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W. H. Hess¹ has described a method for the estimation of lime in which a mixture of ammonium nitrate and ammonium sulphate is employed, the lime being converted into sulphate in which form it is weighed, the addition of ammonium nitrate rendering the conversion into sulphate rapid and certain.

Ignition in a covered crucible with ammonium sulphate alone is recommended by Schrötter,² the lime being weighed as sulphate. Fresenius also³ recommends, after strong ignition of the oxalate, the addition of a little water and solution in HCl. Strong sulphuric acid is then added in excess, evaporated to dryness and ignited. The oxalate is thus converted into sulphate, in which form it is weighed.

¹ Journal of the American Chemical Society, Vol. xxii., (1900) p. 477.

² Fresenius Quantitative Analysis, Vol. i., (seventh edition) p. 188.

³ Loc. cit.

LANGUAGES OF SOME NATIVE TRIBES OF QUEENSLAND, NEW SOUTH WALES AND VICTORIA.

By R. H. MATHEWS, L.S.,

Corres. Memb. Anthrop. Soc., Washington, U.S.A.

[Read before the Royal Society of N. S. Wales, September 3, 1902.]

SYNOPSIS.—Prefatory. Grammatical structure of the following Australian languages:

Queensland—1 Yualeai. 2 Pikumbil.

N. S. Wales—3 Kawambarai. 4 Wongaibon. 5 Kurnū. 6 Tyaké or

Mystic Language. 7 Dyirringan.

Victoria—8 Yotayota. 9 Burēba.

Comprehensive Vocabularies of Kurnū, Yualeai and Yotayota words.

In the following pages it is intended to exhibit the grammatical structure of the languages of some tribes in southern Queensland, in the central districts of New South Wales, and in the northern frontier of Victoria, the whole being the result of my own personal researches in the camps of the natives. It is hoped that work of this character will be found of some value to philologists by enabling them to compare the aboriginal tongues of Australia not only among themselves, but with others in different islands of Polynesia, Melanesia, and various parts of the Pacific Ocean.

In two papers¹ recently contributed to this Society I have described the constitution of the native tongues in the south-east corner of South Australia, the whole of Victoria, and the south-east coast of New South Wales

¹ "The Aboriginal Languages of Victoria," with Vocabularies.—Journ. Royal Soc., N. S. Wales, Vol. xxxvi., pp. 71–106. This paper explains the grammatical constitution of six Victorian languages.

² "The Thurawal, Gundungurra, and Dharruk Languages," with Vocabulary, op. cit., Vol. xxxv., pp. 127–160.

from Cape Howe to the Hawkesbury River. The article now submitted is representative of the speech of the aboriginal tribes from the northern frontier of Victoria through a wide zone of central and western New South Wales, extending into the southern portion of Queensland at least as far as Maranoa and Burnett Rivers.

The system of orthoepy adopted in this paper is the same as that in my article on "The Aboriginal Languages of Victoria," with the following exceptions:

In the present paper, when the long sound of *a*, *e* and *u*, might be uncertain, these letters are marked thus, *ā*, *ē*, *ū*. In certain cases also where the short sound of *u* might be doubtful if unmarked, it is shown thus, *ū*. As far as possible, however, these vowels are not marked.

The usual arrangement of words in a sentence is to place the subject first, then the direct object, and lastly the verb. The indirect object often follows the verb. An adjective qualifying either the nominative or objective, follows the noun. A native speaker puts himself in the time of the event he is narrating; and when it is necessary to quote some person's statement, instead of saying, for example, "Tom told me so and so," he changes the tone of his voice, and repeats the other man's words as nearly as he can. An assertive sentence does not differ in form from an interrogative one, but the distinction is indicated by the modulation of the voice of the speaker.

There are no words, properly so called, corresponding to the English articles *a* and *the*. A blackfellow does not trouble about the abstract idea of a man, a tree, and so on. He speaks of some definite man or tree. The demonstrative pronouns in their various forms supply the place of the definite article. The adverb *here* and its variants, except when used predicatively, is treated in native speech

as a demonstrative, and is then another substitute for the definite article.

1.—THE YUALEAI LANGUAGE.

The natives speaking this language are located upon a tract of country in southern Queensland, including the Bokhara, Birrie, Narran, Ballonne and Moonie Rivers, and extend some distance within the New South Wales frontier, where they are met by the Kamilaroi nation. The Yualéai have the same initiation ceremonies as the Kamilaroi, consisting of the *Bora* and its impressive rites, which have been fully described by me in several scientific journals.¹ The social organization among the Yualéai is also the same as that of their Kamilaroi neighbours. The people are segregated into four divisions called Murri, Kubbi, Ippai and Kumbo, which intermarry in conformity with prescribed regulations. Details of this organisation have been given by me in various publications.²

Mr. E. M. Curr, published vocabularies of some dialects in this part of the country in his work.³ No author has, however, hitherto attempted to promulgate the grammar of the language.

NOUNS.

Nouns have number, gender and case.

Number.—There are three numbers, the singular, dual, and plural. Wan, a crow; wangali, a couple of crows; wanburala, several or many crows.

Gender.—In the human family gender is distinguished by using different words:—Uré, a man; inar, a woman. Men collectively are called dēn. Birralidyul, a youth;

¹ "The Bora or Initiation Ceremonies of the Kamilaroi Tribe," *Journ. Anthropol. Inst.*, Vol. xxiv., pp. 411–417; Vol. xxv., pp. 318–339.

² "The Kamilaroi Class System, etc.," *Proc. Roy. Geog. Soc.*, Queensland, Vol. x., pp. 18–34. "Divisions of Australian Tribes," *Proc. Amer. Philos. Soc.*, Philadelphia, Vol. xxxvii., pp. 152–154.

³ "The Australian Race," Vol. iii., pp. 258–268.

mēadyul, a maid; wambundul, a child of either sex. Among animals, mundaia signifies a male, and gunidyarba a female—these words following the creatures' names.

Case.—The principle cases are the nominative, causative, genitive, dative, ablative, instrumental and accusative.

Nominative.—Gareme, a camp; burran, a boomerang; baura, a kangaroo.

Causative.—Urēu madhai bume, a man a dog beat.

Genitive.—Uregu burran, a man's boomerang; inaru dhibai, a woman's yamstick.

Dative.—Dhainhaia garemo, come to the camp.

Ablative.—Nhaia garemi, go away from the camp.

Instrumental.—This takes the same suffix as the causative:—Urēu wan burundu gaiawi, a man at a crow a boomerang threw.

Accusative.—This is the same as the nominative.

It will be observed that the suffixes fluctuate according to the termination of the word to which they are attached. For example, urē takes *gu* in the genitive, whilst inar takes *u* only, for the sake of euphony.

ADJECTIVES.

Adjectives succeed the nouns they qualify, and take the same inflexions for number and case.

Nominative.—Urē burul, a man large. Uregali burulali, a couple of large men, and so on.

Causative.—Urēu burulu burran wannunni, a man large a boomerang threw.

Genitive.—Uregu burulu burran, a large man's boomerang; bauragu burulu dhun, a large kangaroo's tail.

Owing to the euphonic variations referred to in the declension of nouns, the suffix to burul in the two last

examples, is the same in the nominative as in the genitive, but any ambiguity which might arise from this cause is obviated by the differences in the suffixes to urē.

Dative.—Dhainhaia urēa burula, come to the man large.

Ablative.—Nhaia uredyi buruli, go away from the large man.

Adjectives are compared by saying, Gubba nha—guggil murra, good this—bad that.

PRONOUNS.

Pronouns are inflected for number, person and case, and contain two forms of the first person of the dual and plural. Singular.

	Nominative.	Possessive.	Objective.
1st Person	Ngaia	Ngai-i	Nguna
2nd "	Nginda	Nginnu	Nginnunna
3rd "	Ngu	Ngungu	Nha
Dual.			
1st Person	{ Ngulli	Ngullingu	Ngullinya
	{ Ngulliyu	Ngullingubla	Nungullinya
2nd "	Ngindale	Nginalengu	Nginalinya
3rd "	Yuware	Yuwaringu	Bulanga
Plural.			
1st Person	{ Ngeane	Ngeanengu	Ngannino
	{ Ngeaneyu	Ngeninyella	Nganigunnunga
2nd "	Ngindeyu	Nginaingu	Nginnanya
3rd "	Gunnugu	Gunnungu	Gunnunga

The full forms of the pronouns given in the above table are chiefly used in response to interrogations, as for example "Who is here?" and some one answers "Ngai-i." "Whose boomerang is this?" may elicit the reply "Ngai-i." Again, the question, "Whom did the kangaroo tear?" might be answered, "Nguna." In ordinary conversation pronominal suffixes are employed.

Interrogative Pronouns.—Who (singular) ngana? Who (dual), ngananunma? Who (plural), ngangananunma?

Whom belonging to, ngangu? What, minya? What for, minyagu?

Demonstratives.—This, nha. That (near), ngule. That (farther), yuari. That (yonder), yurma. That (in front), murra. That (behind), murrabu. The demonstratives are many and diverse, and can be declined for number and case. A native will frequently indicate the position of anything by giving its compass direction from a tree or other known spot.

There are forms of the pronoun meaning "towards me," "away from me," etc. There is also a causative form, as, Ngaiala, I (will do it).

VERBS.

Ginye appears to have the meaning of "am," and can be used as a substitute for the English verb, "to be," by taking an adjective, wallun, or other suitable word, as in the following example. Dhu is the pronominal suffix representing "I" or Ngaia:

Present Wallundhu ginye, strong I am
 Past Wallundhu gillani, strong I was
 Future Wallundhu gigi, strong I will be
 Imperative—Be strong! Wallun ginga.

In the subjoined conjugation of the verb buma, to beat, the present tense is given in full; but in the past and future, the first person only of the singular is taken:

Indicative Mood—Present Tense.	
Sing.	{ 1st Person I beat, Bumuldunnadhu 2nd " Thou beatest, Bumuldunnindu 3rd " He beats, Bumuldunnangu
	{ 1st Person We, incl., beat, Bumuldunnali 2nd " We, excl., beat, Bumuldunnaligu 3rd " You beat, Bumuldunnahale They beat, Bumalbulala
	{ 1st Person We, incl., beat, Bumuldunnane 2nd " We, excl., beat, Bumuldunnaneu 3rd " You beat, Bumuldunnadai They beat, Bumuldunnagunnagu

In the past and future tenses there are forms of the verb representing differences in the time of the performance of the action. Examples in the first person singular of each tense will illustrate the principle of the inflexion.

Past Tense.

I beat a while ago, Bumulngenyedhu
 I beat yesterday, Bumulmaianidhu
 I beat, say a week ago, Bumulēnyedhu
 I beat long ago, Bumulawailunnedhu

Future Tense.

I will beat presently, Bumullidyu
 I will beat tomorrow, Bumulgēdyu
 I will beat sometime, Bumullingwullidyu

Imperative Mood.

Beat, bumulla! Beat not, wāl bumulla!

Conditional Mood.

Perhaps I will beat, Ya bumulliadyu.

