harmless. It is, no doubt, owing to this exaggerated idea of infection that there have been such extreme proposals as the New Zealand Act excluding tubercular immigrants. It is probably due to the same cause that there is some prejudice in Queensland against the building of sanatoria for consumptives. There is not a shadow of foundation for the theory that there is danger to the inhabitants of a township if a sanatorium is erected in the neighbourhood. I trust there will be no opposition to erecting sanatoria for the poor and for paying patients. Bright sunshine, invigorating air, and cheerful surroundings, are conditions which compensate in some measure for separation from family and friends, alleviate the sufferings, and give hope in many cases of permanent recovery.

CONCLUSION.

In the remarks I have made to-night, I have touched upon many controversial points, and I have endeavoured to indicate the lines upon which further research is required. I trust that those engaged in scientific inquiries in Queensland will help to throw light on these points. The report of the new Royal Commission now sitting in London will be awaited with interest, but in the meantime there is no uncertainty as to the course to be adopted by those responsible for the public health. Whatever the result of that inquiry may be as regards the relation of bovine to human tuberculosis, we know that there are many factors in the production of the disease.

The removal of insanitary conditions by the co-operation of the public with sanitary officials, will secure for Brisbane the enviable position of being conspicuous among all the great cities of the Commonwealth, on account of its low death rate and practical immunity from all epidemic diseases.

NOTES OF SAVAGE LIFE IN THE EARLY DAYS OF WEST AUSTRALIAN SETTLEMENT.

(PLATES V. AND VI.)

(Based on reminiscences collected from F. Robert Austin, Civil Engineer, late Assistant Surveyor, W.A., late Sergeant-at-Arms Parliament of Queensland, discoverer of the Kimberley Goldfields, W.A.)

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[*Read before the Royal Society of Queensland 8th March, 1902.*]

THE following notes deal with an account of a tribe occupying the country around Port Leschenhault, Koombana Bay—where Bunbury now stands—lat. about 30 deg. 30 min. south, long. 116 deg. east—in the district of Wellington, Western Australia. The back country here in the years 1841-3, to which times these reminiscences refer, was known to the natives as i-lap. On the coast the nature of the soil was sandy, although further inland it was rich, fertile, and well watered; all around were large areas of Zamia,* a plant which there attained a very great size. The surrounding country, at this time, had only been settled about eleven years previously.

The habitual posture of sleep was lying on the back, but, as a rule, the head was not raised. A very common position of standing was, in the case of the men, with the sole of one foot resting upon the area just below the opposite knee, the hand, corresponding to the raised leg, being supported on a spear. In walking the foot was very straight; in those cases where it was turned outwards it was noticeable and characteristic, espe-

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* Macrozamia Fraseri, *Miq.*

cially when "tracking" was concerned. The arms were never swung while walking; they always hung straight down, and gave the observer an impression of a very erect carriage. Neither men nor women appeared conscious of any indecency in appearing perfectly nude in public whenever it was expedient to remove their cloaks. The women, however, when sitting on the ground, doubled up one leg, and placed the foot against the fork; when standing, and wishing to talk, the gentler sex would rarely face one, but generally turn more or less sideways. Climbing trees was always effected by cutting alternate nicks, and in swimming the movement was hand over hand, just like a dog.

The year was marked by the mu-jain (Nuytsia floribunda) coming into blossom; this is of a rich orange colour, and can be seen for miles around. The plant has a very soft kind of covering, reminding one of the bottle-tree. The gum exuding from it—and this is translucent, like jelly, of about the same consistency as wax, and never gets hard—is used as an article of diet, notwithstanding the fact of its producing great flatulence. They know when to expect the different seasons, and were unerring judges of the weather. Smaller epochs of time were reckoned by the moon (miki), ("big fellow" denoting "full" moon), and the sun (ang-a), according to the elevation of which the day was divided. They had a name for night, as distinguished from day, and also terms denoting the points of the compass: thus, ja-ral-li, bu-yal-li, i-re, and wu-dal-li denoted respectively the cardinal points north, south, east, and west. Travelling at night in the bush was effected by local knowledge.

Enumeration took place with the aid of the fingers and toes, separately distinct words being used up to ten; beyond that, everythig was bu-la, the idea of multiplicity and plenty. Neither stones, pebbles, twigs, nor marks of any kind ever assisted them in performing the processes of notation.

There was no term expressive of the idea of disease in particular, but the word men-dik included every pathological condition: thus, "ka-ta men-dik" implied headache; "kob-bal men-dik," stomach-ache, etc. They had a superstition that their medicine-men or doctors (bukol-ya, a name also applied to any evil spirit) could make any individual sick by various incantations and charms, and effect cures, under different manipulations, by removing sticks and stones out of the patient's body. They were invariably very good and tender to their sick, and were great believers in rubbing or massage. Wherever pain was, there the part was rubbed, women rubbing men, and men massaging one another. When suffering from headache, or otherwise sick, the hair would often be cut. Red gum was very commonly taken in cases of dysentery. The bleeding of wounds was usually stanched with blue-gum leaves, the cut surface being subsequently besmeared with mud and earth. In the case of such-like injuries they could always tell whether the damage would prove fatal, or the reverse; indeed, practising their primitive method of treatment, they could almost invariably prognosticate the length of time, even to a month, before full recovery would take place. Their vitality was remarkable. Even in the case of spear-wounds through the body—cases which have been observed—their restoration after a certain lapse of time to perfect health was of no unusual occurrence. The total absence of shock to the system, or any dread of death, may of course have materially aided the convalescence. Taking all in all, there was but little sickness among these people, ordinary colds and chills perhaps excepted.

