THE

ANTANANARIVO ANNUAL

AND

MADAGASCAR MAGAZINE.

A RECORD OF INFORMATION ON THE TOPOGRAPHY AND NATURAL PRODUCTIONS
OF MADAGASCAR, AND THE CUSTOMS, TRADITIONS, LANGUAGE,
AND RELIGIOUS BELIEFS OF ITS PEOPLE.

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AGRICULTURAL PROGRESS IN MADAGASCAR.

Our leading article in the last number of the ANNUAL was devoted to "Industrial Progress in Madagascar;" we propose in this first article of the present number to note a few particulars as to advances made during the last year or two in agriculture and planting.

All readers of the Journal officiel of the French Government know that General Gallieni has made strenuous efforts to promote the planting of various roots and vegetables, so as to increase the food supply of the people; and the reports of the commandants of military "circles" and "sectors," as given, not only in the Journal, but also in the Notes, Reconnaissances et Explorations, show that great attention has been paid to the subject by the military officers and other officials. In the Notes, elaborate and detailed lists are given not only of all the grains, roots and vegetables produced in the various districts of the island, but also of the valuable timbers, the useful fibres, the gums, the dyes, and the medicinal and other products of the forests, which may be collected, as well as increased by planting. Never before has the vegetable wealth of Madagascar been so thoroughly and carefully investigated, and probably there are now few plants or trees of any value unknown to Europeans. If the resources of the island are not now developed, it will not be for want of information as to their nature and distribution.

The results of General Gallieni's efforts in this direction may be seen by all who go about the country, for never has such a large extent of waste land been brought under cultivation as is

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the case at the present time. Everywhere we see manioc and sweet-potatoes and other vegetables growing, so it may be hoped that this kind of food at least will be very plentiful in a year or two's time, and will help to relieve the distress which was so severely felt during 1898 especially, and bring down the price of rice to a figure more nearly like what it used to be sold at. It is sad to think that last year numbers of people in the northern parts of Imérina died from famine; but we may hope that through the efforts of the General and his officers, such a calamity will never again be felt in any of the provinces of the island.

Another evidence of foreign influence may also be seen all over Imérina, viz. the planting of many thousands of trees on waste ground, and also along the sides of the new and broad roads which have everywhere been constructed. Although in many instances this work has been carelessly done, thousands of trees—Cape-lilacs, vahana, mangoes, fanoe, eucalypti, and others—have taken root; and in a few years' time the bare appearance of much of the interior of the island will give place to luxuriant verdure; and avenues of trees will cross the country in every direction. Some climatic changes will no doubt be gradually effected, and, amongst others, there will probably be more frequent rain during the dry season, from May to October, as a consequence of the greater abundance of foliage.

For the last two or three years a great amount of experimental planting has been carried on at the Government Gardens at Nanisâna. These gardens are about 2½ miles from the northern extremity of the Capital, and consist mainly of an old and extensive orchard, principally of mango trees, to which other land has been added. In the lower portion of the grounds are two or three large clumps of fine Ravintsâra, the Madagascar spice tree, of which every part—flowers, fruit, leaves, and bark—is fragrant. These trees are not natives of the interior of the island, but are indigenous to the lower and hotter forest regions; the largest specimens to be seen in Imérina are in the late Queen's Gardens at Mahâzoarivo. Walks have been cut through the mango groves, and here, as well as on the more open ground, a large variety of plants are being cultivated in order to test their suitability to the soil and climate of this part of the country. Here we see numerous species of millet, beans, peas, carrot, oats—five or six varieties—sorghum, earth-nuts, manioc, and cotton, most of them appearing to be vigorous and healthy, although the red soil does not look at all promising for the growth of exotics. Here are also plantations of aloes, agaves, mulberry-trees, figs, eucalypti, crôtons, cannas—with very fine and large
flowers—azaleas, poinsettias, and some new species of cactus, with much larger leaves—if they can be so called—than the naturalised species so common in Madagascar. It would seem that there are hardly any of these plants and trees which will not repay extensive cultivation.

