Latta.
Southern Tribes—Lattawinne.

The suffix "winne" occurs in numerous words, and its meaning is not quite known yet. The real word for iron ore is undoubtedly

La-ta,

in which we again find the same suffix "ta" as in the preceding po-ta.

7. RED OCHRE.—As this substance has formed the subject of a special paper, it is sufficient to mention its name only.

Milligan gives the following:—

Eastern Tribes—Ballawinne.
Southern Tribes—Balla-winne.

We know that the suffix "winne" is unimportant, and that the proper name is therefore

Ba-la.

I only wish to draw once more the attention to the remarkable likeness of the Tasmanian word for blood, viz.,

Ba-loo-ina,

and the word for red ochre. If we separate balawine in the following way—ba-law-ine—the similarity is so striking that there is every probability that the Tasmanian name for red ochre means nothing else but “blood.” La Billiardiere gives another name for ochre, viz., ma-la-ue (1), which in the Tasmanian-English vocabulary is spelt

Ma-la-ne,

and translated as “yellow ochre” according to Peron. Disregarding the suffix, we would have two kinds of ochre, viz.,

Red ba-la-(wine).

Yellow ma-la-(ne).

I may remark here that in the dialect of the Southern tribes the name for canoe was

Ma-la-na (mallanna).

The similarity between this word and that for yellow ochre is very remarkable. It is difficult, if not impossible, to say whether there is not some mistake at the bottom of this. I cannot find any reference to the use of “yellow ochre” by the Aborigines, and this being so, it is hardly probable that they would have distinguished a substance which not only is of rare occurrence in Tasmania, but was also of no use to them, under a special name.

8. HORNSTONE OR CHERT.—As this substance formed the subject of a special paper, in which all the different rocks coming under this heading have been discussed, I need not go into further detail. The Aboriginal names were—

Eastern Tribes—Trona,

and a special kind of this trona, probably the dark blue or grey variety, was called

Mora trona.

(1) Considering the French pronunciation of the letter “u,” the last syllable comes nearest to the English wee-e; ma-la-ue, might perhaps be transcribed as ma-la-wi(n)e.

The meaning of the word *tro-na* is not known, except that it represents a siliceous rock, which the modern scientist calls hornstone or chert, and that it also included such substances as porcellanite, breccia, and a number of quartz minerals such as chalcedony, wood opal, etc.

9. PEBBLE (Rolled Quartz).—Under this heading Milligan gives two words, viz.,

Eastern Tribes—Kugha-weenya
Southern Tribes—Tramutta.

At the first glance we perceive that under this heading two most heterogeneous objects are included. The second word is no other than the general name for stone implement, viz., *trowatta*. No doubt a pebble of rolled quartz can be, and may often have been, turned into a *trawatta*; but there can be also not the slightest doubt that this name was not applied to designate the substance. We can therefore disregard this word.

The remaining *kugha-weenya* presents such a similarity with the word for “topaz” that it will be better to discuss it there.

10. SALT.—It seems one of the most striking features of the Tasmanian vocabulary that there exists no special word for one of the most necessary substances of human life, namely, salt. Human beings cannot exist without salt—a fact too well known to be further enlarged upon. How is it, then, that the Tasmanian Aborigines could do without it, though as a substance it must have been well known to them. For instance, the salt pans near *Mona Vale* are after a dry season completely covered with a glittering white crust of dry salt, and as this part was apparently one of their favourite camping grounds, they could not help noticing this when water became scarce. There is also no doubt that they noticed the salt on the rocks left by the evaporation of sea water.

I think the explanation of this apparently lack of desire for one of the most important substances is very simple. During winter time the food of the Aborigines consisted mostly of shell fish, which naturally contained

sufficient salt to satisfy all cravings of the body for this substance (1). Thus, taking the salt required for the process of life already included in their daily food, there was no reason for them to specially collect it (2).

Milligan mentions the following words for salt:—

- (a) Salt on the rocks by the sea side—
Lienowittye.
- (b) Ditto—
Liopackanapoona.
- (c) Water (salt)—
Lia noattye.