Their methods of hunting were all primitive. Until the advent of the whites, the catching of fish with nets was never dreamt of; no hooks and lines were used, but the fish speared principally in shallow waters in the estuaries and lakes. Weirs were resorted to in swampy channels, these being formed of brushwood intertwined on stakes, with here and there a pocket, at the bottom of which a kind of basket-work would be constructed. Any poisoning of the water with noxious plants, or mud dying with the feet, was unknown. Kangaroos were not only stalked and speared, but trapped on favourable ground by digging along their customary tracks deep pitfalls, covered with twigs and earth. These pits were about 8 or 9 feet long, 7 or 8 feet deep, and about 10 inches wide, just leaving margin enough for the hind feet to fall into. Wallabies were caught in "drives," fences being built in favourable situations along the ravines, with sometimes wattle-work at the end of the drive, woven into a short square basket-work-like mesh with sticks. A common method of catching emus was, for the hunter to plant himself up amongst the thick foliage of a tree close to the spring, etc., whither the bird was accustomed to come for water. Hidden

there, he attracted his prey by means of a tuft of cockatoo feathers stuck on to the top of his spear; this special weapon being of a comparatively heavy type, quite 12 feet long, and a portion of it quite as thick as an ordinary broomstick. In open country the native would stealthily sneak up to the unsuspecting bird under cover of some bushes held in front of him. Emus were never trapped in pitfalls or nets. Cockatoos, parrots, and other winged creatures, especially those flying in flocks, were often brought down with sticks or boomerangs; the younger men especially would employ the latter weapons, as they never set much store upon the time and labour expended in manufacturing new ones when the old ones were broken. Crayfish were caught with the hands. Grubs were obtained from out of grass-trees and black wattles; the natives could apparently tell from the general aspect of the tree, from the various progressive signs of decay, whether the timber was much infested with them or not. Many kinds of roots and yams were eaten; among the latter, the wor-rain, showing thick yellow blossoms, was very common, growing down to a depth of quite 3 feet, and running from the thickness of the finger to that of the wrist. An island (? Leschenhault Island) in Shark's Bay, used literally to be covered with it. All meats, and the majority of the vegetables, were eaten roasted, some of the latter being prepared with great care, the bulrush roots in particular, a very nourishing dietary, being most methodically slowly cooked in the ashes. So far as meals were concerned, the chief one was principally in the evening, what was left over being partaken of in the morning. The natives might pick up during the day anything they could get as they passed along. A man would always share with his neighbour. In the family circle the men, women, and children dined together, but the younger single males at a certain age (puberty and onwards) always had a fire to themselves. When a stranger came to camp, he sat down outside at a distance of some seventy or eighty yards away, and did not come up to the fires until invited, when he had food given him; he remained comparatively silent except when specially addressed.

Though cannibalism was not actually witnessed, it had been heard of in the neighbourhood. Furthermore, when the human entrails, on being thrown into the fire, began to curl up, if the ends pointed in the direction of any particular individual around, this circumstance boded him ill-luck in the future.

Narcotics were unknown. Upon this sandy tract of country, extending back as it did to some considerable distance from the coast, two species of Banksia grew abundantly, one conspicuous by its broad leaf, the other by its narrow leaf. Each species bore cones with pitcher-shaped flowers, which, containing a quantity of honey, were especially visited by the black cockatoos. The natives appreciated the honey also, and, pulling down the cones by means of a long sapling (close to the extremity of which was tied a cross-piece about 9 inches or 10 inches long, somewhat after the shape of a sheep crook), would bite into them and suck the saccharine matter out. At other times they utilised the honey by making a fermented drink of it, somewhat on the following lines:—Large quantities of the flower-bearing cones were taken to the side of some swamp, in the close proximity of which several holes were dug into the ground, each in the form of a trough about a yard long and 18 inches deep. Particularly sound sheets of tea-tree bark were next stripped from the trees, each piece of bark being tied up at the ends with fibre into a sort of boat-shaped vat, the sides of which were kept apart by sticks stretched across; the shape of the vat lent itself to that of the trough, and there was one vat for each trough. The vat was next filled with these cones and water, in which they were left to soak. The cones were subsequently removed and replaced by others until such time as the iquid was strongly impregnated with the honey, when it was allowed to ferment for several days. The effect of drinking this "mead" in quantity was exhilaratiug, producing excessive volubility. The aboriginals called the cones and the fermented liquour produced therefrom both by the same name—the mangaitch.

Though not of a common occurrence, a man was considered mad when he committed suicide. Homicide, usually a form of reprisal, was not justifiable, the culprit having to answer for it and to fight his victim's friend at the next gathering; should he not put in an appearance the tribe as a whole would take care that a corresponding life were forfeited. "An eye for an eye, a tooth for a tooth" was the golden rule here as well as elsewhere; an individual speared in the thigh could not wound his adversary in the stomach. Abduction, the taking away of a man's wife without his permission, was most unpardonable. The greatest offence of all, however, and one the vindication of which was taken up by the whole tribe, was that of incest, the

crime of sexual connexion with one of the prohibited classes. For adultery, the husband could spear his wife in the leg, etc., but not kill her, or otherwise her friends and relations would interfere. At other times, should a man prove particularly brutal to his better half, the other women would "egg" their male relatives on to him.

Each family of the tribe had a more or less defined area of country belonging to it—a kind of heritage: its rights over such track were respected, and any infringements regarded in the light of trespass. Even if an individual of the same tribe, yet of a different family, had occasion to traverse it, he would only, if obliged at all, take just enough to appease his hunger—*e.g.*, one bird, or one egg, from a nest, leaving the remainder for its rightful owners. And it was wonderful to note how these owners knew exactly what was on their piece of land; they were never selfish about its products, but during the superabundance of any food plants, game, fish, etc., at any particular season, would send round for neighbouring families to come and make common property of what Nature had so plentifully supplied them with. Thus also, when the swans were nesting, or when a whale was cast ashore, other tribes would come along by invitation.

At puberty, when, as a part of the first initiation ceremony, the young men's noses were bored, certain precepts of wrong and right were inculcated; they subsequently became responsible for their actions, and other people would no longer fight on their behalf. Win-dang expressed the idea of badness, as wanting in common sense, no good, a saucy fellow, one who was regarded rather in the light of a fool for not conforming to the general usages of the tribe. As a sobriquet, or as a matter of chaff, in drawing attention to any pet weakness, an individual was sometimes spoken of as being stone-, or wooden- headed. Kwob-ba was the opposite extreme, signifying goodness and kindness. It was considered wrong to interfere with a non-tribesman unless a fued were on, the stranger being always welcome so long as he were well-behaved and courteous. Indeed, hospitality was always very marked, but the recipient never claimed it; he would neither come up to the camp, nor even light a fire in the close neighbourhood to cook his own raw game at, unless invited so to do. A good deal of lying went on, but then it must be remembered that they were not expected to tell the truth, especially when against their own interests.

