

## KAMILAROI AND WHITE.

A STUDY OF RACIAL MIXTURE IN NEW SOUTH WALES.

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[With Plates XX.-XXVI and eight Text Figures.]

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## PART I.—SOCIOLOGY.

## (a) Introduction.

The labours of Etheridge, Fraser, Matthews and others in the past have placed on record many important details with regard to the culture and language of the aborigines of New South Wales. But in recent years there has been practically no work done in this State, though the field left unworked is large and the opportunity for research will have passed away in relatively a very short time.



The aborigines of eastern New South Wales were soon brought into contact with white civilisation. Their old culture disappeared rapidly, and by the time that the scientific study of ethnology began in Australia, the investigators naturally devoted themselves to the less contaminated races of the interior. In consequence we know less about many of our east coastal tribes than of those dwelling in the arid regions of Central Australia.

There are, however, two important aspects of Anthropology in which valuable research is still possible among the relics of our eastern aborigines. It is not too late to make a complete anthropometric survey both of the full-bloods and of the hybrids (with the white settlers). Further, the whole problem of racial mixture can perhaps better be studied now than at any other period of our history. A generation ago, the half-castes and other mixed breeds were relatively few. A generation hence there will be hardly any fullbloods remaining. At present there are about 1,000 fullbloods\* and 6,000 half castes; so that there is plenty of anthropological material. Further, the family relations of fullbloods and half castes can in most cases be ascertained by the careful investigator, which will certainly not be the case in another generation.

There is another aspect of the research which should be of interest to the sociologist. It involves the study of the effect of their changing environment upon these primitive peoples. In the following paper we give some notes on their method of life, habitats, mentality and economic capacity which should appeal to those who see in "racial mixture" one of the gravest problems confronting civilisation.

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\* Three-quarter castes are officially included with full-bloods in the census.



The widespread distribution of *Australoid* peoples, not only in Southern Asia but also in Europe in Paleolithic times, has been discussed by one of the authors in a number of publications\*. The recent discovery of a dozen skeletons in Moravia, of prehistoric age and of a type practically indistinguishable from modern Australian aborigines†, is of special interest in connection with the study of the numerous racial stocks which have been mixed to form the Western European peoples. This aspect alone should stimulate research in our primitive Australian aborigines.

Our research was made possible by the courtesy and help of the members of the Aborigines Protection Board (and of its secretary, Mr. Pettitt‡), who authorised us to visit all their reserves in the Kamilaroi country. Further, we had the privilege of accompanying Mr. R. Donaldson, J.P. (the Board's Inspector), upon his inspection of these reserves. A grant from the University Research Fund defrayed some of our expenses, and has enabled us to reproduce more photographs than would have otherwise been possible. We are also much indebted to Mr. Harris of Walhallow, and Mr. Robertson, of Angledool, for their hospitality.

#### (b) Distribution of Aborigines.

John Fraser in his study of the Aborigines of New South Wales (Sydney, 1892), enumerates eight tribes in this State. His map shows that the Kamilaroi (whom he calls Kamalarai, extend from Singleton to Walgett, and from Coonabarabran to Bingara. They thus occupy the valley of the Namoi and of the Upper Hunter. (See fig. 1.) We may note incidentally here that the low divide at Cassilis

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\*"Evolution of Race and Culture". (G.T.) Geog. Review, 1921, New York.

† Personal communication from Professor Elliot Smith, F.R.S.

‡ Mr. Pettitt kindly revised section (d) Control of the Aborigines.



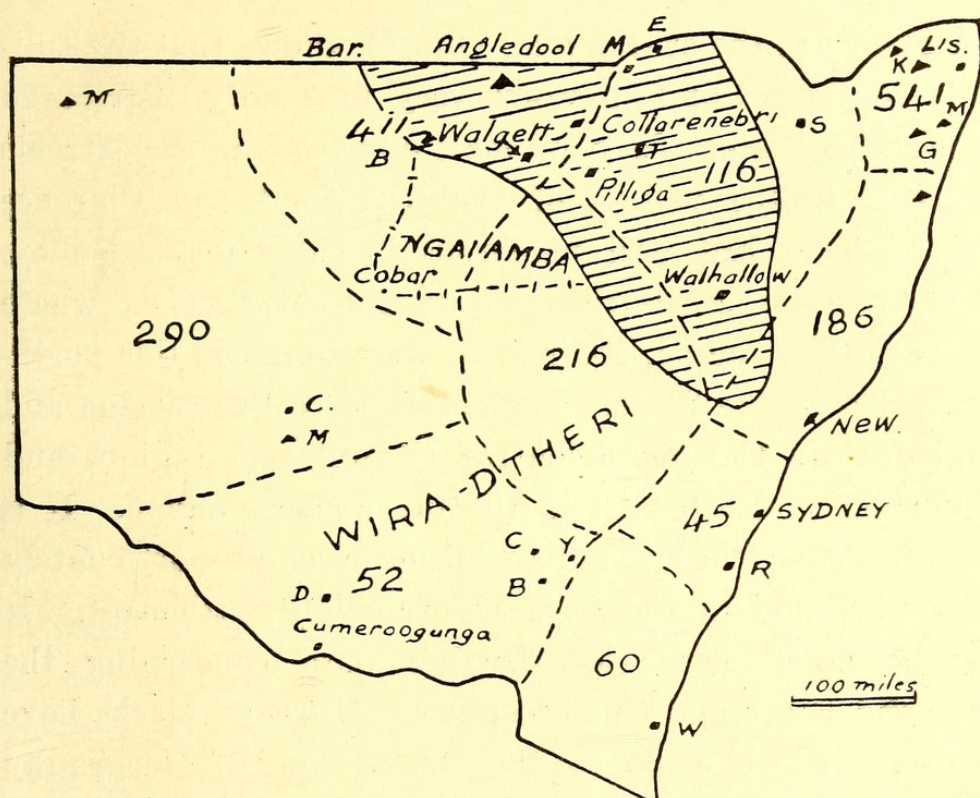


Fig. 1.—The distribution of the full-blood Aborigines in New South Wales in 1912. The Kamilaroi (and Eu-alaroi) region is ruled. Localities where more than 40 full-bloods live shown by triangles. Chief reserves by initials.

has very sensibly been ignored by this tribe, although most cartographers wrongly place a mountain range (the so-called Great Dividing Range) as a barrier across the Kamilaroi country, just south-west of Walhallow!

Beyond the Barwon, as far west as Barrington, extends the territory of the Eu-alaroi (or Walarai); and to the north-west, as far as Cobar and Bourke, is the Ngai-ambah tribe. These two tribes are, however, closely connected with the Kamilaroi. They have similar marriage-groups, and the languages are closely akin also. Thus the Kamilaroi people occupy the central-north of the state, consisting chiefly of the western slopes and middle west plains with an annual rainfall of 30 inches in the east and 15 inches in the west. Almost all of this country consists of open eucalypt forest.



A glance at the sketch map (fig. 1) shows that the full-blood aborigines of to-day are very unequally distributed through the State. They are most numerous in the extreme northeast in the valleys of the Richmond and Clarence Rivers. They are least numerous in the Murray Valley. Of the ten largest settlements of fullbloods (*i.e.*, where there are 40 or more), six in 1912 were found in this north-east corner of the State. The others were Brewarrina and Angledool in the north-central (Kamilaroi) region, and Milparinka and Mossgiel in the far western region. It is quite probable that the distribution was proportionately much the same in the days before white settlement. It may be noted here that further data concerning the Richmond River and Cumeroogunja (Murray) blacks have recently been collected by the Department of Geography of the University of Sydney.