There is no special form for the passive voice. The phrase, "a boy was stung by a scorpion," is expressed in Yualei by the paraphrase, "A scorpion stung the boy."

Middle Voice—Indicative Mood.

Present I am beating myself, Bumulgildunnadhu
 Past I was beating myself, Bumangildunnidyu
 Future I will beat myself, Bumangilidyu

Imperative Mood.

Beat thyself, Bumulingilia.

Reciprocal—Dual.

Present We are beating each other, Ngulli bumullellunna
 Past We were beating each other, Ngulli bumullellunni
 Future We will beat each other, Ngulli bumulle.

Plural.

Present We are beating each other, Ngeane bumullellunna,

and so on. All the persons of the dual and plural take this inflection, by using the requisite pronoun.

There is an inflexion of the verb in several expressions to indicate whether two or more persons or things are spoken of, thus:

A couple talking, Gwallellunna
 Several talking, Gwallawabūldhunna
 A couple sitting, Illauingillellunna
 Several sitting, Illauawabūldhunna
 A couple running, Bunnagangillellunna
 Several running, Bunnagawabūldhunna
 A couple fighting, Bumullellunna
 Several fighting, Bumullawabūldhunna
 A couple standing, Wurringillellunna
 Several standing, Wurriwabūldhunna.

There are forms of the verb to express beating going along the road, beating before some event, after some event, after eating, and many others.

To beat again, Illaialu bumullhui
 To beat frequently, Illa bumuldhe

ADVERBS.

Yes, nga. No, wal. Now, ila. Yesterday, gimmeanni.
 Tomorrow, ilāngi. Bye and bye, ilala. Long ago, ilaluwangan. Always, ilalu. How, gullar? How many, minyangi? Where (singular), minyaia? Where (dual), minyaiaanda? Where (plural), minyaiaandai? Here, nhē. There, ngare. Nhēngaia, here I am.

PREPOSITIONS.

In front, bunnidya. Behind, ngaiga. Inside, muddhuga. Beside me, mirrunda. Outside, wuggidya. Between, biddiyunda. Down, nguddali. Up, ngurribali. Other side, gūndar. This side, nuggli. Through, wōanha.

EXCLAMATIONS.

Yah! calling attention. Wai! look out. Winnungga! listen. Ngarrarbang! pity.

NUMERALS.

One, millan; two, bullar; several, burala.

See the vocabulary of Yualeai words at the end of this article.

2—THE PIKUMBIL LANGUAGE.

The Pikumbil tribes are located on the Weir and Macintyre Rivers, Queensland; they adjoin the Yualeai on the east, and speak a dialect of the same tongue. Their initiation ceremonies¹ and divisional systems² are the same as the Kamilaroi, who adjoin them on the south.

I formerly resided some years in Goondiwindi, Queensland, in the Pikumbil territory, and had exceptional facilities for studying the geographic range of the dialects of their language. Travelling on one occasion from Goondiwindi to Miles, Gayndah and Maryborough, and returning by Ipswich and Leyburn, I found the fundamental elements of the native speech throughout was essentially the same, although differing more or less in vocabulary.

The initiation ceremonies³ of the Dippil, Turubul and other tribes in the country just referred to are described in a paper contributed by me to the Anthropological Society at Washington, U.S.A. Particulars of their social organization⁴ are given in articles I communicated to this Society in 1898, and also to the American Philosophical Society at Philadelphia the same year. Rev. Wm. Ridley gives a brief vocabulary of Pikumbil words.⁵

¹ "The Bora of the Kamilaroi Tribes," Proc. Roy. Soc., Victoria, Vol. ix., N.S., pp. 137-173.

² "The Totemic Divisions of Australian Tribes," Journ. Roy. Soc. N. S. Wales, Vol. xxxi., pp. 156-171.

³ "The Toara Ceremony of the Dippil Tribes of Queensland," American Anthropologist, Vol. ii., N.S., pp. 139-140.

⁴ "Australian Divisional Systems," Journ. Roy. Soc. N. S. Wales, Vol. xxxi., pp. 81-82; "Divisions of Queensland Aborigines," Proc. Amer. Philos. Soc., Vol. xxxvii., pp. 328-331.

⁵ "Kamilaroi and Other Australian Languages," (Sydney, 1875), pp. 59-60.

A few examples of nouns, adjectives, pronouns, verbs, and adverbs are given below :

NOUNS.

The number, gender and case of nouns are so nearly the same as the Yualeai and Kamilaroi that little remains to be said. Mial, a man; thamar, a woman. Miallu mirri bumea, a man a dog beat. Mirrigu dhun, a dog's tail.

ADJECTIVES.

Adjectives are placed after the nouns they qualify and are declined for number and case. Comparison is effected in a manner similar to the Yualeai.

PRONOUNS.

Pronouns have the singular, dual and plural numbers and are without gender. There is an inclusive and exclusive form of the first person of the dual and plural. The singular number of the nominative and possessive pronouns are as under :

1st Person	I,	Nguttha	Mine,	Nger
2nd	"	Thou, Nginda	Thine,	Nginnu
3rd	"	He, Nhumbo	His,	Nhumbaga

Interrogatives—Ngana, who? Minya, what?

VERBS.

Verbs have the same numbers as the pronouns. There are modifications of the verb-endings to express recent and more remote periods of past and future time, the same as in the Yualeai and Kamilaroi. One example in each tense is given :

Present Tense.

Singular 1st Person, I am beating, Bumunguttha

Past Tense.

Singular	{ I beat just now,	Bumūguttha
1st Person	{ I beat this morning,	Bumūganibaththa
	{ I beat recently,	Bumūbyēnththa

Future Tense.

Singular	{ I will beat presently,	Bumulluttha
1st Person	{ I will beat tomorrow,	Bumulingētha
	{ I will beat some time,	Bumulingurrittha

ADVERBS.

Yuka, no. Pika, yes. Wanda, where? Certain adverbs, nouns and prepositions of the Yualeai, Pikumbil, and Kawambarai, are subject to inflexion for number and person, in the same manner as in the Wongaibon.

NUMERALS.

Dharar, one. Buta, two.

3.—THE KAWAMBARAI LANGUAGE.

This dialect of the Kamilaroi language is spoken on the Barwon River about Bogabilla, Boobera, and Tulloona, New South Wales. The Pikumbil people adjoin the Kawambarai on the north-west, and the Yukumbil¹ on the south-east. The Kamilaroi tribes meet them on the south.

NOUNS.

The number, gender and cases of the nouns are so nearly identical with the Kamilaroi, that they will be omitted.

ADJECTIVES.

Adjectives are inflected for number and case like the nouns with which they are used.

PRONOUNS.

As the pronouns resemble the Yualeai, an example of the nominative case only is given :

Singular	{ 1st Person	I,	Ngaia
	{ 2nd	" Thou,	Ngindu
	{ 3rd	" He,	Nguru
Dual	{ 1st Person	{ We, incl.,	Ngulli
	{ 2nd	{ We, excl.,	Ngullingura
	{ 3rd	{ You,	Ngindale
		{ They,	Ngurugale

¹ See my "Yookumbil Language," Queensland Geographical Journal, Vol. VII., pp. 63-67.

Plural	1st Person	{ We, incl., Ngeane
	2nd	{ We, excl., Ngeaneyel
	3rd	{ You, Ngandai
		{ They, Ngurugunnugu
		VERBS.

The principal parts of the verb bumulla, beat, are represented in the following conjugation. An abbreviated form of the pronoun is added to the verb stem, to indicate number and person. The whole of the present tense is given, but only parts of the others :

Indicative Mood—Present Tense.		
Singular	1st Person	I beat, Bumuldadhu
	2nd	Thou beatest, Bumuldandu
	3rd	He beats, Bumuldanguru
Dual	1st Person	{ We, incl., beat, Bumuldali
	2nd	{ We, excl., beat, Bumuldalinguru
	3rd	{ You beat, Bumuldandale
Plural	1st Person	{ We, incl., beat, Bumuldane
	2nd	{ We, excl., beat, Bumuldaneyel
	3rd	{ You beat, Bumuldandai
		{ They beat, Bumuldunnugu
		Past Tense.
1st Person Singular	I beat, indefinite	Bumidhu
	I beat this morning,	Bumulingaindhu
	I beat yesterday,	Bumulmiēndhu
	I beat recently,	Bumullēndhu
		Future Tense.
1st Person Singular	I will beat presently,	Bumullidyu
	I will beat tomorrow,	Bumulngedyu
	I will beat, indefinite	Bumullingurridyu
		Imperative Mood.
		Bumulla, beat !

If we direct one or more to do the beating, we could say, Bumullandu, beat thou ! Bumullandali, beat you two ! Bumullandai, beat you all ! The prohibitive expression would be, Kurria bumulla, beat not. For the dual and

plural the suffixes in the last example could be used. Or, these suffixes could be applied to the negative instead of to the verb, thus : Kurriandu bumulla, beat thou not ! Kurriandale bumulla, but not you two ! Kurriandai bumulla, beat not any of you !

Conditional Mood.

Perhaps I will beat, Bumulliyadhu.

Reflexive.

I will beat myself, Bumainglidyu.

Reciprocal.

We, dual, excl., are beating each other, Bumullellangura
We, plural, excl., " " Bumullellaneyel.

ADVERBS.

Kavam, no. Yo, yes. Thulla, where ? Yelladu, now.
Yirrabo, by and bye. Ngurago, tomorrow. Yawawunna, perhaps. Kullier, quickly. Muru, well. Ngana, who ? Minya, what ? Minyangai, how many ? Ngua, here. Nungarregi, there. The adverbs "here" and "there" often have the meaning of "this" and "that." When used in such sense, they serve the purpose of the definite article.

PREPOSITIONS.

Biddhun, between. Wurre, in front. Boadhe, behind.
Kubbarunda, on top.

INTERJECTIONS.

Ngibai, surprise ! Ngurragadhul, pity. Burrē, to break wind, (*flatus per anum*), is often done as an interjection in the middle of a conversation, and provokes merriment among both sexes of all ages.

NUMERALS.

One, mal. Two, bular. Three, guliba.

4.—THE WONGAIBON LANGUAGE.

The territory of the Wōngaibon tribe extends from about Booligal up the Lachlan River to Uabbalong ; thence to

Nyngan, Cobar, Paddington, and Ivanhoe. Their initiation ceremonies are of the Burbung type in force among the Wiradhuri tribes, who adjoin them on the east, comprehensive descriptions of which have been given by me elsewhere.¹ The Wöngaibon community is divided into four sections in the same manner as the tribes last mentioned, and similar laws regulate their intermarriages. I have explained the Wiradhuri organization in previous papers to this and other Societies.²

NOUNS.

The number, gender and case of nouns are as follows:—

Number.—The dual and plural are shown by suffixed particles: Singular, murrawe, a kangaroo; dual, murrawegale, a couple of kangaroos: plural, murrawebunggo, several kangaroos.