If we begin with the first word,
Lieno-wittye,

we see that it is composed of the word for water *lia* or *liena(o)* and the suffix *wittye*. It is very probable that “*wittye*” is the same as “*winne*;” the word would therefore read

Lieno-winne,

and would perhaps mean a “a substance that comes from water,” salt being the residue after the evaporation of sea water. I am not quite so certain about the second word, except that it also contains the *lia(o)* water, and therefore indicates that the word has some connection with water.

The most interesting of all is, however, the third, the word for salt water—

Lia-noattye.

According to F. Mueller, the negative is expressed in the Tasmanian language by the word “*noia*;” if affixed to a word it would convey just the opposite meaning. Now, we find that water pure and simple is

Lia-winne or *liena*, the last word apparently being contracted from

Lia-eleebana.

(1) I have not tested them, but I am told that limpets (*Patella*), and even mutton fish (*Halioties*), are so salty that if eaten they will, even if well cooked, produce an intense feeling of thirst.

(2) The question may well be asked, How did the archæolithic man of Europe obtain the necessary salt? Is it possible that he, like the Tasmanians, frequented the sea shores?

The attribute "ealebana" apparently expresses a particular emphasis of the good qualities of something. Lia was water; lia-ealebana particularly good water. Now, I do not think that the sense of taste of the Aborigines was so highly cultivated as to distinguish different qualities of water. Good water was any water that was fit for drinking, though, in the opinion of modern man, this same water may be disgustingly dirty. Lia-noia or lia-noattye was bad water—that is to say, unfit for drinking purposes, however clear such water may have been. Now we can fully understand the origin of the third word, which stands for "salt water." Arriving at a waterhole or passing a creek a European would probably ask his native guide, Is this fresh water? The Aborigine would reply, Lia-noattye, meaning thereby, "This is water not fit for drinking." The European would promptly taste it, and, finding its taste saline, would jump at the conclusion that lia-noia or noattye means salt water, while it really had no association with the word "salt" at all.

11.—SAND.—Sand forms one of the most conspicuous features of the Tasmanian landscape, particularly along the sea shore. Sandy soil was the favourite camping ground of the Aborigines, but only two words are contained in the vocabularies to denote sand, and even one of these seems doubtful.

Milligan gives the following words:—

Eastern Tribes—Mungara mena.

Southern Tribes—'Nguna.

The second word is unquestionably incomplete, as the main part, the root, is evidently missing. It is, however, the first one which is the most curious. The word "mena" is apparently a suffix, and the main part is the word "mungara." This is exactly the same word that has puzzled me when discussing the native words for stone implements (1). Milligan states that the Southern tribes used the word mungara to denote "a flint." If that be so, it is hardly probable that the Eastern tribes used exactly the same word to denote "sand." One of

(1) The Aboriginal Designations for Stone Implements, Pap. and Proceed. Roy. Soc. Tas., 1908.

the two must be wrong, and there is a great probability that the translation "a flint" is wrong. The second word, 'nguna, which could also be written 'ngana or 'ngara seems to indicate that the word for sand in the dialect of the Southern tribes must be similar to that of the Eastern tribes. It is therefore very probable that

Mun-ga-ra or
Mun-ga-na

is the Tasmanian word for sand.

Considering that the largest and favourite camps are always situated on nice warm sandy soil, it might be expected that the word for "camping ground" might give a clue.

Milligan gives the following words for encampment:—

Eastern Tribes—Lena wughta rotaleebana.

Southern Tribes—Line rotali.

We know that the word eleebana in particular ro(o)t-eleebana an emphasis of the good qualities, is frequently used, and it is therefore certain that the words

Lena wughta
Line

really express the word for camp, and rotali or rotaleebana simply mean that lena wughta or line are exceedingly good.

Ling Roth literally translates

Lena wughta rotaleebana
hut earth long,

meaning thereby that on such places more permanent structures were erected. (It has been shown on pp. 107-111 that the natives constructed two sorts of huts or break-winds—those which on the ramblings of small parties were to last for a night only, and those more permanent ones to last for a season; hence the last-named—viz., the above word—explains itself. Aborig., p. 189.)