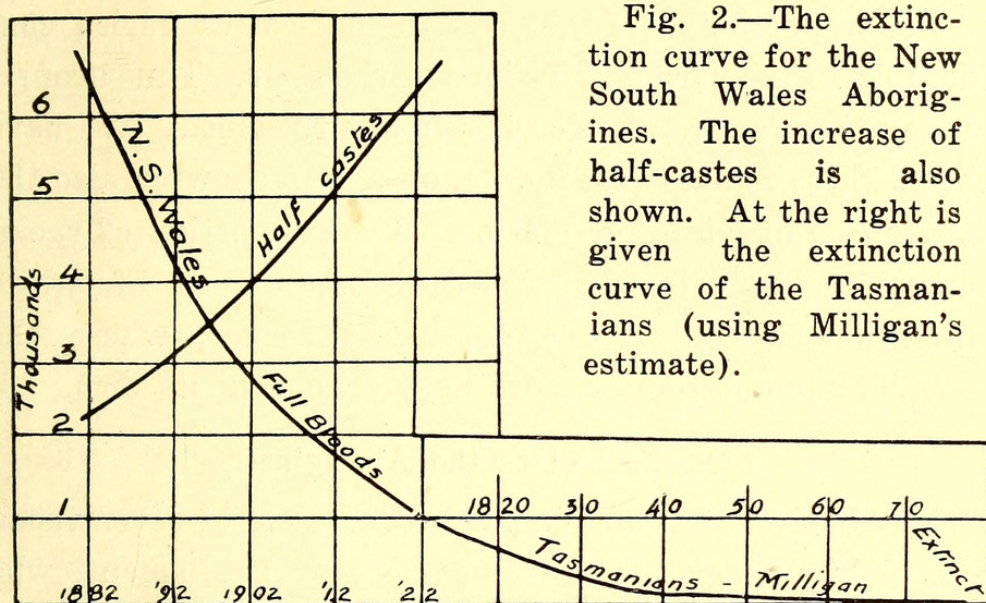
Our traverse passed right across the Kamilaroi Region. We devoted some time to the aborigines at Walhallow, Pilliga, Angledool, Walgett and Collarenebri. At the three former places there are large government reserves with managers and teachers. At the two latter places the aborigines were only under police supervision.

### (c) Aboriginal Census and Extinction.

The census is collected each year and affords sad proof of the rapid diminution of the numbers of fullbloods. There is an accompanying rise in the numbers of half-castes, so that there can be no doubt that the aboriginal population will in a short time be wholly merged into the white population (see fig. 2).

In 1882 a census of the aborigines was first taken, when the fullbloods numbered 6,540 and the half-castes 2,379. In 1897 the numbers in the two groups were equal, while in 1921 the proportions were 1,281 full-bloods and 6,270 half-castes; in other words the numbers had practically become





reversed in a period of forty years. If we may assume that the curve of extinction can be prolonged smoothly, then it looks as if there will be no full-bloods left in forty years. In the figure we have added the extinction curve for the Tasmanian fullbloods, based on Milligan's rather doubtful estimates.

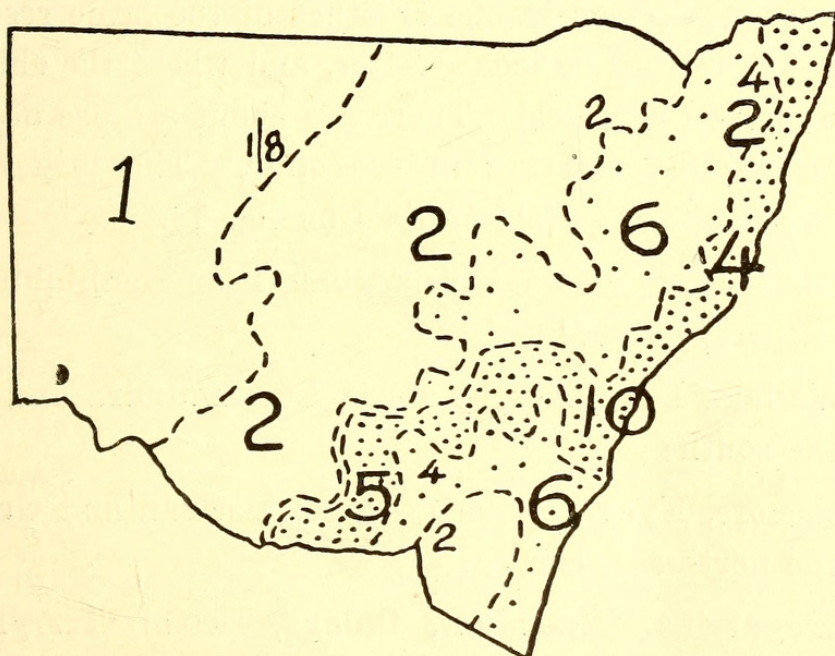


Fig 3.—Hybridism and White Population. Large figures show proportion of half-castes to one full-blood. Small figures show present density of white population. (Close dots over 4 per square mile of whites.)



The proportion of fullbloods to half-castes varies considerably in the various divisions of the state. Thus around Sydney there are ten half-castes to *one* fullblood. We have plotted these figures (see fig. 3), on a map showing also the distribution of white population. The proportion of racial mixture varies directly with the abundance of white population except in the north-east corner, where the aboriginal population is more nearly holding its own.

**(d) Control of the Aborigines.**

The Aborigines Protection Board consists of seven members, chiefly magistrates or members of Parliament, who administer the government vote of some £22,000 per annum. There is an inspector and one or two local boards who assist in supervising the larger reserves. The local Police are of the greatest value in this connection also.

The policy of the Board is to look after the aged aborigines and the mothers and children. These are being gradually segregated in one or other of the large reserves, where they can all be looked after, and where the children can be trained at school. There are about a score of these large aboriginal reserves in the state. The largest are located as follows:—(see initials on fig. 1).

Cumeroogunja and Moonacullah, near Deniliquin and the Murray River;

Wallaga Lake, Roseby Park, Cootamundra and Yass in the south;

Lismore, Kyogle, Cabbage Tree, Maclean and Grafton in the north-east corner;

Brewarrina, Walhallow, Pillaga, Boomi, Terryhiehie and Angledool in the Kamilaroi district.

The reserves usually comprise areas of 300 acres or less, though at Brewarrina (4,700), and Cumeroogunja (2,500),



they are much larger. There are about 100 reserves each less than 100 acres, and about 50 reserves of larger areas. These are situated at some considerable distance from townships, so as to minimise the drink trouble. On the more important, there is a manager and also a teacher. In these reserves the manager's wife usually trains the girls and women in the domestic arts.

The aborigines live in galvanised iron houses, each now costing about £100, and each containing a living room and a sleeping room. These houses are usually disposed in rows at one end of the reserve, while the manager's house and the school are placed at the other end. There are about 700 scholars in the state. The children are sent to school when they reach five or six years of age, and spend about five hours a day on tasks not unlike those of white children of the same age. Perhaps more attention is given to manual work such as raffia-plaiting and drawing for the younger children; gardening, sewing and farm work for the older children. The drawing, writing and singing impressed the writers very favourably.

As the boys grow older they accompany the men to the neighbouring towns or stations, and in most cases the young men soon learn to hold their own at jobs which do not make too great demands on their perseverance. Shearing, droving, horse-breaking, scrub-cutting, carting and similar work appeal to them most. The men usually return to their homes on the reserves at the week end, but are not encouraged to loaf about the houses during the week. This indeed is one of the chief difficulties with the idle members of the tribe. They are quite content to live on the rations issued to the women and children, passing their time in gambling and sleeping.

Many of the reserves have large areas of agricultural land, where the most industrious men are encouraged to



become self-supporting. There are also sheep and cattle belonging to many of the reserves. Thus Cumeroogunja (near Moama) in 1913 sowed 155 acres with wheat, and 60 acres was cut for hay, while they had 163 cattle and over 500 sheep. The produce for the year was worth £1,270. At Maclean (in the north-east), 30 acres of sugarcane yielded the aborigines £460 in 1911. Fruit trees have been planted in a number of reserves and are doing well. Of late, however, the outside demand for aboriginal labour has been so great that few remain to work the farms on the reserves. Hence many acres are leased to whites.

The welfare of the older girls is maintained by apprenticing them among the surrounding stations or in the metropolitan district as domestic helps or nursemaids. In the majority of cases they live there usefully and happily. A special training home is maintained at Cootamundra, and a female welfare officer inspects them periodically.

Rations and clothing are issued regularly to the aged, to invalids and to the women and children. To the adults the following are issued each week: 8 lbs. flour; 2 lbs. sugar;  $\frac{1}{4}$  lb. tea; 7 lbs. meat, with a certain amount of tobacco and soap. Children get half the food supply. The men and boys get one suit and two shirts each per annum. The women and girls receive two dresses and five articles of underclothing each.

There are, of course, many families of aborigines who live far from any reserve. The advantage to the children and to the sick, which ensues from living on the reserves is, however, bringing them more and more under supervision.

#### (e) Mentality.

The three teachers at the aboriginal schools in the Kamilaroi district very kindly gave us lists of the scholars



with notes as to their intelligence (or "smartness"). We especially asked that this test should not deal with book-work or examinations. We have to thank Mrs. Wilkins and Messrs. Dallas and Constable for taking a considerable amount of trouble to compile these lists.