Gender.—Gender in the human family is denoted by different words. A man, thurgala. A woman, wirringga. A small girl, winnarga. Burai, a boy. Warru, a child of either sex. Men collectively are called maii. In speaking of animals, sex is distinguished by the addition of separate words for male and female respectively. Bidyer, a male; gungal, a female; papa, a cock; günni, a hen. These words are placed after the name of the animal whose sex they indicate.

Case.—The cases are the nominative, causative, genitive, accusative, instrumental, dative and ablative.

¹ "The Burbung of the Wiradhuri Tribes," *Journ. Anthropol. Inst.*, Vol. xxv., pp. 265-318; *op. cit.*, Vol. xxvi., pp. 272-285. *Proc. Roy. Soc., Queensland*, Vol. xvi., pp. 35-38. "The Burbung of the Murrumbidgee Tribes," *Journ. Roy. Soc. N.S. Wales*, Vol. xxxi., pp. 111-153. "Initiation Ceremonies of the Wiradhuri Tribes," *American Anthropologist*, Vol. iii., N.S. pp. 337-341.

² "The Wiradhuri System," *Journ. Roy. Soc., N.S.W.*, Vol. xxxi., pp. 171-176. "Australian Class Systems," *American Anthropologist*, Vol. ix., pp. 411-416; Vol. x., pp. 345-347.

Nominative.—Ngura, a camp. Mirri, a dog. Waru, a crow. Guragi, an opossum. Bulga, a boomerang. Kumi, a yamstick.

Causative.—Thurgalagu warru gumi, a man a child beat. Guragandu gira dhurra, an opossum leaves eats. Mirriḡu guragi gutthe, a dog an opossum bit.

Genitive.—Thurgallangu ngura, a man's camp. Guragangu dhun, an opossum's tail.

The possessive case of some nouns is shown by suffixing a particle corresponding to the person and number required as in the following table, which exhibits the inflection of ngura, a camp.

Singular	1st Person	My camp (camp my)	Ngurangadhi
	2nd "	Thy camp	Ngurangamu
	3rd "	His camp	Ngurangalagu
Dual	1st {	Our, incl., camp,	Ngurangaligi
	Person {	Our, excl., camp,	Ngurangaligini
	2nd "	Your camp,	Nguranganula
Plural	3rd {	Their camp,	Nguranggullagula
	1st {	Our, incl., camp,	Nguranggangenigi
	Person {	Our, excl., camp,	Nguranggangenigini
Plural	2nd "	Your camp,	Ngurangganugal
	3rd "	Their camp,	Nguranggalagugal

The foregoing words also have the meaning of "at my camp," etc.

Dative.—Thai nguranggu yauna, the camp come to.

Ablative.—Ngurandi yannaidhi, the camp go from.

If two or more of anything be claimed, the inflexion of the noun would be:—Mirridhi, my dog; mirrigaledhi, my two dogs; mirribunggodhi, my several dogs; and so on through all the persons and numbers as above.

ADJECTIVES.

Adjectives have the same numbers and cases as the nouns, and are placed subsequent to them: Thurgala bitthi,

a man large, Buppir, a very large man or any other thing. Thurgalagu bitthigu murrawe guni, a man large a kangaroo struck. The suffix is often omitted from one of the words, leaving the noun only, or the adjective only, to indicate number or case, as, mirri bitthigu guragi gutthe, a dog large an opossum bit. Thurgallangu bitthilalangu bulga, a large man's boomerang.

The comparison of adjectives does not follow the same rules as in European languages, but one article is compared to another in this way: Yuttama nginya—wurrarai ngunnai, good this—bad that. There are modifications in the case-endings of nouns and adjectives, depending upon the termination of the word declined.

PRONOUNS.

Pronouns have the nominative, possessive and objective cases as in the subjoined table. There are two forms in the first person of the dual and plural—one in which the person or persons addressed are included with the speaker, and another in which they are exclusive of the speaker.

Singular.		
	Nominative.	Objective.
1st Person	Ngadhu	Dhi
2nd "	Ngindu	Nu
3rd "	Nyillula	Lugu
Dual.		
1st Person	{ Ngulli Ngullina	Liggi
2nd "	Ngindunyula	Liggina
3rd "	Nyillubulu	Nula
Plural.		
1st Person	{ Ngeana Ngeanuna	Ngeanaga
2nd "	Ngindugal	Ngeanagina
3rd "	Nyillugala	Nunggal
		Nyuggala

Demonstratives.—Nginya, that. Nginyaga, that (in action). Nginyane, that (acted upon). The demonstratives are very numerous and varied, representing different gradations of meaning, depending upon the position of the object referred to in regard to the speaker, and also to the points of the compass. All the pronouns of the third person are in effect demonstratives, which accounts for their irregularity and diversity.

Interrogatives.—Ngandi, who? Ngangu, whose? Minya, what? Minyunggulmai, how many? Widdyündugai, what's the matter? Widdhuudu, how?

VERBS.

Verbs have the singular, dual and plural numbers, with the usual persons, tenses and moods. The verb stem and a contraction of the pronoun are incorporated, and the word thus formed is used in the conjugation. There is an inclusive and exclusive form in the first person of the dual and plural.

The following is a brief conjugation of the verb ngéli, to speak:—

Indicative Mood—Present Tense.		
Sing. 1st Per.	I speak or talk,	Ngeradhu
" 2nd "	Thou speakest,	Ngerandu
" 3rd "	He speaks,	Ngeralula
Past Tense.		
Singular	{ I talked,	Ngelgaidhu
1st Person	{ I talked this morning,	Ngelgurrinyedhu
	{ I talked yesterday,	Ngelgunnidhu
	{ I talked recently,	Ngeldhumbirradhu
	{ I talked long ago,	Ngelgumbirngaldhu
Future Tense.		
Singular	{ I will talk,	Ngelagadhu
1st Person	{ I will talk presently,	Ngeladhullungadhu
	{ I will talk tomorrow,	Ngelgurriragadhu
	{ I will talk in the future,	Ngelwandhagadhu

Any person or number in each tense can be shown by using the necessary pronominal suffix.

Imperative Mood.

Singular Ngea, Speak (thou).
Dual Ngealadha, Speak (you).
Plural Ngealagadugal, Speak (you).

Conditional Mood.

Perhaps I will talk, Ngeलगaiadhu

Reflexive.

I am talking to myself, Ngedyillingadhu.

Reciprocal.

We, (dual incl.) talk to each other, Ngelinnangulli
We (plural incl.) talk to each other, Ngelinnangēna

If space permitted, all the above examples could be illustrated through the different persons and numbers.

Some verbs take a special inflection for number, which applies to actions in which two or more persons can take part, as in sitting, fighting, throwing, playing, etc., as in the following example :

Two talking, Ngeallanunuala

Several talking, Ngeallanunnugal

The negative form of any verb is obtained by prefixing kurria, thus, Kurria ngea, speak not.

There are numerous modifications of verbs to express different shades of meaning, as: Wingurrimunnadhu, I sat all the time. Birrumburrayambuldhu, I throw (as a boom-erang) in play.

ADVERBS.

Yes, ngarbu. No, wōngai. Now, dhallungurra. Yesterday, kumbirrangurra. Tomorrow, kumbirragulli. By and bye, dhallunggogulli. Long ago, ngurgambungarru. How, widdyū? How many, minyangalmai? Where, wūndha? Where art thou, wūndhalindu? and so on.

PREPOSITIONS.

Ngunagangura, behind. Willidya, in front. Waiangadha, around. Mugama, inside.

Some prepositions, like the nouns and adverbs, admit of inflexion for number and person, by affixing an abbreviated form of the pronoun :

1st Person My left (left of me) Miradhi
2nd " Thy left Miranu
3rd " His left Miralugu

All the persons in each number can be inflected.

EXCLAMATIONS.

Wai! take care! Yah! calling attention. Ohuh! silence. Any vocative can be inflected for number.

NUMERALS.

One, mukku. Two, bulagar. Several, būnggo.

As the Wiradhuri and Wongaibon are dialects of the same language, it will be interesting to introduce here a portion of the conjugation of the Wiradhuri verb buma, beat. A contracted form of the pronoun is suffixed to the root of the verb to show number and person. The present tense is given in full, but the first person of the singular will be sufficient to illustrate the past and future tenses.

Indicative Mood—Present Tense.

Singular { 1st Person I beat, Bumarradhu
2nd " Thou beatest, Bumarrawindu
3rd " He beats, Bumarralula

Dual { 1st Per. { We, incl., beat, Bumarrali
2nd " { We, excl., beat, Bumarraliguna
3rd " { You beat, Bumarrandubla
They beat, Bumarragwainbula

Plural { 1st Per. { We, incl., beat, Bumarranē
2nd " { We, excl., beat, Bumarraneguna
3rd " { You beat, Bumarrandugir
They beat, Bumarragwainbulella

Past Tense.

Singular	{ I beat this morning,	Bumunguridyu
1st Person	{ I beat, yesterday	Bumulguaudhu
	{ I beat, indefinite	Bumaidhu

Future Tense.

Singular	{ I will beat, indefinite	Bumulguridyu
1st Person	{ I will beat soon,	Bumulyamagiridyu
	{ I will beat tomorrow,	Bumulgurrigiridyu

Imperative.

Buma, beat ! Kurria buma, beat not !

Reflexive.

Bumungadyillindyu, I am beating myself.

There are also reciprocal and other forms of the verb, but as I am preparing a grammar and vocabulary of the Wiradhuri language, no more will be said upon the subject at present.

5—THE KURNŪ LANGUAGE.

The native tribes speaking the Kurnū language are located on the Darling River from about Tilpa up the river to Bourke, and also up the Warrego River as far as Ford's Bridge. Dialects of the Kurnū are spoken along the course of the Darling River from Tilpa downwards, viâ Wilcannia and Menindie, to Wentworth, a distance of about 350 miles. The Kurnū language extends, with some modifications, from the Darling River to Torawotta Lake and the Barrier Ranges, as well as up the Paroo River as far as the Queensland boundary. The social organization and initiation ceremonies of these tribes were described by me in a former article to this Society.¹ The following elements of the language have been gathered by myself in the Kurnū territory, from reliable old natives.

¹ "The Group Divisions and Initiation Ceremonies of the Barkunjee Tribes," Journ. Roy. Soc., N.S. Wales, Vol. xxxii., pp. 241-250.

Number.—Nouns have three numbers—the singular, dual and plural. Thurlta, a kangaroo; thurlta pakula, a couple of kangaroos; thurlta gutthalagu, several kangaroos.

Gender.—Wimbadya, a man. Burraka, a woman. Kutyungga, a young boy. Karnkali, a young girl. Muthanggura, a baby of either sex. The gender of animals is shown by affixing words indicative of male and female, as thurlta dhuladya, a male kangaroo; thurlta wambukka, a female kangaroo.

Case.—The following are some of the principal cases:—The nominative indicates anything at rest, and is without flexion, as, kulli, a dog; wimbadya, a man.

The causative represents the subject in action, and takes a suffixed particle, as Wimbadyāwa waku burtatyi, a man a crow killed; kulliwa yerrandyi dhuttadyi, a dog an opossum bit.

Genitive.—Wimbadyana gattheri, a man's boomerang. Kullina gurni, a dog's tail. Burrakana kurnka, a woman's yamstick. The remaining cases are omitted.