Not only is what is useful cultivated in these gardens, but what is beautiful and fragrant also is not neglected; and it is delightful to see a large variety of European flowers, both in pots and in beds, forming masses of colour which remind one of gardens in France and England. Many thousands of seedlings are being raised in and around the long greenhouse lately constructed; and young trees and plants are supplied from the gardens at very cheap rates, so as to promote planting and horticulture. In a few years' time the Nanisana Gardens will be still more beautiful and interesting than they are even at present.

This year 1899 is memorable in the agricultural progress of Madagascar from the establishment of the first Agricultural Show or 'Concours agricole,' on the 15th, 16th, and 17th of April. This Show was held on an extensive tanity, one of those low rising-grounds which swell gently from the great rice-valley to the west and north-west of the Capital. This spacious place, called Androhibé, about four miles north of Antananarivo, was well suited for the purpose, and presented a very gay and lively appearance during the three exhibition days. About a mile west of the north road brought us to the Show, which was conspicuous from a considerable distance by a profuse display of tricolor flags. Here was a great circle, of three or four hundred yards in diameter, formed by a continuous row of stalls or counters, roofed over, and on which were placed the exhibits. These consisted of almost every kind of vegetable produce grown in the Imérlina province. Here we found all the varieties of rice—in the ear, in the husk, and in various stages of cleaning from the husk, from the 'red rice' eaten by the poorer people, not so inviting in looks, but probably more nourishing than the 'white' kind, up to the pearly appearance of the finest white rice; mangaházo or manioc root, including some immense specimens, from plants which had grown for seven years, and took several men to carry; enormous pumpkins, yellow and green, as big as giants' heads; great saonjo or arum tubers, the taro of Polynesia; Indian-corn, yellow, white, and red; ampèmby or millet; beans, in all varieties of colour and shape; native earth-nuts and foreign pistachio nuts; and sweet-potatoes. Here were fruits, in the shape of bananas and plantains, red, green and yellow; citrons and limes and shad-docks; a few grapes, the last gleanings of the vintage, for it
was too late for these fruits; also some poor *bhāsy*, or loquats, for which it was a little too early; and some very fine apples grown from trees planted in Betsileo. Here were also a few specimens of foods prepared from vegetable and animal products, viz. red wine, butter, cream, and cheese; pickles and jams; and also honey and wax. Besides these were manufactured articles, such as mats, in considerable variety, baskets, cord, twine and rope; spoons, cups, dishes and plates of horn and wood; cloths of cotton, silk, hemp, rofia and aloe fibre. It should be said, however, that the display of these cloths was very poor and inadequate, as showing the manual skill and taste of the Malagasy women who weave them. But probably this arose from the newness of such an exhibition, and perhaps still more from the unwillingness of the owners of valuable fabrics, like the more costly and beautiful silk lambas, to expose them to the dust and wind and possible rain of an open-air display. There were also some specimens of needlework and embroidery, and a number of pillows with delicate lace, chiefly made by the women of Ambôhimânga. The women of this old capital town have for long been noted for their skill in this beautiful art, which was first taught to them by Mrs. Wills, late of the L. M. S. Mission. These productions of their clever fingers were, however, a good deal soiled by the dust and wind. There should certainly have been a more protected position for the display of such delicate manufactures as silk lace.

Iron-work was represented by knives, spear-heads, and the enormously long blades of the native spades, which are driven into the ground by the weight of the instrument and its heavy wooden shaft, since the naked foot of the Malagasy labourer cannot be used to drive the spade into the hard earth. It was interesting to see also a number of ploughs and harrows of French manufacture, although it very doubtful whether such European implements could be profitably used in the culture of rice. They may, however, be of service if wheat and barley and oats should be planted extensively on the lower hills and downs of the interior.