We endeavoured to obtain the opinion of the teachers as to the relative intelligences of the various breeds, but the result is not very satisfactory. One teacher gave it as his opinion that the blacks at the age of fourteen were about as intelligent as white children of the age of ten. He added that the boys lose their mental initiative about the age of 13 or 14, and go off rabbiting with dogs and traps, instead of attending school. Very soon they accompany the men to the shearing sheds or elsewhere, and thereafter do not have much to do with the reserves.

Table of 99 Children, 5 to 13 years.

Sex.	Full-blood and $\frac{3}{4}$ .	Half-caste.	Quadroon and less.
Male.	8	22	17
Female.	10	25	17

The best way to express the mentality seems to be by frequency curves, where the various castes are allotted to four arbitrary "pigeon-holes." For these we have chosen as follows:

		Fullbloods.		Halfcastes.		Quadroons.	
		%		%		%	
Grade A.	Very Intelligent . . .	3	17	12	25	10	30
	B. Intelligent . . .	9	50	18	38	10	30
	C. Rather Dull.	3	17	5	10	3	9
	D. Dull . . . .	3	17	12	26	11	31
Totals . . . .		18		47		34	

From the graph (fig. 4), it appears that the quadroons are the most numerous in the "very intelligent" grade, the half-castes rank next, and the fullbloods lowest. This



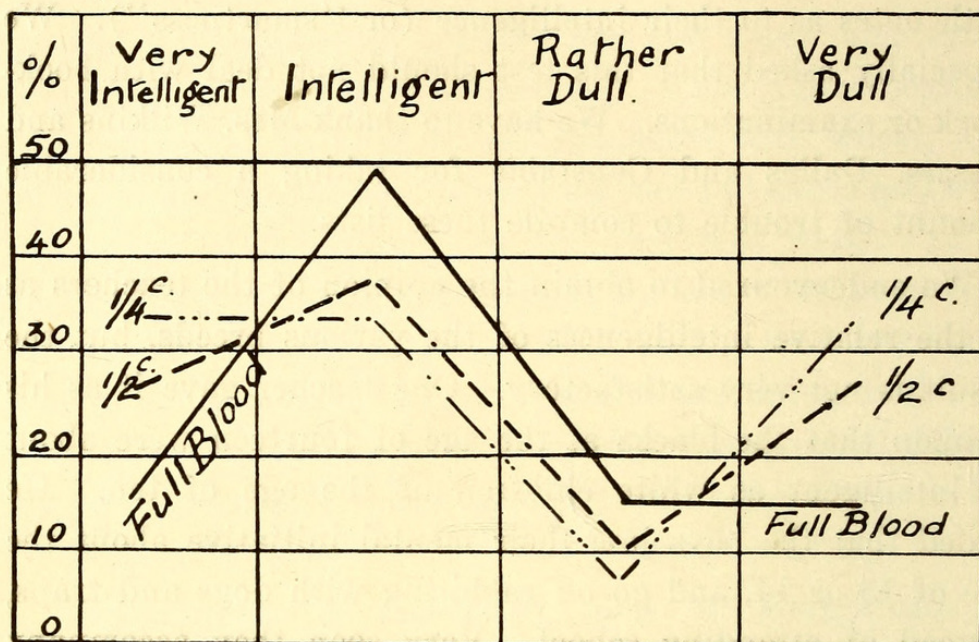


Fig. 4.—The intelligence of 99 Kamilaroi children (5-13 years) as classified into four arbitrary grades. Figures give percentages of total in the particular caste.

order curiously enough holds relatively for the dullest group also, where the quadroons are most numerous and the fullbloods proportionately few. Among children of average intelligence the order is reversed, the fullblood coming first and the quadroon last.

No doubt in the near future "Binet tests" will be devised which will give much more conclusive results.

#### (f) Marriage and Decay of the Clan System.

Many of the aborigines are now legally married, but they are as a whole rather lax in this respect. At one camp (far from any reserve), we were informed that of half a dozen couples, only one had been legally married. We were struck with the discrepancy in age in many marriages, and also by the large number of women who appeared to have been married twice. Probably in a number of cases irregular unions were later dignified by the term "marriage." This complication made the charting of family relationships very difficult. Furthermore, the Board



does not assume responsibility for quadroons and octoroons, so that there was a direct incentive for the lighter castes to make themselves out blacker than they were painted, so as to stay on the reserves.

The girls who are apprenticed in various households receive free clothing and free medical attention as well as a small salary. A proportion of the latter is retained by the Board until they set up homes of their own, when their savings often amount to a considerable sum. The girls return home at regular intervals and marriages between suitable individuals are encouraged. The welfare worker (as regards the girls), and the manager (as regards the men), report to the Board on such matters.

As a special privilege we were told the marriage classes of the Kamilaroi. These are, of course, well known to ethnologists. However, we repeat here the exogamous rules as we heard them at Angledool. The local pronunciation differs from that given by Howitt.

The full classes are:—

	Moiety A (Emu) Adult	Moiety B (Porcupine) Adult	Child	Child
Class X	Hibbai (f. Ivatha)	Gubbee (Gabbutha)	M.	K.
Class Y	Kombo (Bootha)	Murray (Madtha)	G.	H.

For example:—A Hibbai man marries a Gabbutha woman (in the other moiety). The descent is through the mother, so the boys are Murray and the girls are Madtha (in the other class of the mother's moiety). Two of the common totems are Emu and Porcupine. Even to-day, as one of the women put it, "They don't like two 'emus' to marry, *too close meat!*"

These marriage rules are discussed in numerous publications; but one interesting aspect of the transition period



is the way in which these class-names are being adopted as surnames by the civilised aborigines. "Murray" is a common name among them, but (contrary to popular belief), it has no connection with the Scotch clan. (Of course many aborigines do take the name of a prominent white person in the district.) "Kombo" is also common as a surname. Gubbee (or Cubby), we met with once or twice. The name of the fourth class (Hibbai or Ipai), was not observed.

*Chinese-Australian Hybrids.*—On a recent journey to the Northern Territory, one of us (G.T.), was able to obtain photographs of an interesting mixed race at Camooweal, just on the Queensland border. Some of these are given on Plate XXVI. Several Chinese gardeners (from Canton we believe), had taken aboriginal wives. In the photographs both of these original races are shown. The husband of the black woman is not shown, but their progeny are the two younger women. The girl of 18 is the result of this cross, and to European eyes is more prepossessing than either of the parent races. This generation is marrying with Chinese (one of whom is illustrated), and producing Chinese quadroons. Three of these are illustrated.

The observer was not equipped to take measurements, but the following notes may be of interest. The half-castes as a whole resembled Chinese more than aboriginal. Of the quadroons three girls were rather more aboriginal in appearance than two boys. The larger eyes and fuller lips of the girls were perhaps derived from the aboriginal. The boys showed slightly oblique and smaller eyes and smaller noses. The children are said to be quite equal to the white children at the local school. The Chinese men, it was stated, manage the cooking and washing in addition



to their gardening—leaving the women with much more time for the children than is the case in most white families.

### (g) Language.

It was disappointing to find that on many of the reserves there was no recollection of the aboriginal myths or customs. The children knew practically no aboriginal speech, though at Angledool they sang a song (alleged to be due to a Queensland Kanaka!) of whose meaning they had no idea. However, we found one old lady, a half-caste, see Plate XXIV. (top), who could help in this respect. A few of the characteristic riddles are repeated in a later paragraph.

The following vocabularies illustrate the differences in the various dialects surrounding the Kamilaroi peoples. It is perhaps unnecessary to caution readers that Kamilaroi itself varies from district to district, just as do the various dialects in Britain.

#### COMPARATIVE DIALECTS.\*

English	Kamilaroi	Eualaroi	Ngai-amba	Wirah-dtheri	S. Queensland
Locality	Pilliga	Walgett	Brewarrina	Coonamble	St. George
one ... ..	Mahl ...	Beerah ...	Maggoo ...	Maggoo ...	Wangara
two ... ..	Bullar ...	Bullar ...	Bullahga ..	Bwalla ...	Bullari
three ... ..	Gullibar ...	Goolibah ...	...	Goolibar ...	Thirin
head ... ..	Gohgah ...	Dthaygal ...	Wah-lah ...	Bahlang ...	Bangoon
eye ... ..	Mil ...	Mil ...	Mil ...	Mil ...	Thilee
nose ... ..	Mor-roo ...	Mi-ootha ...	Moorrootha	Mooroo ...	Goo
hand ... ..	Murrah ...	...	...	...	Marah
good ... ..	{ Morrobah } { Gabbah }	Gabba ...	Gumbah ...	Gumbah ...	...
bad ... ..	{ Ba'tthah } { Gagi }	Gahgi ...	Wurrai ...	Wurrai ...	Gadjah
water ... ..	Gahli ...	Gung-en ...	Gahlee ...	Gahlee ...	...
drink ... ..	Narroh-gi	...	Narrung-geri	...	...
blackfellow {	Murri	{ Dthain ...	May-ee ..	May-ee ...	Murree
woman ... ..	Gu-wirringai	Henna ...	Wiringah ...	Wiringah ...	Mooghi
whitefellow ...	Eenah ...	Wandah ...	Wimmahn	Wandah	Widtha
kangaroo ... ..	Wandah ...	...	Marrowi ...	...	Bandah
boy ... ..	Bowra ...	...	Warroo	Kyangil	...
	Kyangil ...	...			