ADJECTIVES.

These follow the nouns they qualify, and take the same inflexions for number and case. Wimbadya wurta, a man large. Wimbadyana wurtana gattheri, a large man's boomerang. Wimbadyawa wurtawa gattheri ngartatyi, a large man a boomerang threw.

Comparison of adjectives is effected by such expressions as "this is good—that is bad," and so on, in a similar manner to those of the Thoorga.¹

PRONOUNS.

Pronouns have number, person and case. There are "inclusive" and "exclusive" forms for the first person of

¹ "The Thoorga and Yukuumbil Languages," Queensland Geographical Journal, Vol. xvii., pp. 49-73.

the dual and plural. The following table exhibits the nominative of the singular, dual and plural:

Singular	1st Person	I,	Nguppa
	2nd "	Thou,	Ngimba
	3rd "	He,	Wuttha or gitthu
Dual	1st Person	{ We, inclusive,	Ngulli
	2nd "	{ We, exclusive,	Ngullingulu
	3rd "	{ You,	Ngupangalu
Plural		{ They,	Wutthawula
	1st Person	{ We, inclusive,	Nginna
	2nd "	{ We, exclusive,	Nginnanda
	3rd "	{ You,	Ngurtana
		{ They,	Wutthēda

The possessive and objective pronouns are as under:

Singular	1st Person	Mine, Ngari	Me, Ngunuha
	2nd "	Thine, Ngoma	Thee, Ngumma
	3rd "	His, Watthunegi	Him, Wutthana

There are modifications of the objective pronouns to mean "towards me," "away from me," etc., as in the annexed examples:

Singular	1st Person	Towards me,	Ngunuhari
	3rd "	Towards him,	Gitthunari
Dual	1st "	Towards us, incl.,	Ngullinari
	1st "	Towards us, incl.,	Nginnanari
Singular	1st Person	From me,	Ngunnarndu
	3rd "	From him,	Gitthanarndu
Dual	1st "	From us, incl.,	Ngullinarndu
	1st "	From us, incl.,	Nginnanarndu

With me, or close to me, is Ngariri.

In each of the foregoing examples, the inflections can be applied to all the persons of the singular, dual and plural.

Interrogatives.—Who (singular), windyaka. Who (dual), windyula. Who (plural), windy-windy. Whose, windyakunnagi. What, minnha. What for, minnhamundi.

Demonstratives.—This, giki; that, wutthana.

VERBS.

Verbs have the same numbers and persons as the pronouns, with the usual tenses and moods. Tables of conjugations of verbs are omitted for want of space, but a tolerably full list of verbs will be found in the vocabulary. There are two forms in the first person of the dual and plural—the "inclusive" and "exclusive."

ADVERBS.

Yes, ngi. No, ngatthu. Here, kungara. There, wurra. Yonder, wurityalinnaga. To-day, kailpominka. Yesterday, yillana. To-morrow, wambinna. By and bye, kunnidilli. Long ago, kundindiyi. In the future, windhurn. First, mirriga.

Where art thou, windyarra ngimba. Where goest thou, windyawarra dhani ngimba. How, nūnguna. How many, ngulthurra.

PREPOSITIONS.

In front, mirika. In rear, nguuda. Between, bukkulu. Beside, gungo. Down, baikabika. Up, wunggalu. Inside, ngunggaru. The other side, murlāka. Outside, dhurnamurlaka. At my back, dhurna ngariri.

See the vocabulary of Kūrñū words at the end of this article.

6—THE TYAKE, OR MYSTIC LANGUAGE.

I have on several occasions reported the existence of a secret or cabalistic language used only by the men at the initiation ceremonies of several native tribes in New South Wales.¹ While the novitiates are away in the bush with the elders of the tribe, they are taught a mystic name for

¹ Journ. Anthropol. Inst., (1896) Vol. xxv., p. 310. Proc. Royal Soc., Queensland, Vol. xvi., p. 37. Proc. Amer. Philos. Soc., Phila., Vol. xxxix., p. 471. Journ. Royal Soc., N.S. Wales, Vol. xxxii., pp. 240, 250. Congrès Internat. d'Anthrop. et d'Archéol. prehist., Comptes Rendu, 12me Session, p. 491.

surrounding natural objects, animals, parts of the body, and short phrases of general utility. The language varies in different communities.

On the present occasion I am furnishing the names of several animals and a few other words, in the mystic language used among the initiated men of the Kurni tribe. The English words are given in the first column; the ordinary native equivalents in the second; and the secret or mystic words in the last column.

ENGLISH.	KURNI.	MYSTIC.
Kangaroo	Thurita	Burnki
Black Opossum	Ngalkika	Kulla-niltilinya
Bandicoot	Burakunya	Wanganyalui
Porcupine	Yarrali	Kurlu-burkali
Dog	Kulli	Munnidi
Grey opossum	Yerrandyi	Nguraninninyi
Padamelon	Murrinya	Yalenga
Kangaroo-rat	Gulatyā	Burndali
Eaglehawk	Wurigu	Wundamurra
Black duck	Ngultha	Barrimbarri
Curlew	Willaru	Kapimuku
Scrub turkey	Lauan	Mendhimugga
Diver	Ngurtadya	Burrakamuku
Teal duck	Kultaba	Mipperu
Wood duck	Gunali	Wundammur
Emu	Kulthe	Thittigilyu
Crow	Waku	Wakuburnki
Ground iguana	Burna	Murnibungu
Tree iguana	Gugar	Munkamurra
Jew lizard	Gani	Wurrangura
Black snake	Kullali	Waiwai
Carpet snake	Bulthamuddyera	Kadhu
Penis	Wira	Mendiburnki
Testicles or scrotum	Mulu	Kurlu-burkali
Vulva	Bulli	Kurla
Copulation	Baingullana	Baingulla
Anus	Dhitti	Dhittimukku

It will be observed that some of the mystic names in the above list are formed from the common, by means of an additional word; thus, burnki is added to waku, the common native word for crow, to form the mystic name of that bird. Again, the porcupine is distinguished by the same name as the human scrotum. I have before observed obscenity connected with the porcupine in other tribes.

The following is a short list of words from the mystic language of the Kamilaroi tribe, which I collected when attending the Bora ceremony held at Tallwood in 1895:—

ENGLISH.	KAMILAROI.	MYSTIC.
Kangaroo	Bundar	Ungogirgal
Opossum	Mute	Birredburraburai
Dog	Buruma	Gungmoal
Eaglehawk	Thirril	Dhindhurringa
Emu	Dhinooan	Ungodhulli
Tree iguana	Yurundiali	Birridhubillirnga
Carpet snake	Yabba	Milngulli
Penis	Dhun	Dhunburringa
Testicles	Buru	Burumbunna
Vulva	Yangal	Wungodhe
Copulation	Thadha	Wungogurrilli
Anus	Nyi	Murumburuge
Head	Koga	Kubbadhirba
Forehead	Ngulu	Ngulumbal
Hair of head	Kah	Budhubudhulnga
Eye	Mil	Millungga
Nose	Muru	Murunggun
Ear	Binna	Binnayulaui
Mouth	Ngaih	Ngaimballumbu
Thigh	Dhurra	Gunnimbar
Foot	Dhinna	Gungu
Teeth	Yira	Yiramunna
Fire	Wi	Buddhamur
Snoke	Thu	Thugabil

¹ "The Bora of the Kamilaroi Tribe," Proc. Roy. Soc., Victoria, Vol. ix., N.S., pp. 137-173.

ENGLISH.	KAMILAROI.	MYSTIC.
Water	Kolli	Wungothubbil
Boomerang	Burran	Wanggaribül
A stone	Yarral	Wallamari
Father	Baina	Muddhamunna
Elder brother	Daidhi	Muddhunga
Clever man,	Wirringan	Gundaithar
A man	Giwir	Maimba
A woman	Inar	Winnilwanga
Behold!	Ngummilla	Unggomilli
Camp	Wullai	Nymarai

In ordinary Kamilaroi conversation, kutthalbulda is the noise made while copulating, and burrabunda means emission. If anything remarkable or jocular is being narrated, one or more of the hearers will exclaim "Kutthalbulda!" or "Burrabunda!" or perhaps both words will be interjected by different persons. They are used indiscriminately by men and women.

7—THE DYIRRINGAN LANGUAGE.

The remnants of the Dyirringan tribe occupy the northern half of the county of Auckland, on the south-east coast of New South Wales. They are bounded on the north by the Thoorga-speaking people, whose language I have elsewhere dealt with.¹ On the south are the Thäwa and other tribes, whilst the Muddhang and Ngarrugu occupy the country to the west. Stretching southerly along the sea-coast from the Dyirringan territory to Cape Howe, and onward into Victoria as far as Anderson's Inlet, into which the Tarwin River empties, in the county of Buln Buln, all the languages are similar in grammatical structure² to the Dyirringan, although some of them differ considerably in vocabulary. I have also observed here, as in other districts, that two

¹ Queensland Geographical Journal, Vol. xvii., pp. 49-60.

² See my "Aboriginal Languages of Victoria," Journ. Roy. Soc., N. S. Wales, Vol. xxxvi., pp. 71-106.

dialects may differ widely in intonation, although the changes in vocabulary are comparatively slight, which gives the superficial observer the impression that they are altogether unlike.

The initiation ceremonies of the Dyirringan are described in an article which I communicated to the Anthropological Society at Washington, U.S.A., in 1896.¹ In common with certain other tribes, their intermarrying laws, and the Kudsha ceremony, are also dealt with by me in a previous article to this Society in 1900.² The Dyirringan is one of an aggregate of tribes whose sacred songs I have learnt and published, with the accompanying music, in a paper contributed to the Royal Geographical Society of Queensland.³ These are the first sacred songs of the Australian Aborigines which have ever been set to music.

NOUNS.

There are three numbers—singular, dual and plural.

Number.—Bail, a man; bailwula, a couple of men; bailma, several men.

Gender.—Mulidya, a woman. Bail, a man. Būrru biangwa, a male kangaroo. Būrru ngigwa, a female kangaroo.

Case.—The principal cases are the nominative, accusative, causative, genitive, instrumental, dative and ablative. The nominative simply names the subject at rest, as, Bail bagama, the man sits. The causative indicates the agent of a transitive verb, as, Bailu wingal wammaba, a man a child beat.

¹ "The Bunan Ceremony of New South Wales," American Anthropologist, Vol. ix., pp. 327-344, plate vi.

² "The Organisation. Language and Initiation Ceremonies of the Aborigines of the south-east coast of New South Wales," Journ. Roy. Soc., N. S. Wales, Vol. xxxiv., pp. 263-264, and 276-281.

³ "Aboriginal Songs at Initiation Ceremonies," Queensland Geographical Journal, Vol. xvii., pp. 61-63.



The possessive case is represented by a suffix to the name of the property as well as to that of the owner. Baila mirrigangwa, a man's dog. Mirriga wingalangwa, a dog's puppies. Anything over which possession can be exercised is subject to inflexion for number and person:

	{ 1st Person My camp (camp my)	Badhaldya
Singular	{ 2nd " Thy camp	Badhalnyi
	{ 3rd " His camp	Badhalwa

and so on through the dual and plural numbers.