It would be out of place to go here into the discussion of the correctness of this statement, but it is certain that "rotaleebana" was never applied in a chronological

sense to denote the length of a period. Wherever found, it emphasises the good qualities, but not bad ones.

Admitting that the word "wughta" stands for "earth," that is to say in the meaning of ground or soil, we come to a quite different translation if we assume that "lena" means "water." The literal translation is, therefore, according to my opinion,

lena wughta rotaleebana
water soil very good.

Now, what is the meaning of this? To anybody who has actually seen the camping grounds there cannot be the slightest doubt as to its interpretation. A warm sandy soil was a most essential feature for a camping ground, and to make it perfect it was necessary that it should be close to fresh water (liena or lin'-eleebana). Soil and water being satisfactory, such a locality was chosen as a camping ground, and it is only too natural that the primitive mind of the Aborigines should choose those two qualities which were most essential to them to express the name of the locality. Water and soil being good, it must be a satisfactory place to dwell on, argued the primitive mind, hence its designation for encampment grounds. This is certainly a more probable translation than "the huts of earth constructed for long duration."

Unfortunately, however, this interpretation of the word for camping ground does not contain any indication of the word for "sand." If the soil, the ground, the "wughta," was good, this presumed that it was of an arenaceous nature, but this does not throw any light on the meaning of the words mun-ga-ra and mun-ga-na. These words may stand for sand along the shore, but their literal meaning is at present unknown.

12. TOPAZ.—Under the above headings Milligan gives the following words:—

Eastern Tribes—Tendeagh.
Southern Tribes—Mugramallee.

It will at once be seen that two completely different substances are enumerated under the same English heading.

The first word means "red," while in the second we find the word for "white" (mallee). The first was therefore a "red" and the second a "white" mineral. Now, whatever colours occur in topaz, red topazes are of such rare occurrence, and to my knowledge only found in Brazil, that it is hardly probable that this variety was distinguished by the Aborigines of Tasmania under a special name.

I think it more probable that one of those interested in the collection of native words showed a cornelian to an Aborigine, and the latter simply replied "tendeagh," meaning thereby "red." As it is pretty certain that mineralogical knowledge was not the strongest point of the early settlers, the cornelian stone was mistaken for a topaz.

Topazes occur in Tasmania, as it is well known; and it is probable that the second word, indicating a "white" stone, really refers to topaz. On the other hand, we had under the heading pebble (rolled quartz) the words kugha weenya. There seems to be a certain similarity between the words "mugra" and "kugha," but I am unable to say whether this view is correct or not. The scarcity of topaz pebbles in Tasmania, except Flinders Island, suggests the idea that "mugra" rather means quartz, perhaps chalcedony, or even wood opal (1) than topaz.

However that may be, it is certain that under the heading topaz two widely different minerals were included. The first is a red one, most probably cornelian; the second a white one, most probably quartz or chalcedony, but most unlikely topaz.

13. DIABAS, BASALT, & ARCHAEOAN SCHIST.
—In a paper previously read before this Society (2), I expressed the opinion that the words

Lenn-parenna
Leni-carpenny
Loan-tennina
Noan-yale

(1) Occurring in fine white opaque pieces near Mount Morrison.

(2) The Aboriginal Designations for Stone Implements, Pap. and Proceed. Roy. Soc. Tas., 1908.

represented certain Tasmanian rocks, most probably diabas and granite. I am now in the position to confirm this opinion—in fact, it is now possible to make out the meaning of the first and last word, and as the remaining two are in all probability identical with the first, the problem has been satisfactorily solved.

Lenn-parenna

is unquestionably a composite word, and at least two words are known to me in which the word “parenna” forms the attribute. These are

Matta-perenna=Penis
Commerna-purrenah=beard.

The first of these two words is composed of matta=ball=testicles and

Perenna=spear.

the second of

Commerna=chin, and
Purrenah spear.

We have, therefore,

Matta—perenna
Ball—spear=pennis
Commerna—perenna
Chin=spear=beard.