\*Pronunciation.—‘*Ah*’ is long as ‘*a*’ in *bath*; ‘*ee*’ as in *keep*; ‘*ai*’ is the long ‘*i*’ as in *vine*; ‘*ay*’ as in *hay*; ‘*oo*’ as in *food*; ‘*ow*’ as in *cow*; ‘*u*’, ‘*y*’ and ‘*i*’ are short; ‘*g*’ is hard; ‘*ng*’ as in *singer*; ‘*dth*’ as in *had they*. These are the forms generally used in the aboriginal locality-names, with which Australians are familiar.



The following is a Eualaroi corroboree song given by Old Helen at Angledool. She stamped round in a small circle, clapping two boomerangs at every syllable.

Nambaragah-goh gandrah, garroh-gandrah,  
Gundarra, gundarra.

Gaggah gundarra,

Mah Mah.

Nungaribah gandrah,

Nambarogah.

This seems to be an invocation; the words meaning "*The Debbil-Debbil* (Gandrah), *where does he live* (Nambarogah)," according to Helen.

She also told us a number of riddles, of which the following are representative.

### 1.

The Blackbird speaks:—

Koombai, Koombai, Goorahwingohlee.

(*Sweetheart, sweetheart, get food with me.*)

The Greenbird answers:—

Wahl, Wahl! Daindhu Babburr ngarrilee ngallinya.

(*No, No! People might see "us" tracks.*)

### 2

First animal says:—

Koombai, Koombai! Minyi-gindah, ngarral-dunnah  
dillay-dillay.

(*Comrade! How can you see from the side?*)

Second animal replies:—

Nindaganni Minyi ngarral-dunnah mooyoi-mooyoi.

(*And how can you see, looking from the nose?*)

Answer.—Crayfish (Ingah) and Crab (Nullahgah).



## 3

Why has the dove a blood-red eye?

Ngahn doo ngayee goh.

*(Somebody rob him of eggs.)*

Boo-om-ay nay narragang.

*(Rob him; poor little thing.)*

Mil goo-wambarrah.

*(Eye red like blood.)*

## 4

The song of the River-Mussel:—

Ballal-boh-ah, Gillanee-ah, Ngullungahnah.

*(It is getting dry, all along the edge of the mud).*

Yahn-dai-dai, Doorai-yah.

*(Come along, all come close together.)*

**(h) Burial (Transition phase).**

One of the most interesting localities in the State is the Aboriginal Cemetery, a few miles north of Collarenebri. It illustrates, in a notable way, the transition between the aboriginal culture and the white civilisation. The cemetery is enclosed in a neat netted fence, and contains an area of about 400 square yards. It is shaded by clumps of native flowering trees, such as "rosewood" (*Geijera parviflora*) (See Plate XX.).

The graves number thirty-three, and are not disposed regularly with regard to east and west. Each grave is usually marked out by four poles laid on the ground. It is, however, the covering which arouses attention. Every grave is ornamented by brightly-tinted crockery and glassware. Broken bottles and tumblers form the margin, while all the intervening space is filled with a jumble of broken glass and china, like a loose mosaic. Outside the enclosure are countless petrol tins, used to collect gaudy crockery for scores of miles.



Some of the ornaments are elaborate and unbroken, *e.g.*, a Dresden shepherdess, plates, lamp-bowls, and glasses, cruets, pepper-casters, dolls' heads, decanters, bovril, lysol and medicine bottles, egg-stands, beads, copper coins, and large shells were also common. On several graves small frames, like kite-frames, were ornamented with beads, and reminded us of some of the Central Australian "regalia" for corroborees. On a baby's grave lay a feeding-bottle. We were informed that the aborigines liked the police sergeant to read a service at the grave.

Several old aboriginal women have hitherto kept the cemetery in order. Occasionally they would laboriously remove all the crockery and "mosaic," wash it carefully, and replace it in the same position. Most of these old women have passed away, and with the death of the next it seems probable that this cemetery will share the fate of other land-marks of the aboriginal.

## PART II.—ANTHROPOMETRY.

### (i) Material.

Measurements have been made of 55 individuals of the Kamilaroi Tribe, New South Wales. In this paper are tabulated results for twenty-three adult males, thirteen adult females, and fourteen children, *viz.*, three male and eleven female. The measurements of five individuals, whose ancestry is doubtful or obscured by foreign crossing, are not discussed here.

Particular consideration has been given to the variations in measurements of individuals, resulting from racial crossing. Classified according to ancestry and sex, of those here tabulated, in the case of adults, eleven are full-blood males, eight are full-blood females, four are three-quarter caste males, three are three-quarter caste



females, six are half-caste males, and two are half-caste females. In the case of children, the measurements include those of one full-blood boy, two full-blood girls, two three-quarter caste boys, five three-quarter caste girls and two five-eighths caste girls.

*Measurements and Observations: Explanatory Details.*

*Cranium and Face.*—Measurements were made with the Flower's type of callipers, graduated in centimetres, and radiometer (Gray type), also graduated in centimetres. The land-marks selected are those set out in the hand-book, "Essentials of Anthropometry," by Louis R. Sullivan, issued by the American Museum of Natural History.

*Indices.* The anatomical face index = height of face (chin to nasion) divided by the width of the face.

The nasal index = width of the nose divided by the height of the nose.

*Body.*—Body measurements were made by means of an anthropometer graduated in inches. The height of the acromion and vertex, both sitting and standing, were measured, as well as the height of the distal point of the second finger when standing, and from these Trunk Length, Arm Length, and Leg Length were computed by the subtraction method.

*Hair.*—In all adults this was black (readily going grey with age). In some of the half-caste children it was dark brown. Among twenty full-bloods only three had hair approximating to curly. The remainder had hair with a wave. We saw only one full-blood (not measured) with definite curly hair. Straight hair or hair with a low wave was usual among the half-castes.

*Ear.*—In describing the lobe, the phrases used are those employed by Bertillon in his "Signalétique Instructions." "Descending attached" and "square" have *no lobe*;



“contour intermediate” has a *slight* lobe; “contour gulfed” has a *well-marked* lobe.

*Eyes.*—The scale of colours used for the eyes is that recommended in 1908 by the Anthropometric Committee of the British Association. The eyes have usually a muddy-brown iris, sometimes with a slate-blue border; the margin (sclerotic) is yellow white, usually bloodshot in the elders but clearer in the children.

*Skin.*—The skin-colour standard used is Broca's scale, published by Hrdlicka. This scale proved rather unsatisfactory; in many cases it was impossible to match at all closely actual skin colour with any colours of the standard. We owe to Mr. A. W. Gerard, A.I.A., popular names of the tints of the skin, which, in every case, were taken on the inner side of the upper arm. Broca's Scale (according to Hrdlicka) consists of eight plates of four colours each. Of these the first sixteen colours range from pale ochre to yellow-brown, and the last sixteen from a red ochre through red-brown to eight greys and blacks. The full-blood men are usually red-brown, only one being chocolate brown. The full-blood women are noticeably lighter, Indian red being the most common colour. The three-quarter castes are a little lighter, a sort of sepia with a touch of red, but the children are lighter (coming in Broca's *first* sixteen colours), i.e., yellow-brown. The half-castes are ochre, with a proportion of yellow-brown and Indian red.

There is here no justification for the term *Black-fellow*; (indeed none of their skin-tints appeared among Broca's grey-black colours). The face, however, is much darker than the under-arm, often a real chocolate colour. The soles of the feet are practically white.