Instrumental.—Wannungala yerrabandya warrangandu, who threw at me a boomerang. The accusative is the same as the nominative. Dative.—Ngurani, to a camp. Ablative.—Nguradyan, from a camp.

ADJECTIVES.

Adjectives follow the nouns they qualify, and take the same declensions for number and case. They are compared as under: Jummaga nyan—dhauat nyanya, good this, bad that. Jummagumma nyanya, this is very good.

When an adjective is used as a predicate, it can, by applying the proper postfixes, be converted into a verb, as in the word mündur, strong:

	{ 1st Per. I am strong,	Mündur-gaiamungga
Singular	{ 2nd " Thou art strong,	Mündur-gaiadyamung
	{ 3rd " He is strong,	Mündur-gaiadyama

This inflexion extends to all the persons of the dual and plural, and to the past and future tenses.

PRONOUNS.

There is a distinctive form of the first person of the dual and plural, according as the individual spoken to is included or excluded:

	{ 1st Person I,	Ngaialu
Singular	{ 2nd " Thou,	Indigal
	{ 3rd " He,	Waralu

Dual	{ 1st Person { We, inclusive, Ngaiauga
	{ 2nd " { We, exclusive, Ngaiaungulu
	{ 3rd " { You, Indigumbul
	{ They, Waraligimbula

Plural	{ 1st Person { We, inclusive, Ngaianyi
	{ 2nd " { We, exclusive, Ngaianyilla
	{ 3rd " { You, Indiganyu
	{ They, Waraligima

The following are the possessive pronouns of the first person singular—the other numbers being passed over:

Singular	{ 1st Person Mine, Ngaialunggulal
	{ 2nd " Thine, Indigunggulal
	{ 3rd " His, Waralminyawa

There are two sorts of possessives—those which have just been mentioned, and those which are suffixed to a noun as badyaldya, my camp, exemplified in a previous page.

There are forms of the pronoun signifying "away from me," "towards me," etc., which need not now be particularised.

Demonstratives.—This, nyan; that, nyanya. These and other forms are very numerous, and are inflected for number and case, as in the Thurawal and Thoorga, thus:—

Singular—Bail mündur nyanya, man large that.

Dual—Bailwula mündurwula nyangimbula, men large those

Plural—Bailma mündurna nyangima, men large those.

Interrogatives.—Wannunggal, who? Wannunggulal, whose? Minya, what? Minyané, what for?

Pronominal suffixes, in abbreviated forms, are used in great number and variety in the declension of nouns, adjectives, verbs, prepositions, adverbs, and interjections; examples of which are given under these parts of speech in the present paper.

VERBS.

The verb "to be" has apparently a substitute in the word gaia, which is inflected for number and person.¹ If an

¹ "The Aboriginal Languages of Victoria," Journ. Roy. Soc., N. S. Wales, Vol. xxxvi., pp. 71–106.

adjective, adverb, or other suitable word be taken as a predicate, we get the example given in an earlier page, under the head of "Adjectives": Mündur-gaia-mungga, strong am I, and so on.

Following is the conjugation of the principal elements of the verb wamma, to beat or strike:

Indicative Mood—Present Tense.

Sing.	1st Per.	I beat,	Wammamungga
	2nd "	Thou beatest,	Wammamangi
	3rd "	He beats,	Wammama
Dual	1st Per.	{ We, incl., beat,	Wammamunga
	2nd "	{ We, excl., beat,	Wammamungalu
	3rd "	{ You beat,	Wammamumbul
Plural	1st Per.	{ They beat,	Wammamumbula
	2nd "	{ We, incl., beat,	Wammamunyan
	3rd "	{ We, excl., beat,	Wammamunylla
Sing.	1st Per.	You beat,	Wammamunyu
	2nd "	They beat,	Wammamundya
	3rd "		
Past Tense.			
Sing.	1st Per.	I beat,	Wammabagga
	2nd "	Thou beatest,	Wammabangi
	3rd "	He beat,	Wammaba
Dual	1st Per.	{ We, incl., beat,	Wammabanga
	2nd "	{ We, excl., beat,	Wammabangalu
	3rd "	{ You beat,	Wammabambul
Plural	1st Per.	{ They beat,	Wammabambula
	2nd "	{ We, incl., beat,	Wammabanyan
	3rd "	{ We, excl., beat,	Wammabanyilla
Sing.	1st Per.	You beat,	Wammabanyu
	2nd "	They beat,	Wammabandya
	3rd "		
Future Tense.			
Sing.	1st Per.	I will beat,	Wamayäbulla
	2nd "	Thou wilt beat,	Wamayibulla
	3rd "	He will beat,	Wamabulla
Dual	1st Per.	{ We, incl., will beat,	Wamangabulla
	2nd "	{ We, excl., will beat,	Wamangulabulla
	3rd "	{ You will beat,	Wamulbulla
Sing.	1st Per.	They will beat,	Wamulabulla
	2nd "		
	3rd "		

1st Per. { We, incl., will beat, Wammanyabulla
2nd " { We, excl., will beat, Wammanyabulla
3rd " { You will beat, Wammanyubulla
Plural { They will beat, Wammanyabulla

A negative meaning is given by means of an infix, ña, between the verb stem and the abbreviated pronoun:

Wamma-ña-mungga, I beat not, and so on, through all the parts of the verb.

Imperative.

There are affirmative and negative forms of the verb:—

Singular Beat, Wamma Beat not, Wammanyäwi
Dual Beat, Wammul Beat not, Wammanyawul
Plural Beat, Wammanyu Beat not, Wammanyanyu

Conditional.

Perhaps I will beat, Wamayäbulla-wanda, and so on for the rest of the persons and numbers.

Reflexive.

Present I am beating myself, Wammullimungga
Past I did beat myself, Wammullibagga
Future I will beat myself, Wammullyäbulla

This inflection applies to all parts of the verb.

Imperative-reflexive.

Singular Beat thyself, Wammulli
Dual Beat yourselves, Wammullul
Plural Beat yourselves, Wammullünya

Reciprocal.

This form of the verb is of course restricted to the dual and plural:

Dual.
We, incl., are beating each other, Wammullidyagunga
We, excl., " " Wammullidyagungalu
Plural.
We, incl., are beating each other, Wammullidyaganyan
We, excl., " " Wammullidyaganyilla

Imperative-reciprocal.

Dual Beat each other, Wammadyagalul
 Plural Beat each other, Wammadyagalunyu

There are numerous modifications of the verb to convey different shades of meaning, a few examples of which may be given:—Wammabandya. struck me; wammaguban, struck thee. Warranganwai yellindyarria, a boomerang bring to me. Yellinylilwai, bring this direction. Yellimunga, I carry or bring.

The verb takes an inflection for the same number as the object noun:

Bürü nyambugga, a kangaroo saw I.
 Bürula nyabugälu, a couple of kangaroos saw I.
 Büruma nyabugana, several kangaroos saw I.

PREPOSITIONS.

The equivalents of our English prepositions are in some cases separate words, but are also frequently expressed by a verb. A few short sentences will illustrate the application of these rules:—Bürü, between, or in the middle. Wurananggi, the other side. Nguluwan, in front. Garangañ, behind. Irritgundi, inside. Nguttaandya, outside. Gurrano, up (a river). Wullungurri, down (a river etc.). Nyaninggo, close.

The following verbs convey a prepositional meaning:—
 Dhumala dthurätyububugga, scrub through went I. Bungguri dhumumunga, hill up go I. Bungguri nyirrumunga, hill down go I. Bungguri bulläwugunga, hill on the side of go I, or I go on the side of the hill. Ngugangga yendinyellima, water across comes he.

Some prepositions can be inflected for person and number:

Singular { 1st Person In front of me, Nguluwandya
 2nd " In front of thee, Nguluwandyin
 3rd " In front of him, Nguluwangung

and so on through the dual and plural numbers.

ADVERBS.

The following are a few of the more commonly used adverbs:—Yes, ngäwe. No, thuggail. Today, munnago. Perhaps, wanda. By and bye, bulla. Long ago, warralingo. From yonder, warrabiggidyan. How, yua. Whither, wandynni. Whence, wandidyin. Soon, yunggo. How many, yuagailuma. What is the matter, minyanggundu.

Certain adverbs can be inflected for number and person:

{ 1st Person Where am I, Wandya
 Singular { 2nd " Where art thou, Wandyawili
 3rd " Where is he, Wandyawanni

and so on through all the persons, numbers and tenses.

CONJUNCTIONS.

The general absence of conjunctions is attributable to the numerous modifications of the verbs and pronouns, by means of which sentences are brought together without the help of connecting words. We sometimes find an intrusive letter or syllable used between words, to prevent hiatus, which serves the purpose of a conjunction.

INTERJECTIONS AND EXCLAMATIONS.

These parts of speech are not numerous:—Calling attention, yai! in the singular; yaiauw! in the dual; yaianyu! in the plural.

NUMERALS.

One, mirdindhal. Two, dyirriba. Three, turungadya.

8—THE YOTA-YOTA LANGUAGE.

This language is spoken by some small tribes on the Murray River, from Cobram for some distance below Echuca extending into Victoria as far as Shepparton, and into New South Wales to Deniliquin. On the south they are bounded by the Thaguwurru nation,¹ and on the north by the

¹ "The Aboriginal Languages of Victoria," Journ. Roy. Soc., N. S. Wales, Vol. xxxvi., pp. 71-106.

Wiradhuri, but the Yota-yota people have apparently kept their language distinct from those of their neighbours. On this account it is important from a linguistic point of view, and I consider myself fortunate in being the first to report its grammatical structure. Considerations of space will however, render it necessary to deal only with the fundamental elements of the language.

Mr. E. M. Curr, gave vocabularies of some tribes in this region in his work,¹ but he left the grammar of the language untouched.

The ceremonies of inauguration and the laws of inter-marriage of this tribe, among others, are described in an article I contributed to the Anthropological Society at Washington, U.S.A., in 1898.²

NOUNS.

Number.—Nouns have the singular, dual and plural. Buttya, an opossum; buttyal, a pair of opossums; buttyau, several opossums. Winyar, a woman; winyandyal, a couple of women; winyanboga, several women.

Gender.—There are two modes of indicating gender—by using different words for the masculine and feminine, or by adding words meaning male and female respectively. Yiyir, a man. Winyar, a woman. Nunyunbunna, a girl. Nyawoga, a maid. Dhuddhiwa, a girl. Who has just attained puberty. Yiyirram, a boy. Málnega, a youth. Gudhupka or yarka, a child of either sex. Bukka nhalma, a male dog. Bukka nhana, a female dog. Baiamal nungea, a cock swan. Baiamal nhana, a hen swan.

Case.—The principal cases are the nominative, causative, genitive, dative, ablative, instrumental and accusative.

¹ "The Australian Race," Vol. III., pp. 570–589.