The last composition is rather illustrative; the bristles growing on the chin look like tiny spears. Now, if we analyse the word

Lenn-parenna,

we have

Lenn—loin=stone,
Pärenna=spear,

therefore the literal translation is

Stone—spear,

or, as we would say, spear stone. Now, can we identify any of the rocks with this “spear stone”? The answer is, Yes, and the identification is as easy as it is plain. It is the basalt that is meant by the word spear stone. The fine columns of basalt—for instance at Cape Raoul—make it perfectly intelligible why the Aborigines should call this rock spear stone. There is hardly anything

more suggestive of a bundle of spears than these regular thin columns of rock placed side by side.

The *lenn-parenna* is the basalt, there cannot be the slightest doubt, but I think it also includes the *diabas*. Though not quite as regularly, *diabas* also breaks in columnar pieces; for instance the organ pipes (1) on Mount Wellington, and it is therefore more than probable that this rock was also called "spear stone." In fact, it is very probable that the pieces of columnar *diabas* found on the camping grounds, and used as choppers, were designated *lenn-parenna* in distinction of the real *tronatta*.

The last word, *noan-yale*, unquestionably means "white stone." I have above pointed out that *yale*=*gale*=*male* means white, and as *noan*=*loan*=*loin*=stone, the whole word must mean a "white stone." Now, this is a word used by the Western and North-Western tribes, and the question arises which kind of rock could they have designated as "white stone"? There can be not the slightest doubt that this rock is represented by the archæan schists. Archæan schists of a white colour form the most conspicuous rock in Western and North-Western Tasmania, and there is, therefore, every probability that the "*noan-yale*" is represented by this rock.

In this paper the names of about 16 substances belonging to the mineral kingdom have been examined, and we see that we can classify them under three headings, viz.—

- (a) Minerals proper, including substances derived from the roasting of a mineral and the burning of wood;
- (b) Rocks;
- (c) Substances resulting from the disintegration or weathering of rocks.

(1) The designation "organ pipes" for this occurrence of columnar *diabas* is a curious modern parallel to the "spear stone" of the Aborigines. The Tasmanian compared the rock with a bundle of spears, the modern mind with a row of pipes as usually exhibited in an organ. Supposing a superior being suddenly arrived at Hobart, and, pointing to Mount Wellington in order to obtain the name of the rock forming the precipice, received the rather startling answer—organ pipes. I leave it to the reader to work out the logical conclusion for himself.

A. The minerals are

1. Coal.

(a) Coal, s.s.

Co(n)a-ra, lit. probably black.

(b) Charcoal (artificial produce).

Loa-ra, lit. probably black.

Maw-ba-na, lit. black.

2. Iron ore, either limonite or haematite.

La-ta, meaning unknown.

3. Ochre.

(a) Red ochre (artificial produce).

Ba-la-wini, lit. blood.

(b) Yellow ochre (natural?)

Ma-la-ne, meaning unknown.

4. Quartz (?)

Kugha-winya, meaning unknown.

Kughra-mali, "white" kughra.

5. Cornelian (?).

Tendeagh, lit. red.

6. Crystal of unknown kind (quartz?).

Heka

Eka

} meaning unknown.

7. Salt.

Lieno-wittye, lit. from the water.

8. Topaz (?).

(See quartz and cornelian).

B. Rocks.

1. Basalt, Diabas.

Lenn-parema, lit. spear stone.

2. Archaean schist.

Noan-yale, lit. white stone.

3. Freestone.

Po-ta-mali, lit. the "white" pota } meaning

Po-nin-gali, lit. the "white" ponin } unknown.

4. Pipeclay.

Pen-ga-na mali, lit. the "white"	} meaning unknown.
pengana	
Man-na-na mali, lit. the "white"	
manana	

5. Hornstone, Porcellanite.

Tro-na, meaning unknown.

Mora-trona, perhaps "black" or "heavy"
trona.

C. Substances resulting from the weathering of rocks.

1. Sand.

Munga-ra (mena), meaning unknown.

2. Argillaceous soil, Clay.

Pen-ga-na	} meaning unknown.
Man-na-na	

We see it is a meagre list on the whole, yet, considering the low state of civilisation, it is astonishing that the Aborigines distinguished even this number.