Bon-du signified the truth, ku-thum a lie, and ku-lin a liar. On the other hand, there was hardly any cheating; these blacks would give to one another practically anything that might be envied. Gluttony was regarded as very unpardonable, and in this way they were very self-sacrificing; it was well that such was the case indeed, because an individual might be lucky in hunting on the one day, and yet be unsuccessful on the morrow. Only occasionally, and in secret, would the native be gluttonous; thus, an aboriginal contaminated by whites would ask you not to give him so-and-so before another, as he would probably have to part with it—but such conduct was always considered most reprehensible and mean. On the whole, they were a chivalrous people, and cowardice brought the delinquent into supreme contempt. They were very good to their aged and weak, would tend their sick, and carry them about from place to place; if circumstances prevented this, some one would be left behind to give them every attention.

A father could do what he pleased with his own children, but neither parent would ever strike a boy; if beaten, the latter was supposed to lose courage. The mother taught her girls, looked after their chastity, and, when considered necessary, beat them. The grown-up lads slept together, separate from the others.

Among the party of men who landed with R. Austin on that coast was a young architect, one Greensell, who was supposed to resemble one of their tribe lately deceased: the blacks immediately gave him the name of wor-kap, that of the deceased individual in question. As a rule, they never mentioned the names of their deceased, but in this case they believed that this young gentleman in question was their own mate returned to them in the guise of a white man. Austin subsequently found it to be a general impression among them that deceased blacks were wont to return to their own habitats in the form and shape of whites, and that this was how they accounted for the Europeans coming to visit their country. As already mentioned, this district had been settled only a few years previously. In several places, a similar form of nomenclature in vogue, was met with, and Austin invariably did his best to destroy this belief of theirs. They also had an idea that the spirit of the departed hovered round about the grave, and, though their feelings could not be thoroughly analysed, they certainly had a fear of approaching it for some time subsequently to burial. At

burial, some offerings were left generally in the shape of damaged weapons, etc (but no food) on the grave itself, while upon the bark of neighbouring trees was smeared some red paint, (wil-gi), either in complete rings, or horizontally zigzag lines. For some few days onwards they would sweep with bushes the surrounding ground, so as to track anything in the shape of a visitor, human or animal, and very gratified would they be if no tracks were discovered. This brushed part of the grave, when once finally completed, was never by any chance subsequently traversed.

Any doctrine of the transmigration of souls was only hinted at in the fact recorded of blacks returning to their homes after death in the shape of whites.

They believed that diseases, of which they could recognise no physically pathological origin, were caused by the charms of their enemies, or persons whom they had in some way or another offended. Such complaints the doctors or medicine men professed to cure by various manipulations, massage, etc. Thus, if called in attendance, the doctor would leave the camp at night with a lighted fire-stick, go away to some considerable distance, and extinguish it, and then return sufficiently near to be heard. By stretching his cloak over his thighs and fixing over his buttocks the ends upon which he sat, he clapped upon it with his hands, by this means making no inconsiderable noise, which was supposed to either drive away or to appease the alleged enemy. Upon returning to his patient he would remove a stone or stick by massage, etc., from the part most affected. No special huts were constructed by, or for the use of the medicine men, whom the tribes, believing them to be equally capable of killing or curing, were careful never to offend. Ventriloquism was never brought into requisition.

The natives here were certainly under the firm conviction that at night time the earth was permeated with evil spirits, whom they feared. Such spirits could be checked or repelled by means of fire, and this was one of the chief reasons why, in the dark, they would never leave their camps without taking a lighted fire-stick with them. In addition, the light precluded the possibility of treading upon snakes, etc., unawares.

Another very common idea amongst these people was that there was always something supernatural lying in ambush in everp deep water, or in any fairly-sized permanent water-hole—some unwritten record of an extraordinarily big crocodile,

snake, or iguana inhabiting it. They would naturally be averse to bathing in such localities, or if they did, would never venture far from shore. From cross-examination on different occasions, Austin was led to the conclusion that individuals having been now and again drowned at these places accounted for the superstition—a phenomenon that he could not otherwise explain.

Tribes were not named after any animal, but children at the time of birth would be named after a particular animal, some circumstance in connection with which may have impressed the mind of the mother, either during pregnancy or about confinement. This was the name by which the child as he grew up was referred to in ordinary general conversation. Anyone so named would not, at certain seasons of the year, partake of his patron-animal, and this quite independently of, and additional to, the special dietaries otherwise prescribed for him by tribal usage.

There was no worship of gods of any description, and the idea of a Creator of all things was conspicuously absent; similarly there was no sign of any diety connected with the sun, moon, stars, or with war.

Whenever the results of previous experience taught them that game and food were sufficiently plentiful, they sent round word to their neighbours to come help partake of it. Such an occurrence would be the occasion of what might be called a festival, when songs would be sung, friendships made and cemented, and corrobborees performed. So also when the nose-boring of the males took place—the actual operation being performed secretly in the daytime—the opportunity was made a festive occasion of so many people being present. Otherwise, even at the birth of a child, or at marriage, no festivities helped to mark the event. There was never any festival of a religious character, and nothing in the shape of prayer or sacrifice.

On the death of a friend, the women (especially the wife and family of the deceased) would, with their finger nails, cut deep gashes in their foreheads and cheeks, pipe-claying in addition the former portion of the face. The men used to whiten the forehead simply.

Women were considered impure and unclean during the menstrual period, when they sat apart at a separate fire.

The position of the corpse, when doubled up before covering over with earth, was invariably towards the east.

Nothing in the way of special superstitions, other than those recorded in these notes, was noticed. That they were extremely fond of their dogs goes without saying; so much so that women were often observed suckling young puppies. They rightly believed that it was the one and the same moon which regularly put in an appearance each month.

Disease and death charms in the hands of doctors and alleged enemies have already been drawn attention to. The medicine men mixed up with other individuals like ordinary mortals, but were dreaded; as a correlative, they were aware of it, and consequently traded upon the credulity of their less-witted mates. There were no such things as love charms, while the cries of birds and animals (each separately noticeable) were taken not so much as omens but as indications of the approach of strangers, were they friends or enemies.