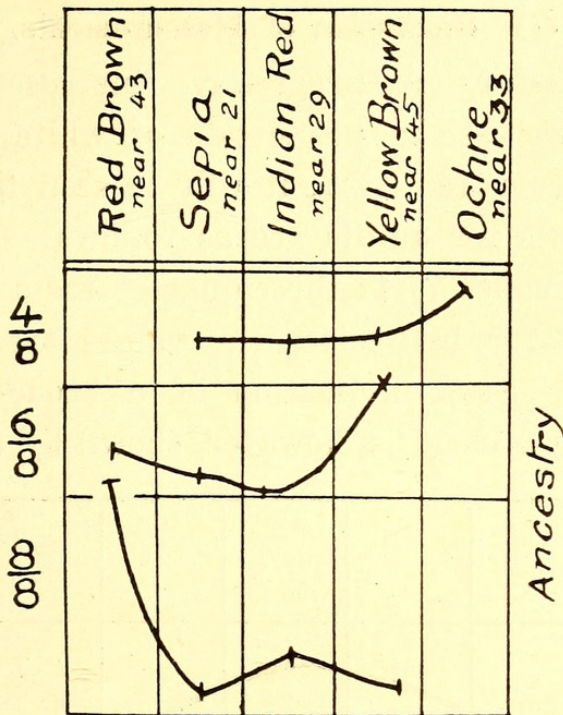


Fig. 5.—Colour of the skin (Broca's Scale) (under arm). Percentage curves with respect to different castes.

#### *Tabulations and Frequency Curves.*

In Tables 1, 2A, 2B, 2C, all measurements, as well as certain derived indices, are tabulated. In these tables, the classification is according to sex and maturity. Mean values of measurements are shown, but no particular significance is attached to these, since no account has here been taken of ancestry.

In Tables 3A and 3B the mean values of measurements classified according to ancestry, sex, and age are summarised. The number of measurements available in each case is shown.

Frequency curves have been drawn as far as possible from the insufficient available data. These are of value in that they indicate in some cases regular variations in the measurements, when considered from the point of view of ancestry. Where available, the data regarding children is indicated by broken-line curves.



## (j) Discussion of Measurements.

*Cephalic Index.*—A progressive increase of cephalic index, with increase in proportion of white blood, is not apparent. From Table 3A, it will be seen that the mean cephalic indices for adults are as follows:—Full-bloods—males 73.6, females 74.4; three-quarter castes—males 70.6, females 76.6; for half-castes the values are—males 73.0, females 73.5. Some indication of a broadening of the head with white blood is, however, shown by the children.

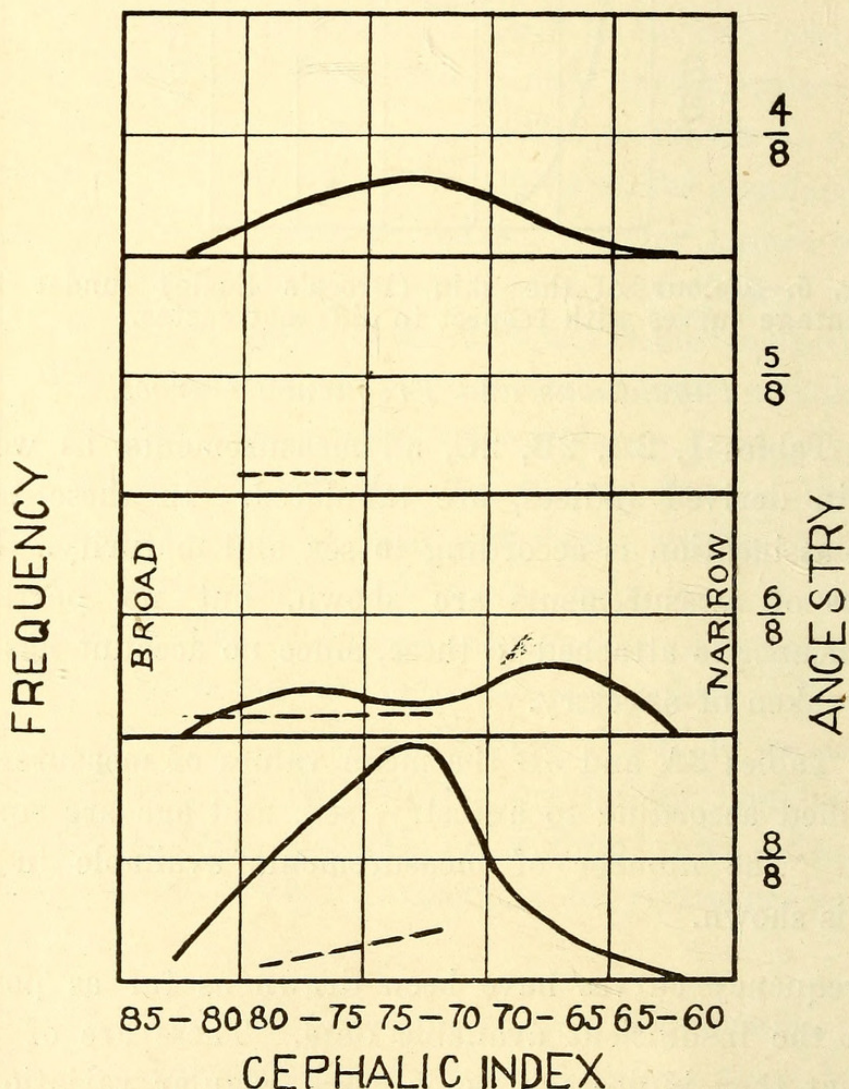


Fig. 6.—Frequency curves for the Cephalic index. No indication of broadening with increase of white blood is shown in the adults. A slight broadening is observed in the results for the 12 children (broken lines).











TABLE I.—MEASUREMENTS OF TWENTY-THREE ADULT MALES KAMILAROI TRIBE.