We know that at least one kind of rock, the "hornstone," in its numerous varieties, was of utmost importance to the Aborigines, and next to it, for ornamental purposes, came the "red ochre," which was closely followed by "coal," that is to say, "charcoal." It is, therefore, not astonishing that these three substances were distinguished by special names; neither is it surprising that the original mineral from which the red ochre was obtained was given a special name.

It is also hardly astonishing that certain rocks, like diabas, basalt, freestone, and schist, which form such conspicuous features in the Tasmanian landscape, were distinguished under different names. All these substances, which either played an important role in the daily life, or were closely associated with the features of the country, were distinguished by special names. Yet there are a few more substances of which the Tasmanian words have been preserved for which no such importance can be claimed. These are yellow ochre,

quartz (crystal), cornelian and pipeclay, and salt. In several instances, viz., salt, pipeclay, and cornelian, it could be proved that the words used had no special meaning appertaining to these substances, but that it was really the transcription of other words, and the same probably applies to the remaining words.

On the whole, the list contains the names of 16 substances, only 7, or perhaps 9, of which can be considered to have played an important role in the life of the Aborigines. These are arranged according to importance:—

1. Hornstone (incl. porcellanite, breccia, and other siliceous minerals).
Tro-na (mora tro-na), meaning unknown.
2. Red ochre.
Ba-la-wine, lit. blood.
3. Charcoal (powdered).
Loa-ra, lit. black.
4. Iron ore (limonite or haematite).
La-ta, meaning unknown.
5. Basalt, incl. Diabas.
Lenn-parenna, lit. spear stone.
6. Freestone, i.e. sandstone.
Po-ta-mali, lit. white po-ta, meaning unknown.
7. Archaean schist.
Noan-yale, lit. white stone.

To these we may add

8. Clay, incl. pipeclay and any kind of argillaceous soil.
Man-na-na
Pen-ga-na-(mali) } meaning unknown
9. Sand.
Mun-ga-ra-(mena), meaning unknown.

The remaining substances, viz.,

Coal (mineral coal)
 Yellow ochre
 Quartz (?)
 Cornelian (?)
 Crystal of unknown kind (quartz)
 Salt
 Topaz

were not of the slightest use to the Aborigines, except that cornelian, quartz, and the crystal of unknown kind, if found in large pieces, could be used for the manufacture of a tronatta. In fact, we find the quartz pebble distinctly called trautta. The mineral coal was probably designated by the same name as charcoal, the words for yellow ochre and topaz are apocryphic, and there was no proper word for salt at all.

I may add that only the three of these substances, or if we consider the "red ochre" as an altered iron ore, only two, were of any importance in the economic life of the Tasmanians. The hornstone for their stone implements, the red ochre (altered iron ore) for ornamental purposes; for the latter charcoal was also sometimes used.

The remaining five substances were noticed and distinguished, but they did not enter into the routine of daily life, except perhaps when it was necessary to describe a certain tract of country.

Now, if it is advisable to transfer the results of this paper on the language of the archæolithic man in Europe, we may conclude that he had a different word for

Flint (meaning the substance from which the implements were made)
 Red ochre
 Charcoal,

and that in all probability he distinguished the most conspicuous rocks of the European landscape—sandstone, limestone, and shale—by different names. As columnar basalt is very common in those localities frequented by archæolithic man, it is probable that he also

distinguished it under a special name. Sand and clay were probably also distinguished, but this may have limited the vocabulary of archæolithic man in Europe as far as minerals or rocks are concerned.

If we consider that the primitive language of the Tasmanians knew only three words for mineral substances, two of which, charcoal and red ochre, cannot strictly be considered as such, because they were artificially produced by means of fire; and as it appears very probable that the archæolithic man of Europe knew of no more, we must wonder when the invention of those words took place which were used to designate the different substances that were already in use during the neolithic stage. If we further consider that in the Tasmanian language the word for "red ochre" means literally "blood," and that for charcoal "black," the first word the human language ever used to designate a mineral was the word for "flint," whatever that may have been, in Europe. Can anything better illustrate the enormous progress of the human race since archæolithic times than a comparison of the single word for flint with thousands of names by which modern science distinguishes the minerals and rocks found on our earth?