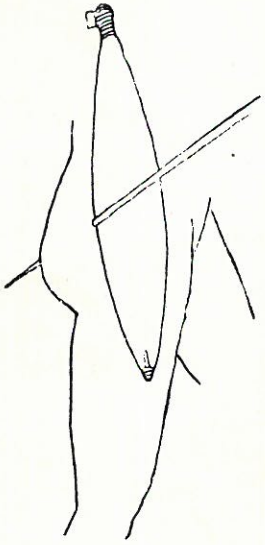
The aboriginals here had no mythic legends or fairy tales, but could tell many a witty story relative to incidents that had occurred, and principally about individuals. Nothing escaped their observation. When crossing a flat one day along the bank of a river, where a European was building a hut, Austin's black boy pointed to an ants' nest, and spoke to the following effect: "My word! that fellow ant knows more than that white fellow man." On being asked what he meant, the boy explained the dictum on the lines of the settler building his humpy below flood-water mark, while the ant constructed its nest far above it.

Children invariably respected their parents as well as their wishes. At the ceremony of the nose-boring, the individual pledged himself to conform to the general rules of propriety in force, certain rules benefiting the whole community—*e.g.*, the respect for each other's property, and the prior right to certain portions of the land which the tribe in general acknowledged to be theirs. There was a uniform attention to decency, peace, and quietness. They were all brought up to supply their own wants, manufacture their own weapons, were almost all equally proficient in their general ideas, in the pursuit of game, in fighting, etc. They recognised a head man, on whom a special term was conferred, but the office was apparently not necessarily hereditary, and if a "strong" man, he might nominate his successor; he was not always the oldest man in the tribe, but general fitness and ability were his characteristics; he never put on any "side," and he exercised the prerogative upon the death of a tribesman, to either take his widow unto himself, or to confer her where he chose. No share in the government was taken by the the women, though they often used to stir up strife amongst the opposite sex; thus, upon the killing of a man, when doubt happened to be expressed as to what concerted action should be taken by the tribe collectively, it was the women who, in a body, would inflame and incite the men to take measures for revenge, and arouse them to precipitate action. It may be truly said that the weaker sex were invariably far more quarrelsome among themselves than the men. Among themselves the men were very good-tempered as a rule. If the younger ones attempted to start any row, the elders would remonstrate with, and their friends restrain, them. The angered individuals would be held back with their elbows to the sides, their mates putting their arms round them from behind; though the would-be assailants might kick and bite, they were firmly held. It was the difference of sex, the gratification of the grand passion, and personal applause which constituted the main causes of all strife and dispute.

Each family in the tribe had its own territorial division, its own ka-la or "fire-place," to which it had a prior right, the land being divided ultimately among the sons upon the death of the owner. Though the game was in no sense preserved, each person knew what there actually was on his own possessions, what birds' nests, etc.—very much in the same manner as a European knows the contents of his garden. When anything showed itself in abundance, the neighbours, etc., would be asked to come over and partake.

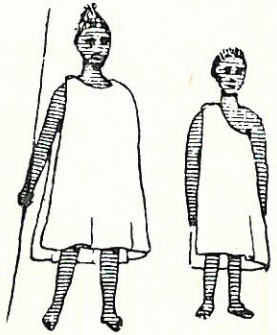
All being equal, and all being armed, one man was as good as another, hence, as a rule, they behaved themselves one to the other, and, having no fear of death, when they did fight they meant business, and never threatened without a fulfilment. In the case of serious offences, or when inter-tribal interests were concerned, the camp council decided upon the form of procedure and the mode of punishment. Mutilation or flogging was never inflicted, and justice, as a rule, was administered with clemency. In the case of wilful murder, incest, etc., the culprit would pay the death penalty somewhat on the following lines:—Standing out with one leg forward, a spear was "jobbed" into the inner side of the back of the advanced thigh; the femoral artery was thus damaged, and in four or five min-

utes the culprit had bled to death. He accepted his death with a dignified calm, and, if an ex-tribesman, he could elect to be killed by his own people. A wife's murder by her husband might be sometimes condoned, though he could legally be put to death by her relatives; the condonation was not infrequently granted in those cases where the woman had belonged to some other tribe from whom she had originally been stolen. In all cases it was the lex talionis which was enforced, and the following example which came under Austin's notice, may not prove without interest. Two blackboys were attached to his camp, and to the elder, about 15 years of age, he gave a gun. They went away shooting one day, when the elder accidentally shot the younger, who was walking behind, and killed him The news spread like wildfire, and the other blacks immediately wanted to kill the survivor, although the fact of its being a pure accident was well known; yet it was the law of a life for a life. Austin naturally demurred, said it was not fair, that he had determined to protect the boy, and warned them that if they dared to use force or violence in getting him away, they would have to take the consequences. They hung round the camp for several days in considerable numbers, crying and mourning for the deceased in the meantime. At last a few of them came to Austin and expressed themselves as satisfied if he would allow the boy to be speared "just a little bit," so as not actually to kill him, and explained that it would be far better for him to give them this permission than to run the risk of letting the boy escape then, only to be speared to death on some subsequent occasion. Austin thereupon talked the matter over with his dusky protegé, who willingly signified his approval, considering, on the whole, that it was a very easy "let off." Having informed the other blacks of his consent to the boy being speared in the buttock, as they had themselves suggested, Austin nevertheless gave them distinctly to understand that he should be present at the infliction of the punishment with his men and guns, and that if they even attempted to do anything else than what they had promised, he would let fire. When the time arrived, the blacks formed a circle around him with the boy. Three of the former, fully armed with their spears and accoutrements, stepped forwards into the ring, placed the alleged delinquent in proper position, with one leg much in advance of the other, and, resting a spear upon a wommera held vertically against the hip, "jobbed" it through



A.

C.



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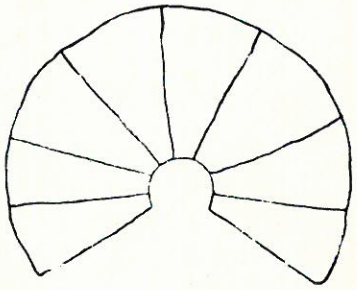

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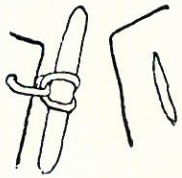


E.

the buttock (*Plate V., fig. a*). The poor wretch clenched his teeth in agony, but stood it firmly, and did not break down until all the men around began to sob and cry, when they all in a body rushed up to kiss and slobber over him.