No.	Ancestry	Age	Cranium			Radiometer			Face			Nose			Ear			Body										Skin											
			Length	Breadth	Cephalic Index	Vertex	Glabella	Occiput	Alveola	Nasion	Breadth	Height	Anatomical Face Index	Transverse Cephalo-facial Index	Breadth	Height	Nasal Index	Length	Breadth	Lobe	Aural Index	Total Height	Height of Left Shoulder	Height of Right Shoulder	Length of Trunk	Arm Length	Leg Length	Arm Index	Leg Index	Hair	Eyes	Broca's Scale	Colour	Initial	No.				
1	Aborigine	42	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
2		44	19.3	13.3	68.9	12.2	10.2	8.0	10.0	...	11.75	10.7	91	89	4.3	3.9	110	6.45	3.8	inter.	59	66.4	66.5	55.0	23.1	30.4	32.6	134	141	low Wave	dark*	39	Ochre Red	W.C.	1				
3		20.7	14.4	69.5	13.0	11.2	10.7	10.3	10.2	14.4	12.25	85	100	5.0	4.1	126	6.8	4.1	decc.	60	67.0	66.0	61.25	22.0	...	36.6	...	166	(br.) med. W.	dark*	37	Red Br. L.*	J.L.	2					
4		19.1	13.9	73.0	13.2	10.1	9.9	9.2	9.2	12.5	11.0	88	89	4.45	4.3	103	6.2	3.6	square	58	67.75	...	55.12	21.1	30.6	34.0	145	161	(brown) C.	neutral	47	Grey Oc.	S.M.	3					
5		21.5	15.0	69.7	13.2	11.4	10.1	10.2	9.8	14.0	11.6	83	93	5.7	4.5	126	7.8	3.9	inter.	50	67.75	67.25	...	24.6	31.0	32.5	126	132	med. W.	dark*	43	Red Br. M.*	F.M.	4					
6		24	19.2	13.4	69.2	12.0	9.8	10.0	9.1	8.6	11.7	10.9	93	87	4.1	4.2	97	6.0	3.45	decc.	57	63.37	62.75	...	21.1	29.1	31.7	138	160	deep W.	dark	21	Sepia L.	G.C.	5				
7		70	20.3	14.3	70.9	12.9	11.8	8.6	11.5	...	13.1	12.6	96	91	5.45	4.7	116	7.35	4.1	gulfed	61	69.9	...	59.75	25.6	33.0	34.2	129	134	curly	dark	43	Red Br. M.	G.A.	6				
8		75	20.2	14.3	70.7	12.5	10.5	9.6	10.2	...	14.0	11.1	79	98	4.5	4.5	100	6.95	4.2	square	60	65.12	...	64.12	21.5	30.6	32.6	142	152	curly	dark	37-29	...	B.G.	7				
9		23	18.9	14.1	74.6	13.3	10.2	9.9	9.1	...	12.2	11.25	92	82	3.9	4.6	84	5.9	3.5	gulfed	60	...	...	...	...	...	...	...	...	neutral	40	Grey Y. M.	R.A.	8					
10		23	19.6	14.3	72.9	13.4	10.2	10.1	9.3	...	12.3	11.4	93	86	4.7	4.3	109	6.5	3.95	inter.	61	65.12	65.0	...	20.3	29.1	34.7	143	171	deep W.	dark	43	...	B.M.	9				
11	55	19.5	15.1	77.4	12.9	10.7	9.9	9.9	...	13.6	11.1	82	90	4.9	4.9	100	7.0	3.7	inter.	53	66.9	...	51.0	23.1	31.3	32.9	135	142	...	dark	43	...	T.C.	10					
12	25	19.5	14.4	73.8	12.5	9.2	10.4	9.2	...	12.1	11.3	93	84	5.3	4.5	118	7.1	3.8	inter.	54	67.5	...	...	22.8	...	...	...	...	med. W.	neutral*	43	...	O.M.	11					
13	45	19.5	14.4	72.3	12.8	11.0	10.0	10.4	...	12.9	11.2	87	90	5.1	4.3	118	7.3	3.8	gulfed	53	62.6	...	52.7	20.8	29.5	31.9	142	163	deep W.	dark*	43	...	R.M.	12					
14	80	19.8	14.5	73.2	11.8	11.0	10.3	9.9	...	14.1	11.9	84	97	4.2	5.1	82	7.0	3.9	gulfed	56	66.8	...	...	22.1	...	...	...	...	low W.	dark	29	Indian R.	T.	13					
15	27	20.2	14.9	73.7	13.9	10.5	11.4	9.5	...	12.6	10.8	86	89	4.3	4.3	100	6.2	3.6	square	58	66.0	51.5	...	23.1	27.1	28.6	117	124	deep W.	dark	29	...	W.L.	14					
16	77	18.6	14.2	76.3	12.9	9.6	8.5	9.25	...	13.1	12.2	93	92	3.9	5.0	78	7.0	4.0	gulfed	57	62.2	62.1	...	...	28.12	...	...	...	low W.	dark	22	Sepia M.	T.L.	15					
17	27	18.9	15.0	79.3	12.5	11.1	10.0	10.8	...	13.6	14.9	109	91	5.1	4.9	104	7.0	3.8	inter.	54	66.0	55.1	...	21.6	31.8	33.5	147	165	curly	dark	29-42	Deep R. Gr.	W.	16					
18	61	19.2	15.7	81.7	13.0	10.8	10.5	10.9	...	13.8	11.9	86	88	5.4	5.4	100	6.5	3.7	gulfed	57	68.1	67.0	56.2	21.4	31.9	35.2	149	165	med. W.	dark	28-29	Red Ch. Br.	M.	17					
19	60	20.0	14.45	72.2	12.65	10.6	9.8	9.9	...	13.65	13.15	96	94	4.25	4.6	92	7.1	3.3	gulfed	47	69.5	...	58.2	23.1	32.1	35.1	139	152	deep W.	dark	37	Red Br. L.	D.D.	18					
20	33	18.7	14.4	77.0	13.0	10.5	9.7	10.2	...	13.2	11.0	83	92	3.7	4.6	81	6.6	3.8	gulfed	57	65.8	64.8	...	21.7	30.1	33.6	138	165	low W.	neutral	39	Ochre R.	G.C.	19					
21	Af. & Ab.	62	20.3	15.2	74.8	13.8	10.7	10.9	10.2	...	12.9	13.35	97	85	4.25	5.0	85	7.4	3.9	gulfed	53	...	...	...	...	...	...	...	curly	dark	40	Grey Y. M.	E.	20					
22	Aborigine	40	19.6	13.4	68.3	12.1	10.55	9.7	10.4	...	13.1	10.85	83	98	4.1	4.6	102	6.4	3.3	inter.	51	63.3	54.0	...	21.7	30.0	32.3	138	149	low W.	dark	22	Sepia M.	A.S.	21				
23	"	80	19.4	13.4	69.0	12.6	11.1	9.4	9.4	...	12.3	11.8	96	92	4.0	4.7	85	7.5	4.4	gulfed	58	68.5	67.5	58.0	21.1	31.5	36.7	149	174	low W.	dark	31	...	F.	22				
24	"	64	19.3	14.4	74.6	13.3	10.5	10.8	9.1	...	12.9	11.1	86	90	4.0	4.2	95	6.7	3.7	gulfed	55	66	55.8	...	21.8	30.6	34.0	140	156	low W.	dark	...	...	B.G.	22				
Mean			20.0	14.4	73.2	12.9	10.6	9.9	9.9	9.5	13.0	11.9	90	91	4.6	4.6	100	6.8	3.8	...	56	66.2	65.0	56.2	22.2	31.0	33.5	138	152	...	...	...	...	...	...				

TABLE IIa.—MEASUREMENTS OF THIRTEEN ADULT FEMALES KAMILAROI TRIBE.

24	Aborigine	25 <sup>1</sup>	18.6	14.2	76.3	12.9	10.6	9.9	9.9	9.5	13.0	11.9	90	89	4.25	4.25	100	6.7	4.2	inter.	63	62.7	53.2	53.3	20.3	28.6	32.9	141	162	...	dark	29	Indian R.	A.M.	24	
25	"	26	18.2	13.7	75.2	11.6	9.8	8.5	9.3	...	11.9	10.5	88	82	3.9	3.75	104	5.5	3.4	square	62	61.4	52.0	...	22.0	28.0	30.0	127	126	low W.	dark	22	Sepia M.	L.M.	25	
26	"	20 <sup>2</sup>	18.2	13.5	74.1	12.0	9.7	9.3	8.7	...	11.4	9.8	86	84	4.2	3.4	123	6.2	3.5	inter.	57	...	47.9	50.9	18.8	27.4	31.6	146	167	low W.	dark	29	Indian R.	F.D.	26	
27	"	25	17.7	13.3	75.1	12.1	9.3	...	8.8	...	10.9	9.5	87	82	3.9	3.45	112	6.2	3.75	inter.	61	60.0	50.6	...	19.6	24.9	31.0	130	158	...	dark	22	Sepia M.	A.B.	27	
28	"	22	17.5	13.3	76.0	11.0	9.35	...	8.9	8.8	...	12.0	9.4	78	90	4.25	3.4	123	5.75	3.1	square	54	59.6	...	...	20.0	...	...	...	...	deep W.	dark	29	Indian R.	E.M.	28
29	"	60	18.8	13.8	76.0	11.0	9.3	...	8.5	10.8	...	12.7	10.8	85	84	4.25	4.1	108	6.1	3.3	gulfed	50	61.5	53.9	19.3	24.2	33.9	146	176	deep W.	dark	37	Red Br. L.	A.M.	29	
30	"	32	18.4	14.4	78.2	11.9	10.0	9.3	9.0	8.8	12.2	11.2	92	85	4.4	4.4	100	6.4	3.8	gulfed	59	61.0	50.9	...	23.4	29.9	27.5	128	117	deep W.	dark	37	Red Br. L.	C.	30	
31	"	26	18.1	13.0	71.8	12.0	10.5	8.5	8.85	...	11.6	10.15	88	89	4.5	4.1	109	6.6	3.7	square	56	58.4	60.2	...	20.5	28.0	29.7	137	145	deep W.	dark	28	Choc. Br. L.	W.	31	
32	"	48	17.4	13.6	70.1	12.5	...	...	...	...	11.6	9.6	83	85	3.65	4.35	84	6.3	3.85	inter.	61	60.0	51.6	...	22.0	27.4	29.6	125	135	straight	neutral	45	Yellow Br. L.	M.	32	
33	"	39	18.3	14.0	76.5	13.4	10.3	8.6	8.85	...	11.75	10.0	85	84	3.65	4.45	82	...	...	desc.	...	60.8	51.9	50.5	21.4	26.0	29.8	121	139	low W.	dark	40	Grey Y. M.	C.	33	
34	"	19	19.3	13.9	72.0	12.6	9.5	9.9	9.6	...	12.3	10.6	86	89	4.3	3.9	105	6.2	4.1	gulfed	66	62.1	...	...	...	...	...	...	...	deep W.	dark	...	...	...	...	...
35	"	23	...	...	...	...	...	...	...	...	12.1	10.0	81	...	4.2	3.9	107	...	...	gulfed	...	...	...	...	...	...	...	...	...	dark	21	Sepia L.	M.P.	35		
36	"	33 <sup>1</sup>	18.3	14.1	77.0	12.1	9.8	10.1	8.8	...	12.1	9.9	82	86	3.6	3.9	94	...	...	...	...	...	...	...	...	...	...	...	...	straight	dark	33	Ochre	S.	36	
Mean			18.2	13.7	74.6	12.1	9.6	9.3	9.0	8.8	12.0	10.2	86	86	4.1	4.0	104	6.3	3.7	...	59	60.5	61.5	51.5	20.7	27.6	30.7	133	148	...	...	...	...	...	...	