² "The Victorian Aborigines: their Initiation Ceremonies and Divisional Systems," American Anthropologist, Vol. XI., pp. 326–330, with map showing distribution of the native tribes of Victoria.

Nominative.—Wunya, a boomerang. Kangupka, a perch. Nukkin, the tail of an animal. Dungula, a river. Manung, a camp.

Causative.—Yiyirril wunya munnin, a man threw a boomerang. Winyarril kangupka mummun, a woman a perch caught. Bukkal buttya yinnin, a dog an opossum bit.

Genitive.—Yiyirrin wunya, a man's boomerang. Win-yarrin nūnyir, a woman's yamstick. Buttyan nukkin, an opossum's tail.

Dative.—Dungulung, to the river.

Ablative.—Dungulin, from the river. Manungyin, from the camp.

Instrumental.—Ngango yiyir wūnyal munnin, I at a man a boomerang threw.

Accusative.—The same as the nominative.

ADJECTIVES.

Adjectives are declined for number and case, and are placed after the qualified noun. Yiyir dunngidyā, a man large. Yiyirral dunngidyā, a couple of large men. Yiyarrau dunngidyau, several large men. Yiyirril dunngidyil buttya tuttain, a large man an opossum killed. Yiyirrin dunngidyin wunya, a large man's boomerang.

The remaining cases are declined the same as the nouns. Comparison of adjectives is effected in a manner similar to that employed in the Thoorga.¹

PRONOUNS.

Pronouns have three numbers and the usual cases. The first person of the dual and plural contains two pronouns, the first of which includes both the speaker and the party addressed, but the second excludes the party spoken to. These are marked "incl." and "excl." respectively. Some

¹ "The Thoorga Language," Queensland Geographical Journal, Vol. XVII., pp. 49–73.

of the nominative and possessive pronouns are as here tabulated:

Singular	1st Person	I,	Ngango	Mine,	Ngini
	2nd	"	Thou,	Ngunnungo	Thine, Ngüni
	3rd	"	He,	Nha-ungo	His, Dinnin
Dual.					
1st Person	{	We, incl.,	Ngalingo	Ours, incl.,	Ngalungun
2nd	{	We, excl.,	Ngullungo	Ours, excl.,	Ngullan
3rd	{	You,	Bullungo	Yours,	Bullan
		They,	Ngamungo	Theirs,	Damalinya
Plural.					
1st Person	{	We, incl.,	Ngündingo	Ours, incl.,	Nguanndan
2nd	{	We, excl.,	Ngannango	Ours, excl.,	Ngannan
3rd	{	You,	Nhoorango	Yours,	Nhuran
		They,	Ngamungo	Theirs,	Ngamunyin

The third personal pronoun has various forms, and is often used as an ordinary demonstrative. There are pronouns meaning "me," "myself," "towards me," "from me," etc., the same as illustrated by me in dealing with other languages. There are also causative forms of the nominative pronouns which must be passed over for want of space.

Interrogatives.—Ngani, who (singular). Nganibula, who (dual)? Nganinhura, who (plural)? Nganinguddha, who for? Nganinnat, who from? Nganinarak, who with? Minnhé, what? Minnhetgudda, what for? Minnhalda, what with?

Demonstratives are used in great number and variety, exhibiting niceties of expression in regard to the location of the person or thing spoken of. These demonstratives include the different points of the compass.

VERBS.

Verbs have the same numbers, persons, tenses and moods as those of the Thurawal language,¹ and although the

¹ "The Thurawal Gundungurra and Dharruk Languages," *Journ. Royal Soc., N. S. Wales*, Vol. xxxv., pp. 127-160.

suffixed particles differ, they are applied in a similar manner, as represented in the following conjugation of the verb mullin, to beat:

Indicative Mood—Present Tense.					
Singular	1st Person	I beat,	Mullinnga		
	2nd	"	Thou beatest,	Mullinginna	
	3rd	"	He beats,	Mullinda	
Dual	1st Person	{	We, incl., beat,	Mullingalngin	
	2nd	{	We, excl., beat,	Mullingulla	
	3rd	{	You beat,	Mullinbullak	
Plural	1st Person	{	They beat,	Mullindamulu	
	2nd	{	We, incl., beat,	Mullinyuandak	
	3rd	{	We, excl., beat,	Mullinyanak	
			You beat,	Mullinhurak	
			They beat,	Mullindannak	

One example each in the past and future tenses will be sufficient:—

Past Tense.

Singular 1st Person I beat, Mullénnga

Future Tense.

Singular 1st Person, I will beat, Mulliaknga

Imperative Mood.

Beat, Mullél. Beat not, Kuddhagana mullél

Condition Mood.

Perhaps I will beat, Yötadyin mulliaknga.

Reflexive.

I am beating myself, Mullinganyen.

Reciprocal.

We (dual) are beating each other, Mullédhanngulla

We (plural) " " Mullédhanyanak

ADVERBS.

No, yota. Yes, ngöwi. Today, kannanngur. Tomorrow, bapirrik. Day after tomorrow, yiyirrak-kanangar. Now, yimmalang. By and bye, dyinyanguna. Long ago, pappura-

bunnarak. I don't know, ngai. Perhaps, yotadyin. Where waga? Whereabouts, wannbul? Whither, wannhalmuty? Whence, wūnyin? How, wannhalum? When, wummir? There, nhullai; there, farther, dungubbera; there, farther still, ngungabunnarak. Yonder, dhunnala.

NUMERALS.

One, iāwa. Two, būtyobal.

See the vocabulary of Yota-yota words at the end of this article.

9—THE BUREBA LANGUAGE.

This native tongue is spoken on both sides of the Murray River, from Swan Hill upwards till met by the Wambawamba, Giāni-giāni, Yabula-yabula and Yota-yota. Below Swan Hill, and extending right down the Murray to Wentworth, are several small tribes, such as the Wattiwatti, Lātyu-lātyu, Muti-muti, Nyerri-nyerri, Darti-darti, and some others. Towards the north-east these tribes are met by the Birraba-birraba and Itha-itha communities, whose languages have been described by me elsewhere. All these triplets speak dialects having the same constitution as the Burēba, bearing also strong affinities to the Tyattiyalla, but they differ more or less among themselves in vocabulary. Considerations of space will preclude more than a cursory outline of the chief elements of the language. The social organisation and "man-making" ceremonies of all the above mentioned tribes are described by me in an article to this Society in 1898.¹

NOUNS.

The number and gender of nouns are on the same principle as those of the Tyattiyalla.² Although the dual is generally

¹ "The Group Divisions or Initiation Ceremonies of the Barkunjee Tribes," Journ. Roy. Soc. N.S. Wales, Vol. xxxii., pp. 240-250 with map.

² "The Aboriginal Languages of Victoria," Journ. Roy. Soc. N.S. Wales Vol. xxxvi., pp. 71-106.

used, a trial is often met with in some of the languages mentioned in the above paragraph.

Case.—The nominative and accusative are not declined, as wan, a boomerang; laiur, a woman.

Causative.—Laiuru bupu dhaka, a woman a child beat.

Every object over which ownership can be claimed is subject to inflexion for number and person:—

Singular	{ 1st Person My boomerang,	Wanak
"	2nd " Thy "	Wanin
"	3rd " His "	Wanuk

Dual, 1st Per.	{ Our, incl., boomerang,	Wanai
"	Our, excl., "	Wanallung

Plural, 1st Per.	{ Our, incl., boomerang,	Wanangura
"	Our, excl., "	Wanangandang

There are also case-endings for the instrumental, dative and ablative.

ADJECTIVES.

Adjectives follow the qualified noun, and take the same declensions. They are compared like the Gundungurra.¹

PRONOUNS.

Pronouns are inflected for number, person and case, and contain two forms in the first person of the dual and plural. The following examples of the nominative and possessive cases, in the singular number, will be sufficient to exhibit their inflexion:

Singular	{ 1st Person I,	Yetti	Mine, Yetiuk
"	2nd " Thou, Nginda	Thine, Ngindeuk	
"	3rd " He, Malu	His, Malgung	

Who, winyar? What, nganyu? This, ginya. That, malu. The demonstratives are numerous, and of various forms, frequently taking the place of pronouns of the third person in all the numbers. This accounts for the great

¹ See my "Gundungurra Language," Proc. Amer. Philos. Soc., Phila., U.S.A., Vol. xL., pp. 140-148.

diversity of the third personal pronouns, which have little or no etymological connection with the others.

VERBS.

Verbs have the same numbers, persons, tenses and moods, as the other languages treated in this article. In the first person of the dual and plural there is a variation in the suffix of the verb indicating the inclusion or exclusion of the person spoken to. An example of the present tense of the indicative mood only will be given.

Singular	1st Person	I sit,	Ngangan
	2nd "	Thou sittest,	Ngangar
	3rd "	He sits,	Nganga
Dual	1st Person	{ We, incl., sit,	Ngangangul
	2nd "	{ We, excl., sit,	Ngangangullung
	3rd "	{ You sit,	Ngangangula
Plural	1st Person	{ They sit,	Ngangabullang
	2nd "	{ We, incl., sit,	Ngangangur
	3rd "	{ We, excl., sit,	Ngangandhang
	2nd "	{ You sit,	Nganganguta
	3rd "	{ They sit,	Ngangandhana

ADVERBS.

No, bureba. Yes, ungungui. Here, gingga. There, nyua. Where, windyella.

PREPOSITIONS.

Prepositions may be either separate words, or they may consist of modifications of other parts of speech to express a prepositional meaning. Several prepositions are subject to inflexion for person and number:

Singular	1st Person	At my back,	Warmadhak
	2nd "	At thy back,	Warmadhangin
	3rd "	At his back,	Warmadhanyuk
Dual	1st Per.	{ At our, incl., back,	Warmadhangul
		{ At our, excl., back,	Warmadhangullung
Plural	1st Per.	{ At our, incl., back,	Warmadhangurra
		{ At our, excl., back,	Warmadhangandak

NUMERALS.

One, yuaia. Two, bullë.

CONCLUSION.

In the foregoing pages I have endeavoured to record and preserve the elements of nine aboriginal languages and dialects, all of which are now published for the first time. Only those who are acquainted with the difficulties attendant upon the collection of information from uncultivated races can understand the labour and time and patience which have been expended in gathering the materials for the preparation of this article.

It is perhaps too much to expect that the details of so many languages, and the materials of three vocabularies, should be free from omissions and mistakes, especially when we remember that the seat of investigation comprises about three-quarters of New South Wales, the northern frontier of Victoria, and an extensive region in southern Queensland.

The whole of this work has been done by myself, without the assistance of any person, either in collecting the particulars, or in arranging the grammars. It is hoped that these efforts may prove at least of some value as bases of future operations, and render the further study of Australian languages comparatively easy. Should this end be achieved, the labour and outlay of the author will be abundantly rewarded.

VOCABULARY OF KURNŪ WORDS.

The following vocabulary, containing about 220 of the most important Kūrñ words in general use, has been prepared from notes taken by me from the mouths of old men and women in the native camps.