With regard to the general custom of salutation, men used to kiss one another on the cheek, and hug one another. There was no osculation among the women. After long absences, they would rejoice over the return of the wanderer, who recounted to them the numerous adventures he had had, whom he had seen, how successful he had been in hunting, and anything curious that had come under his observation. In addition, he would illustrate *in propria persona* all that he thought might prove of interest—in one case, under Austin's observation, going so far as to imitate the waltzing of the whites. As a rule, these blacks used to get up comparatively late of a morning, unless compelled by want of food, or for any special purpose; *e.g.* to collect the mangaitch before the ants got at the honey. The young were always reproved and kept in order, but the boys were never beaten. Their sense of decency was parallel with our own; they never spoke with strangers concerning their sexual relationships, and it was only the younger males who talked filth. Their moral deportment was creditable to them in every way, with the exception that if a bachelor friend asked his married friend for the temporary loan of his wife as a great favour (especially as the lady was usually agreeable), the husband's consent was generally given.

The old men taught the young ones at initiation which diets to avoid; they reserved to themselves as elders, and as heads of families, such diet scales which were only rarely met with, or were considered special delicacies. In addition, for each individual, food was always refrained from when it happened to be anything in connection with that according to which his birth name had been given. There was no particular food tabu to any of the four special divisions of the tribe. The names of people deceased were avoided, and as a rule any reference (except by the younger males) to sexual matters discouraged. Certain water-holes and graves were also tabu.

In trading with other tribes, all that they could barter in exchange were their spears, made from the local "spear-wood," which grew plentifully in the close neighbourhood of the coastal

swamps. What they received in return included the following:—

(*a*) A sort of red ochre, wil-gi, which was used with fat for smearing over the body.

(*b*) Fragments of crystalline quartz, bwor-ral, for sticking into their spears, which, with the advent of the whites, was subsequently replaced by glass. This quartz came from the Darling Ranges.

(*c*) Stone-tomahawks (kod-ja); also from the ranges.

(*d*) Wommeras (mi-ra); manufactured of the "raspberry jam" Acacia,* from beyond the ranges, in the Avon district.

(*e*) Throwing-sticks (dau-ak); made of similar wood, and from the same district.

(*f*) Cork-wood shields (hi-la-man); also from the Avon.

There were no special individuals or actual traders for carrying on the exchanges, but they would proceed to their particular market whenever they considered the amount of food available there would be sufficient for the wants of all who might be present. There was never among particular tribesmen any principle of association, special sharing, or distinctive trademarks. Letter sticks were in vogue, but the messenger himself took the message verbally. These sticks, about two inches long, were pointed at each end, and squared in their length, very much after the style of an English boy's tip-cat. They were carried in the hair just over the ear. Made of some light coloured wood, which did not ordinarily change colour, they bore incised upon them certain marks which might have been aids to memory, but they were absolutely nothing more. When the messenger happened to be charged with messages from different peoplee, the marks would be cut by the various individuals interested.

Distance traversed during the day was measured by the elevation of the sun. Measures and weights were only hinted at by speaking of anything as being large or small, long or short, light or heavy, no fixed standards being recognised.

When on the track of an adversary, a black would not challenge his enemy, unless observed; he rather preferred to steal upon him asleep or awake, though they would both prove very bold and determined if it so chanced that they met in the open. In the case of inter-tribal warfare, each party came

* A. acuminata, *Benth.*

to the attack in open rank, the tribesmen standing side by side; prisoners were not taken captive, but all killed.

Hunting parties, when game was plentiful, were often formed, and all the spoil invariably divided impartially and fairly.

Their migrations were certainly dependent upon the scarcity or plenty of the animals they hunted, their nomadic habits being thus easily accounted for.

As a general rule, a wife was very happy and obedient; indeed, she had to be civil to her husband, as otherwise she might expect a crack on the head or a spear thrust through her calf.

There was no special marriage ceremony, beyond the betrothal of a girl by her parents, and in this matter the mother would appear to have always had an important say. Of course there were certain group divisions of the tribe into which marriage could or could not take place. At any rate the betrothal often gave rise to many troubles. Faith might be broken by the parents, the girl herself might like somebody better, and ask him to steal her, or the man might not care to tarry awhile, and consequently set about stealing someone else—and thus a row would commence. This stealing of a wife constituted a very primitive measure. The bridegroom, *in posse*, would just knock her on the head, or spear her in the leg, if she refused to join him, though, in addition, he might have to fight for her with some individual who considered he had a prior claim. Punishment for this course of conduct, if the lady were a tribeswoman, was spearing in the thigh. Should it, however, prove to be a case of incest (*i.e.*, either too close consanguinity, or an infringement of the tribal regulations *re* marriageable groups), the gay Lothario would be put to death. A man could have up to as many as four wives, with usually a hut for each; but in such cases it must be borne in mind that some of these women might very probably have been his brothers' widows, to whom he had a legal right. A wife entered the tribe of her husband, if of foreign origin. Divorce was not recognised as an institution, but if a woman could not hit it off amicably, she would tempt some other fellow to steal her from her husband. Men were invariably kind to their mothers-in-law.

A widow was taken to wife by the elder brother of her deceased husband; if this arrangement were inconvenient, or

she happened to be too old a body, her own blood-sons would look after her, or failing them, her daughters; the sons, however, were always first in their attentions.

Infanticide was not practised, nor was anything specially done with twins when they put in an appearance.

The conditions of marriage might be shortly expressed as suitable group relationship, stealth, or betrothal, and the attaining of the nose-boring initiation ceremony, which took place sometime subsequent to puberty. They had a very general idea that a man was always more courageous before matrimony than after; and, as owing to the comparative paucity of eligible women, the getting of a wife very often proved a constant source of feud, the older men were always discouraging the younger ones from entering the married state. On an average, there were about six men required to provide by hunting, for the wants of every two women (with children). Of the latter, the majority would appear to have died before reaching middle age; the proportion of two or three young women to every old one, being pretty constant. Three or four children would not uncommonly be noticed as belonging to one mother, who might be seen suckling more than one of her infants at a time.

Children were taught how to climb trees as well as the use and exercise of arms; they learnt to throw spears by practising on small reeds, etc., to commence with. They were certainly not instructed in the manufacture of the different weapons, but apparently did this by imitation, though they might occasionally get instruction and assistance from their fathers. The mother would look after the education of her girls, teaching them how, when, and where to dig for roots, yams, etc., and also how to prepare the different foods. Tracking was never actually taught; the aboriginals apparently picked it up as time went on.

A very common game played by both little girls and boys, up to 8 or 10 years of age, consisted in throwing along the ground, with a peculiar turn of the wrist, a more or less ovate-shaped piece of bark, and throwing a 6ft. reed at it as it spun.