TABLE IIb.—MEASUREMENTS OF ELEVEN CHILDREN (FEMALES) KAMILAROI TRIBE.

			cm.	cm.	cm.					cm.	cm.			cm.	cm.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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TABLE III a.—MEAN MEASUREMENTS OF THIRTY-FOUR ADULTS KAMILAROI TRIBE, CLASSIFIED ACCORDING TO ANCESTRY AND SEX.

No. of Measurements	Ancestry.	Cranium			Radiometer					Face				Nose			Ear			Body								Sex
		Length	Breadth	Cephalic Index	Vertex	Glabella	Occiput	Alveola	Nasion	Breadth	Height	Anatomical Face Index	Transverse Cephalo-facial Index	Breadth	Height	Nasal Index	Length	Breadth	Aural Index	Total Height	Height of Left Shoulder	Height of Right Shoulder	Length of Trunk	Arm Length	Leg Length	Arm Index	Leg Index	
12	Aborigine	cm.	cm.		cm.	cm.	cm.	cm.	cm.	cm.	cm.		cm.	cm.		cm.	cm.		inches	inches	inches	inches	inches	inches	inches			Males (Adult)
8	"	19.8 18.3	14.6 13.6	73.6 74.4	12.8 § 12.2	10.7 § 9.8	9.9    9.2	10.2 § 9.0	* 9.8 ...	13.3 11.9	11.9 10.2	90 86	91 87	5.0 4.2	4.7 3.9	108 108	7.0 6.3	3.8 3.7	54 58	66.4 60.3	55.7 § 51.5	§ 56.2 † 51.5	22.4 20.0	31.0 31.5	33.5 31.5	139 § 137	151 § 158	Females (Adult)
3	"	19.5	13.8	70.6	12.4	10.4	9.7	9.6	† 9.4	12.5	11.3	90.3	89.5	4.3	4.2	103	6.3	3.7	59	† 65.6	† 55.1	† 58.2	† 22.1	† 29.8	† 33.6	† 136	† 152	Males (Adult)
3	"	† 18.3	† 14.1	† 76.6	† 11.8	† 9.9	† 8.9	† 9.2	* 8.8	12.2	10.6	87	† 84	4.2	4.0	104	† 6.0	† 3.6	† 61	† 61.2	† 51.5	...	† 22.7	† 29.0	† 28.8	† 128	† 127	Females (Adult)
6	"	19.3	14.3	73.7	13.2	10.5	9.9	9.5	* 9.2	13.0	12.0	88.3	91.9	4.1	4.7	88.2	6.9	3.9	57.3	66.2	a 53.9	a 55.2	21.8	29.5	a 33.2	a 137.3	a 153.5	Males (Adult)
2	"	17.9	13.9	73.5	12.3	* 9.8	* 8.8	* 8.8	...	11.9	9.8	83	86	3.7	4.3	88	* 6.3	* 3.9	* 61	* 60.0	* 51.6	...	* 22.0	* 27.4	* 29.6	* 125	* 135	Females (Adult)
TABLE III b.—MEAN MEASUREMENTS OF TWELVE CHILDREN KAMILAROI TRIBE, CLASSIFIED ACCORDING TO ANCESTRY AND SEX.																												
1	Aborigine	17.7	13.5	76.2	11.3	9.5	9.2	8.2	...	11.1	10.8	97	82	3.8	3.8	100	3.8	3.6	61	...	...	...	...	...	...	...	...	Males (Children)
2	"	17.8	13.0	72.9	...	...	...	...	...	* 10.8	* 9.9	* 91	* 84	3.8	3.2	119	* 5.9	* 3.4	* 58	...	...	...	...	...	...	...	...	Females (Children)
2	"	* 18.8	* 13.8	* 73.4	* 12.9	* 9.8	* 10.0	* 8.8	...	...	...	...	...	3.8	3.7	101	* 6.5	* 3.8	* 58	...	...	...	...	...	...	...	...	Males (Children)
5	"	† 16.9	† 13.6	† 80.7	...	...	...	...	...	* 11.3	* 9.7	* 86	* 81	3.6	3.4	107	† 6.2	† 3.5	† 56	...	...	...	...	...	...	...	...	Females (Children)
2	"	* 18.4	* 14.4	* 78.0	...	...	...	...	...	* 10.3	* 8.2	* 79.6	* 72	3.4	3.1	109	...	...	...	...	...	...	...	...	...	...	...	Females (Children)

\* One Measurement. † Two Measurements. ‡ Three Measurements. a Four Measurements. || Five Measurements. § Six Measurements.











The frequency curves indicate a maximum for values of 70-75 in the case of full-bloods and half-castes. A similar value is probably indicated in the case of three-quarter castes, but a sufficient number of measurements was not available for the production of a smooth curve.

There is a marked uniformity in the measurements of head length and breadth. Only in the case of the male three-quarter castes, and there only in regard to head length, is the average deviation in excess of 0.5.

The measurements of the males vary to a greater degree than those of the females. In the case of the half-castes, the converse apparently holds, but the figures in the case of the females are based on measurements of two individuals only.

#### *Anatomical Face Index.*

The mean values of anatomical face indices, as set out in Tables 3A and 3B are, in the case of adults, full-bloods—male 90, and female 86; three-quarter castes—males 90, females 87; half-castes—males 88, females 83.

The indication is a slight change from the dolichopse towards the eurypse form, with increase in proportion of the white blood. This change is even more pronounced in the few measurements available in the case of children.

This tendency is apparent in the frequency curves. In the case of the full-bloods a maximum frequency is indicated for values of 85-90. In the case of the three-quarter castes the maximum frequency occurs for values of 90-95, and in the case of the half-castes the maximum occurs for values of 80-85. An arbitrary system of grouping has been adopted in plotting the frequency curves, which shows an apparent increase in value of anatomical face index in the case of the three-quarter castes, whereas,



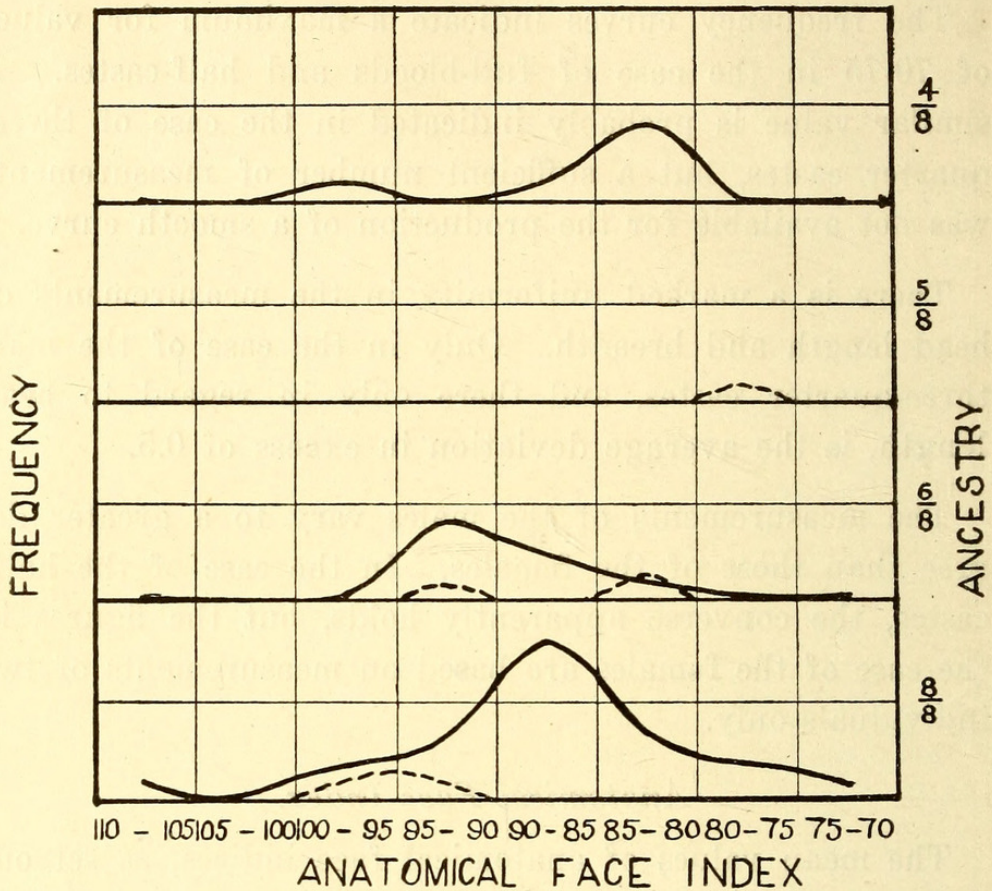


Fig. 7.—Anatomical face index. (Height of face divided by breadth). The frequency curves show that as the proportion of white blood increases the face becomes broader. (Broken lines are for children.)

actually the maximum occurs within the same limits as that for the full-bloods.