All around the central enclosure were gathered a very large number of cattle. Many of these—the native humped species with long horns—were magnificent animals, and the garlands and ribbons with which many of them were adorned showed that they had gained prizes from the judges. But there was also a large display of cattle of foreign introduction, without humps, and with short horns, in striking contrast to the grand weapons of the native stock. These cattle are called *rânalâhy* and *rânavavàny* by the Malagasy. The native sheep, with their
twisted horns and long fat tails, were well represented, and there were a few examples of the recently introduced Merino sheep. Goats and kids were exhibited, and many fine specimens of pig, almost as fat as those to be seen in European cattle shows. The pig has only obtained an entry into this part of the province since the French occupation; he was formerly a tabooed animal, and was supposed to be disliked by all the chief idols of the Hova. There was also a fine show of poultry of all kinds: turkeys and geese, ducks of the ordinary and of the Muscovy breeds, a great variety of domestic poultry, and also a few pigeons.

Such, as far as could be ascertained in a rather hasty visit, were the chief features of this first Malagasy Agricultural Exhibition. Considering all the circumstances—the novelty of the whole thing, and the suspicions some of the people had as to the real objects of the Show—it must be pronounced a very encouraging success and a good omen for future advance. General Gallieni is certainly to be congratulated on the way in which his efforts to stimulate the Malagasy to greater enterprise and industry have been responded to by large numbers of the people of Imèrina. On the afternoon of the concluding day of the Exhibition, the General gave a large number of prizes to the successful exhibitors, greatly to their satisfaction; and we may confidently expect that the next Agricultural Show will attract still larger numbers of exhibitors, and give still greater stimulus to agricultural enterprise on the part of the Malagasy. In all such efforts to benefit the people and the country, the action of the French Government must be heartily applauded by all who wish well to Madagascar.

JAMES SIBREE, ED.
THE history of Madagascar, and the story of its people and their customs, have been so often told and retold by writers of different nationalities, more or less competent and trustworthy, that there is really nothing very new to record concerning the position, customs, and occupations of the Women in Madagascar.* At the same time, there are perhaps a few things connected with them and the life they live which will interest readers of the Annual living beyond the boundaries of the colony; and this is my apology for writing the present paper.

The long period during which the throne of Madagascar was occupied by women is one of the familiar facts in the history of the island. With an interim of only a few months, female sovereigns reigned from the year 1828 till 1895. First came Ranavâlona I, who reigned from 1828 till 1861, and will ever be known as "the persecuting queen of Madagascar." She was followed by Rasohêrina,† who sat on the throne from 1863 till 1868, whose name will be handed down to posterity as "the last of the heathen sovereigns." After the death of Rasohêrina, her cousin Ramôma was crowned queen, and, honoured and loved by her subjects, occupied that exalted position till her lamented death in the eventful year 1883. All true historians will write of her as "the good Christian queen, Ranavâlona II." Razafindrahêty, a niece of the last-named sovereign, succeeded to the throne. She was publicly crowned, on 22 November, 1883, as Ranavâlona III., and continued sovereign of the island until the French conquest and occupation in 1895, and was not less honoured and loved than her predecessor.

In the pages of Malagasy church history also, women worthily occupy a prominent position; and it should be long before Rasalâma, the protomartyr, and others are allowed to be forgotten, on account of their steadfast adherence to the Protestant Christian faith which they had embraced, and the heroism with which they endured persecution during the reign of Ranavalona I., and finally suffered martyrdom by being speared, or hurled down rocky precipices, or made fuel for the flames, which were cruelly kindled around them and consumed their bodies on the heights of Faravohitra.