Among the elders and at the camp-fires a man would often stand forward with his wommera and recite some adventure of his, telling all about what he had done, and often what he hadn't done, what prowess he showed under the circumstances,

and what a brave man he was. This form of self-adulation was very common, and after his hearers had applauded another man would take his place, and give a similar recitation culled from his autobiographical memoirs. Even when starting out from camp of a morning, surrounded only by his own immediate family, a black, after shaking his spears, would very generally tell his wife and children what he intended doing during the day; how many kangaroos, etc., he proposed bringing home; how he would fight any one who dared oppose him, and vaunted himself upon his pluck, courage and endurance. Indeed, judging from what these aboriginals said of themselves, their lives must have been quite Homeric. In the ordinary corrobborees, which always took place in the neighbourhood of the camp about a couple of hours after sundown, the men only took part, while the dancing was of a stamping movement; the reverberation of the sandy ground was once indicated by the mercury in Austin's artificial horizon when at a distance of fully over a hundred yards. As decoration, feather down was stuck over their faces and bodies upon the stripes of red ochre grease, and pipe-clay. The plays usually performed represented emu and kangaroo-hunting, etc., though various other personal adventures, with embellishments, were depicted. The audience at these entertainments consisted in the main of women, children and old men. Some of the women in the squatting position beat time with the flats of their hands, or with sticks, upon the cloaks stretched tightly across their knees. Others again would stand up and beat their yam-sticks, etc., held crosswise over their heads.

They never employed roads or bridges, though, for instance, a log lying (not placed designedly) across a creek might be utilised for the purpose. They were expert swimmers, hand-over-hand fashion, like a dog. When on land their ordinary property did not consist of anything more than what they could carry. On the walk-about, halts were made generally at some very dry stage, the nature of the timber giving them some good idea of the substratum. When "at home," the increasing remnants of old refuse, the superfluity of ants, or scarcity of food in general, were causes operating to compel them to shift the sites of their camps. The general arrangement of the camp itself was crescentic, with the "horns" towards the fires; each hut, from a few to a score of yards apart

had its own fire burning at about a yard to a yard and a-half in front of the entrance. Permission had to be asked and obtained before travellers were allowed within the precincts. In travelling, the men went in front, generally in single file, the women bringing up the rear some sixty or seventy yards behind. The former carried the weapons, and any game that might have been caught during the day, while the latter burdened themselves with all the remaining property. Some of the particularly old men—this was certainly never observed among the younger ones—used to carry a small dilly-bag over the left shoulder, hanging in the armpit; this contained red ochre, pieces of crystalline quartz (for the spears, etc.), gum, and hair. Their powers of rendering the voice distinct and intelligible over comparatively great distances were remarkable. They could both speak and reply. In one case that came particularly under Austin's observation, over an estuary quite one and a-half miles wide, where they would ascend a tree to a height of about 20 feet, the better so to do, the voice of conversation in that particular instance was carefully modulated rather than high-pitched, though the initial sound to attract attention was a sharp shout.

The red ochre, wil-gi, was rubbed up in the hand dry, or pounded with a stone to a fine powder. It was also subsequently mixed with snake's entrail or iguana fat held at the end of a stick over a fire. Supposing now that our individual in question was about to take his departure on a visit elsewhere, etc., he would arrange his toilet somewhat after the following fashion:—After seeing that his weapons and accoutrements were all in good condition, and removing his head and belly strings, he would put the wil-gi powder into his left hand, and then with the right thumb dab it in rings round his chest, arms, thighs and legs. Admiring himself, he would take up a spear and wommera, shake them in defiance at an imaginary foe, and probably sing a song concerning his own prowess, his wife, of course, telling him all the time what a fine, noble fellow he looked, and how that he was by far the better of the two. In this mood of supreme self-satisfaction he would squat down, and with some fat smear the whole of his body and limbs until the skin showed a uniform appearance of a greasy vermillion colour. Singing all the time, he would finally red-ochre grease the head and belly strings before putting them on again.

The former was first of all wound round the head once or twice, and the hair turned up, then another circle or two, and more hair turned up, until at last the whole of the hair was fixed in the form of an upstanding tuft. He would now consider himself suitably dressed to make a start from camp.

The wife used to paint herself on similar lines, especially if they were a happy couple, and they shared each other's joys and sorrows.

The grease-paint, in addition to serving a decorative purpose, was useful in keeping away the ants, sandflies, and other insects. The renewal of the painting process depended greatly upon the supply of the ochre itself, and whether for the purpose of paying a visit to another camp, they were desirious of appearing at their best. It was not done every day, but if they were young men and fancied themselves they would renew it as often as the inclination took them.

Raised scars, "keloids," or "flash" marks were always to be seen in the males on the breast and arms, sometimes on the back and shoulders, but never on the thighs. On the chest they were each about 2 ins. long, lying in horizontal rows one below the other as far down as the pit of the stomach. Austin observed the scars to be originally made as small scratches, and into each saw them rub "dirt," the particular nature of which he omitted to enquire about. The women were not so strongly marked in front. The keloids here lay rather in between the two breasts, and reached below as far as the navel.

They wore a cloak, bo-ka, made of kangaroo hide (sometimes with a collar some 5 ins. or 6 ins. deep, which fell over) hanging to just below the knee, and shorter in front than behind. It was worn with the hairy side in, and was coloured on the outside with the wil-gi. It was made of some seven or eight gores (*Plate V., fig. b*), wider below than above, each prepared from a skin by pegging it out, preparing with ashes, scraping with quartz, and then thoroughly greasing until perfectly soft. The separate gores were sewn together, either with kangaroo tail sinew, or else with rushes, the separate holes for their insertion being made with a piece of pointed bone (*Plate V., fig. c*). The ends of the cloak, which was worn differently in the two sexes (*Plate V., fig. d*), were fixed together at the top of the right shoulder by means of a toggle and grummet

(*Plate V., fig e*). These cloaks were always worn in the winter time, the wet season, *i.e.*, June, July, and especially August. If the parents chose to take the trouble they would clothe their children with similar garments ; otherwise, the little ones would have to make shift as best they could, each with a single skin.

In the cold weather it was a common thing for the adults to carry a lighted fire-stick under their mantles, to keep the lower portion of the abdomen warm ; this stick was held in the left hand, in between two pieces of bark, just like a coal in a pair of tongs, and as it got burnt up, another would be picked up and lighted as they went along.