#### *Transverse Cephalo-facial Index.\**

In the adult no regular progression is apparent or indicated with regard to this index. In the children the index drops from about 88 (full-blood), through 83 (three-quarter), to 78 (five-eighth).

#### *Nasal Index.*

The nasal index has yielded the most satisfactory and definite results in this investigation. The mean values

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\* This index is the width of the face divided by the width of the head.



of nasal indices taken from Table 3A are:—Full-bloods—males 108, females 108; three-quarter castes—males 103, females 104; half-castes—males 88, females 88. Here a very definite tendency towards a change from the platyrrhine towards the mesorrhine form, as the proportion of white blood increases, is indicated.

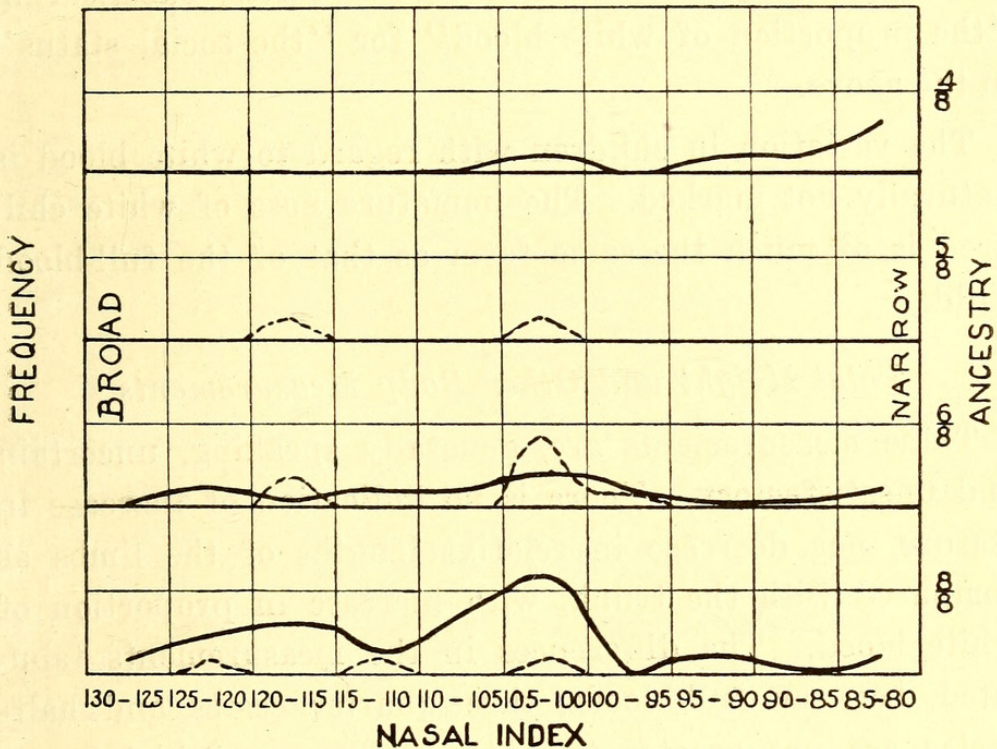


Fig. 8.—Nasal index frequency curves arranged according to ancestry. The nose becomes narrower as the proportion of white blood increases. Broken lines are for children.

The frequency curves are not so satisfactory, being bimodal and trimodal, due to paucity of measurements, but the decrease of value of the nasal index, between full-bloods and half-castes, is indicated.

The importance of considering the mean of a large number of measurements is here demonstrated. It was found that the average deviation and the coefficient of variation for the nasal measurements, generally speaking,



have a greater range in value than those for any other measurements tabulated.\*

Just as Risley, in "The People of India," has laid down a law that "The social status of the members of a particular group varies in inverse ratio to the mean relative widths of their noses," so a similar generalisation might be made in regard to the aboriginal castes, substituting "the proportion of white blood" for "the social status" in the above.

The variation in children with regard to white blood is naturally not marked. The immature nose of white children is of much the same form as that of the full-blood child.

#### *Total Height and Other Body Measurements.*

These measurements are, generally speaking, uncertain and unsatisfactory. There is no indication of increase in stature, nor decrease in relative lengths of the limbs as compared with the trunk, with increase in proportion of white blood. The differences in the measurements tabulated, between full-bloods, three-quarter castes and half-castes are not greater than the differences which occur within a particular group.

#### **Description of Plates.**

##### PLATE XX.

(Top)—Front face and side face of young full-blood woman from St. George (Queensland), just over the border. Her measurements are given as No. 34 in tables.

(Middle)—Profile photographs of young 6/8 black, his 8/8 father and an old full-blood (Nos. 8, 6, 7 in tables). All at Angledool.

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\* Tables giving Range of Variation and the Mean for each measurement, with average Deviation and Coefficient of Variation were prepared, but have not been printed owing to limits of space.



(Bottom)—View of the Aboriginal Cemetery at Collarenebri, entirely maintained by the local blacks.

PLATE XXI.

All Collarenebri Aborigines.

(Top and Middle)—Three grades are illustrated. The change from full blood to three-quarter blood to half-caste is well illustrated in the three right-hand figures (Nos. 4, 3, 1, 2 in Tables).

(Bottom)—Full-blood wife of No. 4.

PLATE XXII

(Top)—Woman, three-quarter blood, strong beard for a woman. Father full-blood, mother half-caste (Walhallow).

(Middle)—Three girls (from 6 to 8 years old) at Angledool. The two outer girls are sisters  $5/8$ ; the central girl is  $6/8$  black.

(Bottom)—Two  $6/8$  black sisters from Angledool (Nos. 35 and 25 in Tables).

PLATE XXIII.

(Top)—A Pilliga family, showing result of marriage of full-blood man and half-caste woman (Nos. 17 and 32 in Tables).

(Middle)—Three elderly half-castes at Walhallow. (The man is No. 22 in Table). His wife on left; her sister on right.

(Bottom)—The man is  $4/8$  African,  $1/8$  Australian,  $3/8$  white. He married a full-blood Australian. The children are  $2/8$  African,  $9/16$  Australian, and  $3/16$  white.

PLATE XXIV.

(Top)—Photos of Old Helen of Angledool, to whom we owe the riddles. Her father was white, her mother full-blood. (She has gray eyes.)

(Middle)—A half-caste family (first and second generation), from Pilliga.

(Bottom)—A family from Angledool. The mother (No. 36 in Tables) is a fine type of half-caste. Her husband is  $3/8$  black. The children are  $7/16$  black and quite intelligent.



## PLATE XXV.

(Top and Middle)—A group at Pilliga. The boy is  $\frac{6}{8}$  black, the older woman is  $\frac{3}{8}$  black (but is practically indistinguishable from white), and the daughter (about 25 years) is  $\frac{11}{16}$  black. Note the elongated head of the boy, who is measured as No. 53 in the Tables.

(Bottom)—Full-blood woman (31 in Tables) and her baby of five months (from Pilliga).

## PLATE XXVI.

Photographs illustrating a mixture of Chinese and Aboriginal blood at Camooweal (N.W. Queensland).

(Top Left)—Full-blood Queensland aboriginal about 50 years old (mother of the two young women), married to the Chinese partner of the man shown.

(Top Right)—Young woman (about 20 years), half Australian, half Chinese (married to man below).

(Bottom)—Chinese gardener (from Canton?), about 45 years. Woman is half black, half Chinese. Her children are quarter black and three-quarter Chinese.

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Taylor, Thomas Griffith and Jardine, Fitzroy. 1924. "Kamilaroi and White, a study of racial mixture in New South Wales." *Journal and proceedings of the Royal Society of New South Wales* 58, 268–294. <https://doi.org/10.5962/p.359884>

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