The social position of women in Madagascar does not strike an observer as one of marked inferiority to that occupied by the opposite sex. Many little things indicate that she is not recognised as standing on exactly the same platform as that occupied by the men; but the treatment she receives is seldom in very wide divergence from what is warranted by the New Testament teaching, which affirms that: "The head of the woman is the man," and the appropriateness of which is generally recognised throughout Christendom. It used not to be the

* The reader should understand that nearly all of what is recorded in this paper applies more particularly to women belonging to the Province of Imêrîna.
† [Radâma II. (1861-1863) was hardly reckoned among the sovereigns of Madagascar.—J.S., E.D.]
custom in Madagascar for man and wife to walk side by side during their walks abroad; the man generally took the lead, and the woman followed in his train. In speaking to, or of, her husband, the wife frequently uses the term, ‘Tompokolahy,’ i.e. Lord, Master, or Sir, instead of the more tender and affectionate epithets with which European ears are familiar; and it is also true that, on the occasion of any domestic feast, or more public fête, the women wait upon the men and minister to their wants before attending to their own. An explanation can, however, be given for this conduct, and these things must not be taken to imply that inferiority is the recognised position of women in Madagascar, for it is not really so. That she usually followed behind her husband in public walks was a time-honoured Malagasy custom, to which no special meaning can be attached; and sometimes such a course was necessitated by the condition of the roads before the date of the French occupation; for in Antananarivo they were execrably bad, and in the country many of them were nothing more than narrow tracks which could only be traversed in single file. Addressing the husband as Lord, or Master, or Sir, is simply the use of Oriental phraseology instead of the Occidental; while the other fact I have mentioned may be understood as rather an evidence of the respect of the woman for the man, and a laudable desire on her part to render him becoming honour, than as an assumption on his part of superiority, or of admission on hers of inferiority. On the greatly improved roads now found in Madagascar, the different sexes are often seen walking side by side; and an educated native speaker (especially such as have come in contact with Europeans), addressing a mixed assembly, pays most becoming respect to the female portion, using the words: “Tompokovany sy Tompokolahy”—“Ladies and Gentlemen”—as the opening formula of his address. During long residence among the people, I have never observed anything which has made me consider the position of the women as particularly hard or degraded, nor has the general treatment of them by the husband or others often called for remonstrance or rebuke, or suggested a demand for vigorous reform in that direction. The lot of the slave women was undoubtedly sometimes oppressive, especially in that she could be separated from her husband, and that her children could be sold away from her; but those were evils connected with the system of slavery, and not due per se to the position occupied by women in the island.

While slavery was still a Malagasy institution, the women among the higher ranks occupied a position of idleness and ease, and of what, from a native stand-point, was one of comfort and luxury. This is not the place to discuss the question of slavery, or to give expression to any private or individual opinion about the Edict of 1896, which suddenly removed the bonds of the slaves, and in a single day turned the whole population into free subjects; but the fact is indisputable that the emancipation has produced a complete revolution in the position of many women belonging to “the upper ten thousand,” reducing them from affluence to poverty, and changing their life of ease into one which necessitates the performance of much menial work—a change not indeed without its compensation, even as
a boot which pinches, or as an ill-fitting and uncomfortable garment, 
may be a protection to the wearer from severe frost and cold.

The occupations of women in Madagascar are very varied, and the 
line which defines the boundary of their duties is very distinctly drawn 
in some departments. Within this boundary the women confine them­
­selves pretty strictly, and the men do not often advance across it. That there are some things beyond female ability and outside their 
province is fully recognised, and appears in a native proverb which 
says: "Vehivany isy mahafaty lambo; amalo-masaka isy afa-mandeha," 
i.e. "Women can't kill wild boars; cooked eels can't swim." Plaiting 
the rush mats with which the floors of the native houses or huts are 
entirely or partially covered, and which are also used for many different 
purposes, also the making of the rush baskets in which so many 
things are carried and kept, and also the making of the straw hats 
worn by the men—these are all distinctly occupations of the women 
in Madagascar. So also is the moulding and firing of the various 
clay vessels used for cooking and other domestic purposes, and of those 
in which water is brought from the streams and springs, as well as the 
larger ones—sinóbé, as they are called—in which water is stored in the 
houses. Spinning silk, cotton, hemp, and other fibres of various kinds, 
is another department of women's work, which many of them follow up 
by weaving the threads they have spun into lámbo and textures of various 
kinds and patterns. I have never seen a man working the primitive 
loom which, from a remote period, has been in use in Madagascar. All 
domestic arrangements, as a rule, fall under female management, and 
in common parlance, the woman is spoken of as Tompon-trano, 
literally, 'mistress of the house.' Within the writer's experience, many 
girls and women in Madagascar did not know how to use, or even how 
to hold, a needle, or on which finger to place the thimble; but that 
primitive condition of ignorance has happily passed away, and through 
the exertions of European ladies connected with the various Missions 
in the island, a large number of the present generation of girls and 
women are excellent needlewomen, and could compete successfully 
with Europeans in doing the various branches of plain and fancy 
needlework; many among them can knit socks and stockings, and can 
darn old ones with praiseworthy neatness; they excel in the more 
advanced and finer arts of crochet, tatting, and embroidery, and many 
European ladies have been charmed with the beautiful specimens of 
pillow-lace, of which they have become the fortunate possessors, made by 
their coloured sisters in this country.