In connection with personal ornaments, it may be mentioned at the outset that married women wore nothing except the cloak ; it was only the young, unmarried women and the little children who occasionally sported necklaces in the form of two or three rings of threaded grass-reed beads. Even the various accoutrements to be immediately described as pertaining to the men did not constitute any sort of corrobboree dress, but were the "fashion" when travelling, or paying a visit to one's neighbours. When necessary, the hair was cut with a sharp quartz stone, but never cropped as short as the women's ; the men cut their whiskers from between the ear and angle of the jaw, so as to leave a beard and moustache, while some of the older ones especially shaved the moustache only. There was never avulsion of any teeth ; the nose was bored, but the wearing of the nose-pin exceptional.

(*a*) The ka-ta-band (*cf.* kata—the head) was a piece of red-coloured opposum string, as thick as ordinary twine, wound across the upper portion of the forehead, the thirty or forty coils round the head forming a thick band about one and a-half inches wide.

(*b*) A dingo tail was often tied round over the kataband, while

(*c*) A bunch of feathers was often stuck into it. This bunch was formed of the pinnules pulled from the stems of white cockatoo or emu feathers, all tied tightly into a bundle, through which a wooden skewer was plunged.

(*d*) There was an armlet, always on the left arm, formed of red opossum string, wound round and round at least a score of times. Underneath it a bunch of feathers, without any

skewer, was usually tucked ; otherwise this bunch was fastened under the waist-belt at the loins.

(*e*) The belly-string or waist-band, nul-ban, or nul-band, was formed similarly of a great length of red opossum twine, coiled around so as to form a solid mass, quite $2\frac{1}{2}$ to 3 inches wide, and $\frac{1}{2}$ inch thick ; in this they carried their tomahawk (kod-ja) behind, and their boomerang (kai-li) on the left side.

Besides the nasal and cicatricial mutilations already referred to there was nothing worthy of note, no circumcision was practised, though the latter rite was prevalent at the time up at Champion Bay, some 300 miles to the northward. On the other hand, the prepuce was always well forward with marked crinkles at the extremity. Children up to five or six years of age were often noticed to have what was apparently umbilical hernia, but this deformity was never observed among the adults.

The striking of the skins or cloaks stretched across their knees, either with sticks or with the hands, as well as the tintinabulation of the yam-sticks hit crosswise over their heads, was the only primitive form of music noticeable.

There were no canoes, or any signs of them.

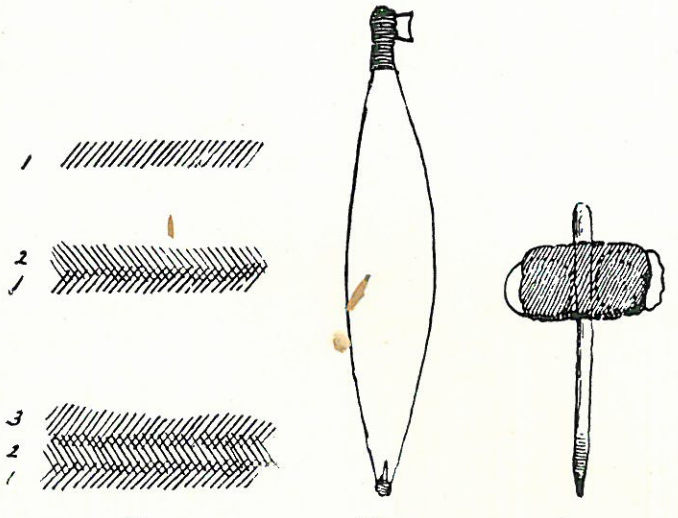
As a rule, these people lived in the open in this temperate, beautiful climate, though in wet, wintry weather they used huts, and occasionally protected themselves from the violence of blowing winds by means of "break winds." The huts were of two varieties, according as they were built of grass-tree leaves, or with bark, the choice of "timber" depending upon its temporary abundance or scarcity. When made of grass-tree—and these were from five to six feet high, about four or five feet in diameter, with a floor-level unaltered from the surrounding ground-surface—some fourteen or fifteen peduncles were stuck into the sand, at pretty well equal distances apart (except where the entrance was subsequently to be), and fixed together at their apices, so as to form a kind of cone-shaped scaffolding. The grass-tree leaves—about eighteen inches long, and one sixteenth of an inch thick—having been collected from the trees, and carried in the bend of the left elbow, were then dropped in handfuls with the right hand into the sand, points downwards ; each handful, it must be borne in mind, was not thrown vertically, but at an angle. The whole row round having been completed, a second layer was commenced, but this time the

bundles were fixed at an angle with those of the first, the leaves interlacing with one another as in a cheval-de-frise ; the third layer would have its constituent leaves of course placed in the same direction as the first (*Plate VI., fig. f*), and so on alternately, until getting higher and higher, they became wedged in between the gradually narrowing interspaces left by the peduncles. As the structure proceeded, the builder himself would occasionally from the inner side look out for any weak spots which were located by the light coming through ; he would then start again from the bottom so as to act as a foundation for what was necessary to put in to fill up the gap.

When the grass-tree leaves were at all scarce, these aboriginals built themselves bark huts, their primary scaffolding of which consisted of two forked sticks, and a backstay ; if the latter were forked, so much the better. The secondary scaffolding was formed of two thick pieces attached each from about the middle of the back-stay to the lower end of the main-stay, while cross-wise were placed (not tied) several additional sticks, which together supported the final covering of bark-sheets. The bark was put on from below up, the pieces above overlapping the ones underneath ; on top of all, along the line of the back-stay, was fixed a projecting bark ridgecap (*Plate VI., fig. g*).

The break-wind was a semi-circular ring of bushes intertwined with a few additional ones hanging overhead at the centre.

Fire was produced by twirling a stick, held vertically, on to another stick fixed horizontally, the wood so employed being the grass-tree peduncle. The flat surface on the horizontal piece was bitten out with the teeth, upon it the vertical piece was twirled, and as soon as the "pit" was produced a nick was cut, so as to connect it with the surface edge. Within this same nick was next placed some of the powdered "fluff" (from the dried-up flowers on the peduncle-top), which acted as a sort of train to the fine dry shreds of fibre (scraped from the inside of a dead log) lying close below. As soon as the smoke appeared, this "sawdust" or "tinder" was fanned into flame by a gentle breath. If the necessary timber for manufacturing these firesticks ever proved at all unsuitable through wet, or scarce, the lighted sticks would be carried along under the men's or women's cloaks.