ENGLISH.	KURNU.	ENGLISH.	KURNU.
<i>The Family.</i>			
A man,	wimbadya	Tongue,	dhurlunya
Married man,	burrakulli	Chin,	wukka
Small boy,	kütyungga	Back,	dhurnu
Youth,	wilyarrungga	Arm,	wünye
Novitiate,	kulta	Hand,	murra
Initiated man,	münkamura	Thigh,	mungga
Father,	ngambadya	Calf of leg,	thilya
Elder brother,	kukkudya	Knee,	dinggi
Younger "	bulludya	Foot,	millinya
A woman,	burraka	Blood,	muppurla
Married woman,	yupparilla	Fat,	korai
Young girl,	karnkali	Bone,	birna
Marriageable girl,	kumbulla	Penis,	wira
Child (neuter),	mundhanggura	Erection,	wandhadya
Mother,	ngamugga	Testicles,	mulu
Mother-in-law,	guliirri	Vulva,	balli
Elder sister,	kunnittya	Nymphæ,	dhillin
Younger sister,	würtuka	Hair on pudendæ,	murtubulki
<i>The Human Body.</i>		Copulation,	baingullana
Head,	milpirri	Masturbation,	burtaburtamüntha
Forehead,	pikku	Semen,	burdiñ
Hair of head,	bulki	Urine,	kippurra
Beard,	wukkubulki	Excrement,	kilkua
Eye,	maimurra	Venereal,	mikkali
Nose,	mindyumulu	<i>Inanimate Nature.</i>	
Neck (throat),	bunba	Sun,	putyi
Ear,	yuri or munga	Heat of sun,	windhura
Mouth,	yulka	Moon,	dhintyanni
Lips,	mimnai	Stars,	buli or ngunyaga
Teeth,	ngundi	Pleiades,	gumbalpirri
Breast (female)	ngumma	Thunder,	butaugutthu
Navel,	wirngu	Lightning,	birnde
Belly,	mūnda	Chain lightning,	nimuddheri
		Rain,	ngunburu

ENGLISH.	KURNU.	ENGLISH.	KURNU.
			<i>Mammals.</i>
Fog,	kukuma	Native cat, blk. and white }	bünduli
Frost,	yillingurra	Native cat, yel. and white }	kikunya
Hail,	büntara	Rock-wallaby, wangulu	
Fresh water,	thilburu	Flying-squirrel, dhilipuru	
Ground,	mundi	[See mammals under "Mystic Language."]	
A stone,	yunda		
Sand,	gurrinya		
Light (of day),	bañbukka		
Darkness,	ngamutabutti		
Heat,	wunyuru		<i>Birds.</i>
Coldness,	bundinyulla	Laughing-jackass, gurrugaga	
Rainbow,	kurindherri	Native-companion, burälga	
Moonlight,	boityoa	Pelican,	wirrianungkura
Shadow,	guindyirri	Peewee,	baindhal
Camp,	mulye	Plover,	rittha-rittha
Grass hut,	muthuguli	Swan,	yungguli
Bough hut,	dhurtuguli	Crane,	baraga
Bark hut,	guippurra	White cockatoo, gullibuga	
Smoke,	dhoaro	[Other birds are given under	
Food (flesh),	wūnga	"Mystic Language," <i>supra.</i>]	
Day,	kalkirri		<i>Fishes.</i>
Night,	marka	Perch,	gūnbali
Morning,	dhungkonka	Cod,	dhuburu
Evening,	warragalka	Catfish,	bundali
Hill,	mukku	Silverfish,	binnabuga
Sandhill,	dhunna	Black bream, bunngulla	
Grass,	muthu		<i>Reptiles.</i>
Leaves of trees, girra		Bubbur snake, bundindyura	
Birds' nest,	wanginya	Brown snake, dhinga	
Egg,	bārti	See "Mystic Language," <i>supra.</i>	
Honey,	bumbulu		<i>Invertebrates.</i>
Path,	yutheru	Locust,	wurtu
Shadow of tree, göilburra		Blow-fly,	winguru
Tail of animal, gurni		Louse,	ngutu

ENGLISH.	KURNU.	ENGLISH.	KURNU.
Nit of louse,	butti	Afraid,	nguyalangaba
Oentipede,	gilga	Right,	gundyalka
Mosquito,	ngündhi	Wrong,	dhulugalla
Scorpion,	dhunga	Tired,	binnamundhulla
<i>Weapons.</i>		Fat,	gen-nga
Tomahawk,	wukkaga	Lean,	nindadya
Koolamin,	dhinye	Cold,	bundinyulla
Yamstick,	kunga	Angry,	burnbamurka
Spear, wood,	gabaga	Sleepy,	gunhulla
Spear-lever,	wommer	Glad,	gilpuri
Spear shield,	baiawulli	Greedy,	huri
Waddy shield,	gunba	Sick,	gullulla
Club, fighting,	birra	Stinking,	buka-buka
Club, hunting	dhuttu-birra	Pregnant,	mundabuka
Boomerang,	gaththeri, wanna		<i>Verbs.</i>
Small club,	büngürdu	Die,	bukamulla
<i>Adjectives.</i>		Eat,	gaila
Alive,	gilla-bukamulla	Drink,	dhundyali
Dead,	bukada	Sleep,	inagala
Large,	wurtu	Stand,	dhurri
Small,	kutthalaga	Sit,	ngingga
Tall,	baluru	Talk,	gulpa
Low,	mukadya	Tell,	gulperri
Good,	gundyalga	Walk,	gani
Bad,	dhulugalla	Run,	gulyera
Red,	ngalgirga	Bring,	gandi
White,	butha	Take,	wurragandi
Black,	kukindi	Make,	dindala
Full,	nguppalangadu	Break,	yaka
Quick,	gira-gira	Strike,	burtu, bulka
Slow,	bolanyi	Fight,	muyalla
Blind,	maimurra	Wound,	mirpa
Deaf,	urimuko	Arise,	dhingeri
Strong,	muttyerra	Fall down,	nganggala

ENGLISH.	KURNU.	ENGLISH.	KURNU.
Look,	bummila	Shine,	bainburti
Hear,	dhürli	Suck,	dyungdyalla
Give,	nguga	Swim,	iga
Sing,	bukkinyulla	Search for,	wagari
Weep,	ngira	Spit,	tupala
Cook,	nguala	Smell,	para
Steal,	mirndala	Throw,	ngarta
Request,	ngandyerri	Roast,	ngosala
Blow with breath,	bupa	Whistle,	gwilpi
Climb,	binnari	Pretend,	burlinya
Conceal,	wiruki	Kiss,	murmundya
Jump,	benburri	Vomit,	mundulla
Laugh,	ginda	Dance,	bukka
Scratch,	mirra	Dive,	nguppoagalla
Send,	karndi	Sting,	bünda

VOCABULARY OF YUALEAI AND YOTA-YOTA WORDS.

The following vocabulary contains about 365 English words with their equivalents in the Yualeai and Yota-yota languages, thus making a total of 730 native terms. Every word has been carefully written down by myself from the lips of the native speakers.

ENGLISH.	YUALEAI.	YOTA-YOTA.
A man	urē	yyir
A husband	gulire	winyanbunayir
Old man	thunningurri	dhaniyir
Very old man		dyirribung
Clever man	wiringin	ngaraga
Small boy	birradyl	mulnigaptya
Youth, before initiation		malhēga
Youth, partly initiated		wōnga
Youth, after extraction of tooth		gogamulga
Youth, fully initiated		dyibbauga
Elder brother	dhaia	pānyupa

ENGLISH.	YUALEAL.	YOTA-YOTA.
Younger brother	kullaminga	pānyip
Elder sister	boadhi	dhaigip
Younger sister	boanga	pugika
A woman	inar	winyar
Old woman	mamigulla	dhamawinyar
Woman during menses		kartubulla
Wife	gulir	winyar
Small girl	meadyul	nyauwoga
Young woman		dhuddiwa
Time of first menses		durguggimuty
Maid at first menses		maia
Father	boadyir	nhungui
Mother	gunidyir	nhannha
Child of either sex	birralidyul	guthūpka

The Human Body.

Head	dhaigal	boko
Forehead	ngulu	ngunyer
Hair of head	bullundhur	bukan
Beard	yerri	moandhiuring
Eye	mil	mē
Nose	muyu	kauwu
Back of neck		wunnawurra
Throat	wuyu	dyia
Ear	udha	marmu
Mouth	ngaih	kutta
Lips	illi	wuru
Teeth	ia	dirrūn
Breast, female	ngummo	baiyi
Navel	wirrigal	kagadha
Afterbirth	ngalir	nyittāwa
Belly		bulli
Back	baua	bunnūth
Arm	būngun	bōru
Elbow	ngunuga	ngunangga

ENGLISH.	YUALEAL.	YOTA-YOTA.
Shoulder		kutir
Hand	ma	tyirtyirran
Thumb		nhana
Thigh	mubun	ngurgatvirmna
Knee	dhinbir	yukun
Foot	bubbur	tyunna
Heart		ngūngwura
Liver		bōrtha
Blood	gō-oi	māwa
Fat	wammo	wallaktya
Bone	buia	lillumā
Penis	dhūn	nukkin
Erection	gilwurri	taiu
Testicles	buru	budyanga
Hair on pudendæ	buthe	yimiñ
Sexual desire	nginggin	dyillu
Copulation	thadha	dhanin
Masturbation	kaiaiailla	dyilluñ
Sodomy	nididharri	dhanadhan
Noise made in copulating	kutthabul	dhungo-dhungo
Semen	barri	bulia
Emission	burrabunda	dyityin
Vulva	yangal	bunuñ
Nymphæ	binnunggal	
Anus		muttya
Excrement	guna	gunē
Urine	kil	gumuñ
Venereal	babadi	bēwa
<i>Inanimate Natural Objects.</i>		
Sun	yiai	yōrnga
Moon	bāla	yora
Stars	goburrai	tutuñ
Orion's belt	birri-birrai	
Pleiades	mēmēai	

ENGLISH.	YUALEAL.	YOTA-YOTA
Sky		yuradha
Sunshine		dhuddyaunar
Thunder	dhulumai	munnara
Lightning	dhungera	tyirngawan
Rain	iu	gōgurra
Rainbow	yaluwiri	
Dew	gugil	yāwa
Fog	gua	yanggāwa
Frost	dhundhar	yūngaba
Hail	dhaian	nyinnuga
Water	gungun	walla
Dirty-water		muppagoa
Ground	dhemar	wukka
Mud	biddyai	muppun
Stone	maiana	bānga
Sand	gumbogan	watraga
Light	dhuiai	yinya
Darkness	būllui	dhulla
Heat	bulēr	nataty
Cold	bullia	bolkaty
Camp	garema	manmun
Bark hut	dhadhar	manung
Grass hut	ngunna	
West-wind	giger-giger	
Whirlwind	buli	
Dust storm	maira	
Mirage	yerradher	
Pipe-clay		targa
Red ochre		putthōga
Fire	dhu	pitya
Smoke	wuyugil	thōanga
Food, meat	bunna	mullan
Food, vegetable	dhuar	
Thirst		thanga

ENGLISH.	YUALEAL.	YOTA-YOTA.
Day	yiai	kananigur
Night	bulwi	thalla
Morning	gibabu	yawa
Evening	bulului	yēlbuga
A splinter	muyandhuduñ	malnha
Hill	dhuyul	
Sandhill	gumbogandul	wammudyamulloga
Grass	bunu	būrpa
Leaves of trees	garil	dawaru
Bird's nest	gareme	manung
Eggs	gō	budyanga
Honey	warrungunna	
A tell-tale	dhubannulligu	
Grub in box tree		mērin
Grub in gum tree		balaga
Grub in ground		kuka
Bloom on trees		bōwurring
Pathway	yūruwundul'	dana
Shadow of tree	dhuddin	mulāwa
Shadow of man	mulluwil	
Tail of animal	dhun	nukkin
Summer	yaiba	
Winter	dhundarba	
<i>Animals—Mammals.</i>		
Native bear	guda	gūrbur
Dog	madhai	bukka
Opossum	mudē	buttya
Kangaroo-rat	gunhar	ngurnuada
Native cat, black and white	buggundi	miya
Native cat, yellow and white		burraty-ba
Bandicoot	guyu	thalwa
Small kangaroo-rat	bilba	
Water-rat	gumai	

ENGLISH.	YUALEAL.	YOTA-YOTA.
Porcupine	biggibilla	
Kangaroo	baura	burra
Platypus		wannagapippua
Flying-squirrel		birranga
Ringtail opossum		bindyarama

Animals—Birds.