During recent years, the sewing-machine has found its way to 
Madagascar; and in not a few towns and villages the Malagasy matron 
may be seen sitting at her mlinna, as calls she it, making more rapidly than 
she could do with her fingers, garments for herself, her husband, or 
children, or for others whose patronage she is glad to secure for the sake 
of the remuneration it brings.

Within the past few years, in some districts, women have taken to 
carrying burdens—a department of labour which, until recently, was 
confined almost entirely to men. In the Capital, women may frequently 
be seen now-a-days carrying on their heads heavy loads of bricks and 
tiles, from the brick-kilns in the rice-fields at the base of the city, to the
plot of land where a building is being erected; and they are also often met bearing burdens of calico and other goods, for which service they have hired themselves to the men who have brought the goods from the coast, but who, finding themselves overcome by fatigue towards the end of their toilsome journey, are glad to make a bargain with any one willing to carry the packages to their final destination. About twelve miles from Antananarivo, I recently passed several women journeying towards the city, their heads crowned with huge galvanized cisterns, in which they themselves might have been conveniently transported through the country! The pressure of poverty which, during the past three or four years, has been felt by many of the recently emancipated slaves and others, and the great advance in the price of all kinds of food, is perhaps sufficient to account for this new departure on the part of the women in Madagascar. It is curious, however, to note that, though both men and women act as bearers of goods, a woman is never seen to carry hers on the shoulder, suspended from the ends of a pole, as men usually carry theirs; and that a man is not often seen carrying his on his head, as is customary with the women.

In the cultivation and harvesting of rice, the staple food of the Malagasy, both men and women engage. During the Malagasy spring and autumn the rice-fields everywhere present a scene of great animation; indeed in no other department of life is equal activity manifested. The women's share in this agricultural labour is very distinct. In the spring it is their work to transplant the ketsa, i.e. the young rice-plants. These are raised in special beds, and at the proper time are pulled up by the women, and tied into bunches of such a size that they can be conveniently held in one hand, all the roots being arranged in the same direction. These bunches of young plants they convey to the rice-fields, already prepared to receive them by the male portion of the population, and where, at the time of planting, water is usually standing two or three inches, or more, deep. Stepping into this, and holding a bunch of young plants in the left hand, the women seize the plants one by one very dexterously with the thumb and index finger of the right, and plunging the hand into the shallow water, fix the root of the young rice-plant in the soft mud beneath the surface. This planting is performed with great rapidity; but at the close of the day the backs of the poor women must ache to the breaking-point, as the operation requires the stooping position to be maintained throughout, until the field is dotted all over with the blades of the young rice-plants showing above the water; the physical exhaustion at the completion of the day's task must also be extreme, for the work is carried on under a burning sky, and at the season of the year when the rays of the sun are felt in all their tropical fierceness. In the autumn of the year, after the ripe grain has been cut by the men, to carry the sheaves to the threshing-floor, and afterwards to take the threshed grain to the storehouse, is again usually women's work. To husk the paddy, and then to clean and winnow it, and finally to cook it, and serve it out at meal-times to the family and household, are also duties which fall within the women's department.