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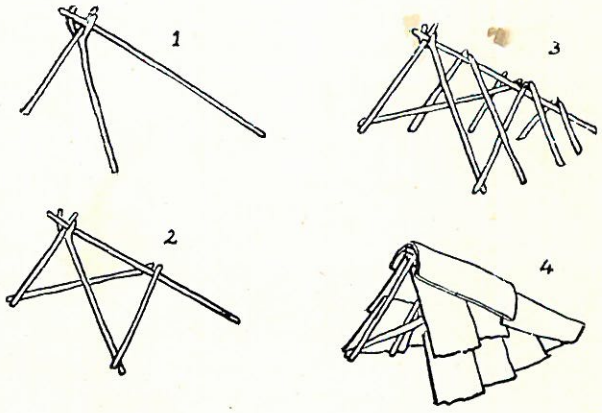

G.

Opossum string was manufactured as follows, and by the males only: From a heap of opossum hair well rubbed together, at his left side, the operator would pick up a piece, roll it up and down his left outer thigh, in squatting position, with corresponding hand, and, fixing it length to length, roll the string so formed on to a distaff with his right hand. This distaff was formed of two round pieces of stick, each about 3 inches long, tied crosswise, the shape of a cross. The string itself was of single strand, and not in any sense too strong. They further used for sewing purposes, when sinews, etc., were not available, a piece of jointless rush, a very tough kind of wire-grass without any blades on it. Austin never saw any human hair *per se* used as string, but often observed them employing longish strands of it, mixed with grass-tree gum, for fixing the sharpened shell into their wommeras, the barbs on to their spears, etc., The fixing process in these cases consisted in tying first of all with hair, then covering with a coating of gum, and heating; again more hair, more gum, heat, and so on.

Up to the time of the advent of the Europeans they never manufactured nets. The nearest approach to anything of this sort was the basket-work arrangement at the end of a wallaby drive, formed of thin sticks stuck into the ground, and then wattled horizontally in and out with rushes.

The dilly-bag (go-ta) was used by the women only, slung up by a piece of string, and carried round the neck, so as to hang down over the back. It was formed of a long piece of dressed kangaroo skin, folded over, and sewn at the sides, leaving just a slight cover.

Omitting for the present the specially-constructed weapon for catching emu, these people had three varieties of spear—ked-ji, all made from a very hard and straight wattle, the timber of which gave the name to the instrument; the process of manufacture was simple, the sapling being just stripped of its bark, which left it a bit "ribby," then scraped where necessary, and subsequently straightened by holding it over some heated ashes, and bending it with the teeth and hands into the required shape. They were all about 10 feet long, and from $\frac{1}{2}$ inch to $\frac{5}{8}$ inch in diameter, with a rounded point about 6 inches long, and invariably thrown with the wommera. Such a one constituted a fish-spear. The quartz-spear bore along a vertical length of the tip numerous pieces of quartz crystal, subsequently

replaced by glass, fixed in position with gum. The barbed spear had tacked on to it, about an inch or two from the point, by means of hair and gum, a spatulate concave piece of wood, about 2 inches long, wider at its free than at its fixed extremity. The blacks each ordinarily carried about with them during the day one quartz-, one fish-, and two barbed spears; if on the war-path, the fish-spear would be discarded for an additional quartz one.

The wommera (mi-ra) (*Plate VI., fig. h*) was formed of a perfectly flat piece of any hard wood, cut into a leaf-shape pattern; it was about 2 feet long, 4 inches or 5 inches wide, and $\frac{1}{4}$ inch to $\frac{3}{8}$ inch thick. Both extremities were covered with hair and gum; a kangaroo tooth fixed at the distal extremity acted as the hook, while a piece of concave-edged shell, firmly planted into the haft laterally, played the part of spear scraper and sharpener.

The tomahawk (kod-ja) (*Plate VI., fig. i*) consisted of a handle 8 inches or 9 inches long, each with two stones fixed on opposite sides with gum and hair, at first sight giving the impression of there being but one; the exposed edge of one of these stones was comparatively rough and blunt, while that of the other was ground fairly fine. The width across, at their extreme edges, was quite 5 inches, and its gross thickness about $1\frac{1}{2}$ inch. This implement was particularly used in the climbing of trees. The rough stone-edge was used for smashing or bruising the bark to get a firmer foothold, while the sharper was employed for actual cutting; the lower end of the handle, previously hardened with fire and sharply pointed, was jobbed into the tree more or less horizontally, and, held close to its insertion, afforded the climber not only a means of steadying himself, but also of advancing. When not in actual use the implement was carried on the loins, under the waist band, the handle hanging along the upper portion of the fold of the buttocks.

Boomerangs (kai-li) were made of the "jam-wood" Acacia, a tree which grew favourably for the required shape. They bore no regular pattern in the way of marks beyond some zig-zags and strongly incised straight lines, and sometimes these were absent altogether. Older men used them for fighting purposes, younger men for throwing at birds, etc. Austin never observed an individual carrying more than one of these weapons at a time.

The ordinary yam-stick (won-na) was a rounded piece of wood, not quite as thick as a broom-handle, about 6 feet long, scraped, and hardened with fire at one extremity. Though primarily devised for digging up roots and yams, the women also used it for fighting purposes, in the procedure of which they adopted three lines of defence: held with both hands vertically, to the right, to the left, and horizontally over the head.

Nothing was observed on the immediate coastline here with regard to rock carvings, mural paintings, etc., though Austin discovered some beautiful examples subsequently on the Murchison.

They were not an emotional people, and were able to express themselves by signs, independently of speech. The showing of the teeth, with the beard firmly clutched in between, was a common gesture indicative of anger, and the likelihood of a row.

Austin does not believe that there were ever more than from twelve to twenty heads of families constituting the groups, each with its particular territorial divisions, who together made up the tribe, extending between the Murray River and Koombana Bay. They evidently avoided too close intermarriage.

On the whole these primitive people were amenable to the standard of honour imposed by their tribe; they were equally expert in the use of weapons, and, while restrained by those unwritten laws which tended to maintain order and insure the general comfort of the community, they were prepared to fight to the death, and go coolly and deliberately to mortal combat in the face of all men.