Birds collectively	dhiggiaia	tyōanda
Crow	wān	dūngami
Laughing jackass	gugurgāga	dūrdyulapka
Curlew	u-i-an	billuoba
Mallee-hen	waggūn	laua
Plain turkey	gumbulgubbin	māndya
Native companion	burālga	kunugudula
Pelican	gulambula	dhailipnha
Swan	baiamal	turnupnha
Woodduck		kunyugoa
Bat	ngarrāadhan	mumianga
Quail		bōrkir
Eaglehawk	mullean	wānmirr
Emu	dinnawan	biggarundya
Common magpie	buragalbu	korngāñ
Black magpie		bēnia
Black duck		dolma
Mopoke	budhanba	kōkōk
Bronze-wing pigeon		mūngoburra
Lark		dhuddadudda
Rosella parrot		dudūtya
Parroquet		dēkula
Common hawk		pittyinna
Kingfisher		nurnamamdatba
Peewee		tyilloanga
Plover	burrindyin	timmulbornya
Crane	baldhurradhurra	kalmuka
White cockatoo	gurrāga	tyarring
	muyai	

ENGLISH.	YUALEAL.	YOTA-YOTA.
Black cockatoo		nyanang
Weejujger	guggilarin	
Fish-hawk	wulla	
Heron	durrūn	
Galah	gillā	
Bowerbird	wida	

Animals—Fishes.

Perch		kungupgah
Cod	gudu	būrmanga
Catfish	gaigai	
Frog	yuaya	dhungoba
Silverfish	birnga	
Yellow-belly	dhuggai	wūrthumurra
Bream	bunngulla	bungame
Trout		

Animals—Reptiles.

Ground iguana	biwi	baryebala
Tree iguana	mungungali	biltyimdyā
Sleepy lizard	ubun	
Small lizard	gudda	bombala
Shingleback	kurbali	mutirr
Death adder	murubi	
Carpet snake	yubba	manell
Brown snake	ngundhaba	
Black snake	wuyubului	mingurinya
Tiger snake	bubbur	woala
Jew lizard		
Wood lizard	wallubāl	

Animals—Invertebrates.

Locust	ngurrulla	dyunna
Blow fly	gummu-gummu	dyēndyura
Louse	muni	muna
Mother-louse	gubbul	
Nit of louse	gaiiai	timmin

ENGLISH.	YUALEAI.	YOTA-YOTA.
Bull-dog ant	buyugu	gudyidya
Centipede	gian	thultin-gin
Jumper ant	milbawai	
Maggot		tutula
Common house fly	muguñ	wāwunya
Grasshopper	bunbun	yunādyā
Spider	murgamurgai	
Mosquito	mūng-in	bētha
Scorpion	guna	tilla
Greenhead ant	baiar	bumanebula
Mussel	munggi	diddling-er

Trees and Plants.

Any leaning tree	bundhirri	kandyima
Any dead tree	burngiñ	dauwir
A hollow tree		durdabulla
Any large tree	bungil	dyealna
Ti-tree		dyima
Willow, wild		ngōrtya
Myall	maial	gānga
Wattle		ngummara
Pine	bailiñ	waw-lulla
Oak		bartya
Cherry-tree		bāla
Red-gum tree	guraua	dharnya
White box		baiuna
Yellow box		bērua
Honeysuckle		bitthin
Bullrushes		maiyailla
Yam		maiyailla
Desert pea	gillungara	
Sandalwood	buddhar	
Whitewood	būrbul	
Beefwood	mumbo	
Brigalow	kulbai	

ENGLISH.	YUALEAI.	YOTA-YOTA.
	<i>Weapons, Utensils, etc.</i>	
Tomahawk	kumbō	dityimba
Koolamin, wood	binggui	
Koolamin, bark	welbun	
Koolamin, for honey	wirri	nūnyer
Yanstick	dhilai	dyikura
Spear, wood	billar	kama
Spear, reed		wunnaga
Fishing spear	wommurra	yōlwa
Spear lever	burin	bornyir
Spear shield		mūlka
Waddy shield		burrunggala
Fighting club	bugu	bān-ga
Hunting club	murula	wūnya
Boomerang	burran	murra
Net bag		muttha
Canoe		kunki
Large bag		kagadya
Paddle		murrunggulling
Headband		kunnehula
Belt		ngōreh
Kilt		
	<i>Adjectives.</i>	
Alive	mūrrun	dhoana
Dead	ballune	kokuiñ
Large	burul	dunngidya
Small	būdyen	ying-arna
Tall or long	guyar	dyurrungunna
Low or short	buyadyul	thuluka
Good	kubba	kalinya
Bad	guggil	mutthē
Thirsty	bullal	thang-um
Red	kwainburra	moamaty
White	bullā	pet-tyaity

ENGLISH.	YUALEAL.	YOTA-YOTA.
Mad or crazy	womba	
Black	bului	dhullanun
Full	ngaibo	wurumaty
Quick	burrai	wunyuwula
Slow	bullua	thurramdyuba
Blind	muga	moathaty
Deaf	wumba	nhubbada-marma
Strong	wullanba	dungolōdyā
Afraid	giel	dyuman
Right	mai	kalirrin
Wrong	walmai	muddhindhūn
Tired	inggil	muralatyamaty
Blunt, edge	mugur	manha
Blunt, point		nhurupka
Sharp edge or point		buggadhuillūn
Fat	wammo	waliya
Lean	bilga	walibulla
Hot	dhubiai	
Cold	bullia	boalkuty
Angry	ile	koalyunan
Sleepy	yuar	ngulyēn
Glad	kubbayul	wullanhan-bukkaba
Sorry	kugilyul	dunngalaty-dyumity
Greedy	dhurin	dyirnyaua
Sick	dhālane	ittyumuty
Stinking	nhui	didyumura
Baldheaded	wuggiba	gulnyaoga
Pregnant	yuleai	bulleana
<i>Verbs.</i>		
Die	ballugigu	kukuñ
Eat	dhulligu	dutyim
Drink	ngaugigu	dhangun
Sleep	dunduigu	nunba
Stand	wurrai	dana

ENGLISH.	YUALKAI.	YOTA-YOTA.
Sit	illawai	garwul
Talk	gwalligu	loathaty
Tell	dhubanmulla	ngariaty
Walk	nhawanna	yarwul
Run	bunnagaigu	yunma
Bring	dhaigang-a	yulkorma
Take	gang-a	munma
Make	gimbilli	buñma
Break	gummulligu	kunga
Strike	bumulligu	nyinna
Beat	bumulligu	mullin
Wound	gurrilligu	kuthana
Arise	wurraia	kumbina
Fall down	bundang-a	tātēn
See	ngurrilla	nhanha
Look		nhawul
Hear	winnunggulla	ngarnhung
Listen		ngarwul
Give	wuna	ngunu
Sing	baulla	bā-i-ya
Weep	yugi	dūnhu
Cook	illamulligu	thurra
Steal	munnamulligu	biddhanda
Request	dhaiailli	minnamda
Blow with breath	bubilli	boama
Climb	gulliē	wurwaty
Conceal	dhurimbulli	nhūrka
Jump	baia	yarkabuk
Jump over	bane	
Laugh	gindamaia	kārebak
Scratch	moangilli	yerka
Scratch with claw	nimmulli	
Forget	ūdhummur	nhubbadamarm
Stare at	bunbun-ngurrilla	nhattiyillim

ENGLISH.	YUALEAL.	YOTA-YOTA.
Send	ürnulla	wōtyan
Shine	wialdhunna	walwunmuty
Suck as a child	ngummugi	bana
Suck a wound		nota
Swim	gubigu	yarwa
Bathe		maryibāk
Search for	ngawillunna	yamuty
Spit	dhulan	thupen
Smell	ngauia	ming-a
Throw forcibly	gaiawi	munna
Pitch	wunnunga	yung-a
Roast	dhomulli	thurra
Whistle	wile	lēta
Pretend	wage	ngungeandha
Kiss	ngaigale	thunē
Vomit	gawiligu	yakalum
Dance	yorme	kurradhan
Corroboree		tumman'muty
Dive	ung-ai	durtya
Sting	dhuni	
Hunt on ground		mumulwa
Hunt in trees		wawallu
Go	naia	
Come	dhainaia	
Burn	gailamurra	
Bite	kutthera	yimin

POT EXPERIMENTS TO DETERMINE THE LIMITS OF ENDURANCE OF DIFFERENT FARM-CROPS FOR CERTAIN INJURIOUS SUBSTANCES.

By F. B. GUTHRIE, F.I.C., F.C.S., and R. HELMS.

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Part I.—WHEAT.

THE following experiments were carried out in order to test the effect upon the growth of the wheat-plant of a few of the chemical substances occasionally present in the soil and in manures, and which are known when present in excessive quantities to seriously interfere with the growth and development of the plant.

The experiments were carried out in cylindrical culture pots of galvanized iron, 8 inches high and 8 inches in diameter. The pots were watered from below by means of an external tube, communicating with a channel in the bottom of the pot, a quantity of cinders and broken earthenware being first introduced to ensure thorough aeration and drainage. The pots were filled with the soil chosen for the experiment, each pot containing about 18 lbs of the soil. Through the kindness of Mr. Maiden, a space was set apart in the Botanic Gardens in the open air, so arranged that a tarpaulin could be at once unrolled to cover the whole experiment in the event of heavy rain or wind. All the pots were exposed to exactly the same conditions as to light, warmth, water, etc., throughout the course of the experiment. Check-pots were also filled, sown, and treated in exactly the same way for purposes of comparison, omitting the substances whose action was being studied.

Nature of the Soil.—Two kinds of soil were used. That with which the pots were originally filled, and in which