Catching small fish found in shallow pools, and also in many of the rice-fields after harvest, is an occupation followed by some of the women. The net used is made of reeds, and is of an irregular oval
shape. The women wade in the water, and holding the *tandrèho*, which is the native name for their net, with both hands, one at either end, they bend forward, and stretching out their arms at full length, draw the net first down under the water, and then towards their legs, and finally up towards their breasts. I recently watched for a few minutes three women fishing in this manner. They had coiled up their garments into a kind of turban, and in the centre of this they had managed to fix a small basket on the top of their heads, into which to cast their takings, both hands being occupied with holding and drawing the net. It was most interesting to observe how, having brought up the net, and finding some members of the finny tribe enclosed within it, they temporarily held the net by the left hand only, while with the right they grasped the catch, and then, raising the hand above the head, dropped the small fish into the open-mouthed basket held by the turban of clothes, immediately afterwards resuming their fishing operations.

In the public bazaars women are always found squatting by the side of sundry articles, in the sale of which they show equal keenness and persistence with the opposite sex in making a bargain, after the lengthened higgling and haggling which invariably accompany all such transactions in Madagascar. The merchandise of the women is, as a rule, confined to hats, mats, baskets, fruit, vegetables, and the lighter wares; the hundred and one other things exposed for sale in these markets are, for the most part, left in the hands of the male portion of the trading community.

A few Malagasy women have been trained as hospital nurses and as midwives, and have proved themselves quick to learn these professions, and afterwards capable of discharging the responsibilities and duties connected therewith.* In the mission and other European families, native women are employed as nurses for the children, and of the majority of these it is impossible to write in terms too eulogistic. They have, as a rule, proved trustworthy, faithful and affectionate to a most gratifying degree, and have won the hearts of the children placed in their charge, and have also rightly secured the gratitude and love of the parents. In my own family, Înény (the familiar name for Nurse) has been with us for a period of thirty-three years; and while always proving herself capable for the very varied services required of her, and equal to every family emergency which has arisen, she has been an ideally faithful, loving and wise nurse to our now grown-up bairns.

With the Malagasy women personal appearance is by no means a matter of indifference. The charms of feminine beauty are admitted by the community, and a pretty face is prized by its owner, and does not fail to secure the admiration and eulogy of others. Nature has used her finest mould for some of the young women, and with their black hair and eyebrows, lustrous dark brown eyes, delicate and well-formed features, radiant with a bright and happy expression, and with their rosy lips, between which show a perfect set of the whitest teeth, there are damsels among them who present a really attractive appearance, and who, as specimens of Nature’s art, are worthy to stand by the side of many a European brunette. The hands and feet are seldom ungainly, more often they are small, especially is it so among the ladies of the *Andriana* clans.

* "Their patience and gentleness is far above that of the average English nurse." *Medical Mission Report,* 1890.
Bracelets, armlets, and nose-rings are not worn as by the women in India and other Eastern lands, except occasionally bracelets of large-sized coral beads, and which are estimated at a very high value. Neat earrings are not uncommon, and in recent years finger-rings have become very popular, so that the digits are often seen laden with these ornaments, made in massive gold by the native goldsmiths. The personal attractions to which I have here briefly referred are admitted by the wise in the land to be somewhat deceitful and dangerous, and a Malagasy Solomon remarks in one of his proverbs, that "Ta-rehy tsy mahakeo fanahy," i.e. "Character is superior to beauty;" and another affirms: "Ny hatsaram-panahy no ravaky ny vehivavy," which being interpreted is: "Character is woman's highest adornment."

As a rule, the Malagasy women have regular and excellent teeth, to the preservation of which they wisely give considerable attention, generally rinsing the mouth after each meal, and frequently cleaning the teeth, using as a dentifrice powdered charcoal, or the ashes of wood or grass from the fires in their homes. A native damsel considers it a grave misfortune to lose any of her front teeth in early life. Twice during my residence in the country I have been besought, almost with tears, to try and reinsert such teeth, after they had been accidentally removed. On the first occasion, the young woman, being chased by oxen over rough ground, had fallen and knocked out two of her upper incisors; on the other occasion, some domestic brawl was, I believe, the cause of a similar unfortunate result. In the latter case, the victim of the catastrophe was inconsolable and so utterly irreconcilable to her loss, that within a few weeks of the accident, she started on the journey to Antananarivo, a distance from her home and back of over three hundred miles, in order that her loss might be artificially replaced by the skill of dentists now exercising their profession in the capital city.

The native female dress is simple and neat, becoming the wearers, and suitable for the climate, and by unprejudiced critics must, I think, be acknowledged to be such as "even nature itself" suggested as fittest for the country and general conditions of life in Madagascar. It almost universally consists of a bodice of calico or print, a skirt of the same or similar material, with the national lamba gracefully thrown over the shoulders and hanging loosely over these garments. Neither hat, nor bonnet, nor any other covering is worn on the head, either in the house or out of doors, and the feet and legs are unencumbered and unpunished and undistorted by either stockings or boots. In making this statement, I am, of course, speaking of what is essentially native female costume. With not a few at the present period, vanity in connection with dress reigns triumphant, and such becoming simplicity as that of which I have spoken disappears, and the more complicated, expensive, extravagant, and oft-changing customs of European ladies are copied and adopted and often caricatured. In the Capital it is not uncommon to see Malagasy ladies attired from head to foot after the latest European fashions they have been able to secure; and foreign artistes who have come to this El Dorado advertise "Robes et Manteaux," and secure a sufficient number of customers to encourage them to remain in the colony.
In early years, and until past the meridian of life, the hair of all women in Madagascar is raven black; but time, and various troubles of this mortal life, have their effect upon it, and as years advance grey hairs are frequently discovered here and there upon them; and, in ripe old age, the once raven tresses become grey, and in some instances, glossy white.

A young Malagasy woman takes special pride in her hair, and the dressing of it is an important and absorbing process. Before the Emancipation Edict, among the upper classes, a favourite slave often acted as lady's maid for the occasion; but with the middle and lower classes, dressing the hair has generally been a reciprocal favour. Various terms are found in the native language for the different styles in vogue of arranging the hair; but, if the one most in favour is designated by its characteristic feature, it should be called the 'knobby style,' since it consists in tying the hair into a number of small knobs, so that when finished, the lady has knobs at the back and the front, knobs on either side, knobs on the crown, and, in fact, knobs all over her head, varying in number, size and pattern according to the vagaries of individual female taste, as many as twenty or more different ways of finishing the hair in this 'knobby style' being known among the sisterhood.

The toilet requisites are few, simple and inexpensive, and consist of a pointed piece of bone, in shape and size something like a stiletto; a brush, perhaps twelve inches long and about the size of the middle finger of one's hand, made from a whisk of stiff grass; and a vessel containing grease, not attractive in appearance, and which you soon discover has not been perfumed with otto of roses or anything of exquisite odour. The hair being taken up and separated into small strands by the stiletto-like comb, is well anointed with the Macassar and brushed; after this it is plaited into fine braids, which when completed are doubled up into the number, size and design most coveted by the owner of the tresses, and these form the knobs. This style of coiffure is not achieved in ten minutes or a quarter of an hour, but what with first taking-down, then unplaiting, followed by the anointing, brushing and replaiting, and artistic arranging, it often occupies the best part of half a day! This is perhaps the chief reason why this part of a woman's toilet in Madagascar is attended to only about once a month, after the example of the fashionables in England some two hundred years ago, when heads properly dressed "kept for three weeks," as the coiffeurs of those days phrased it. I should not forget to add, that if nature has not been sufficiently generous in the quantity of hair bestowed, a Malagasy damsel makes up the deficiency in the simple manner well known to her sex in civilized lands, and she does not hesitate to supplement her own locks with contributions from those of others, or to meet the want from other sources.

At the death of relatives and friends, the hair is dishevelled as a sign of mourning, and it is allowed to remain in that unkempt condition during the period over which the mourning extends. At the decease of Queen Ranavalona II. in 1883, the female population suddenly presented a curious sight, as the women of all ages, ranks and conditions were everywhere seen with their hair falling over
their neck and shoulders and hanging down their back, in obe­
dience to the orders issued for national mourning. Even this was a
great concession, and to the female population an acceptable modi­
fication of the earlier customs which, in times of national mourning
for previous sovereigns, had required the hair of all subjects, whe­
ther male or female, to be cut off, much in the same manner

A marked and pleasing change in the customs of the women in
relation to their hair has taken place within the last few years, and
is extending rapidly through the country. In the churches, and
among the scholars in the girls' schools in Antananarivo, it is the
exception now-a-days to see the hair worn in the 'knobby' fashion;
nearly all the women in the city congregations, and the girls in
the schools, have their hair done up in a neat and becoming manner,
similar to that which they have observed followed by the wives
and daughters of the missionaries and the few other European
ladies who live among them. In her locks a Malagasy woman holds
a power with which she not unfrequently exerts a conquering in­
fluence over the opposite sex; for, with her hair nicely and newly
done, she often presents a very attractive appearance; the more
so as the occasion for which the hair has had special pains be­
stowed upon it is frequently also one on which she appears in her
best and cleanest garments. This power was long ago recognised by
sages in the country, and is revealed in the ancient proverb, which
runs: "Ràndra-milan-dàhy," i.e. "Hair-knobs hold the laddies."

As remarked in the preceding pages, all the domestic arrange­
ments fall within the woman's province; the "all," however, repre­
sents a very different quantity to that which the head of a Euro­
pean household would attach to it, for the duties are neither nume­
rous nor burdensome, life being still confined to its primary elements
in most Malagasy homes. Many houses consist of but a single apart­
ment, and an average fairly good one has not more than two rooms
downstairs. From the single entrance door of the building you step
into the first apartment, and from this, the inner one is reached
through a small door, or a simple opening in the partition wall.
The inner room is supplied with a small window, but such an arrange­
ment is absent in the first, the entrance door for the household
and all comers being also the medium by which daylight enters.
From the south-east corner of the entrance apartment, a rude stair
leads to the attic—really the inside of the roof. This is utilised as
a kitchen, where the preparation of food and the cooking opera­
tions are carried on, and where frequently the meals are eaten;
this attic is also often used at night as the bedroom for numerous
members of the family and visitors or others. As this average house
has no glass windows, and no wooden floors, and no furniture,
there is very little cleaning, or scrubbing, or polishing to attend to;
and as the area is only about 12 ft. by 18 ft., there is no heavy
pressure of work of any kind to demand the attention and occupy
the time of the mistress of the household. The surface of the
mud floors is covered with rush mats; but even though the mats are
newly laid to-day, they soon get into a condition far removed from
the "spotlessly clean," notwithstanding the fact that they are occasionally swept with a kind of broom of stiff dry grass. In order to show respect to visitors, it is usual to spread a small new mat over those already covering the floor, and upon this the visitors squat. I say "squat," because, if left to themselves, that is the position assumed by the unsophisticated Malagasy, male or female, and in which they are most at their ease. With furniture, in the European meaning of the term, the ordinary Malagasy house is not over-crowded. There may possibly be a small table and a single chair, but in nine out of ten of the houses you enter you will not find either. A rude wooden bedstead is the one piece of furniture most frequently met with, and this usually occupies the north-east corner and side of the inner apartment, when the house can boast of two rooms; and on this bedstead, sleeping-mats, and sometimes a mattress stuffed with grass and one or two pillows are spread—the last-mentioned being placed at the end to the north, as it is considered unlucky to lie with the head to the south, superstitions connected with witchcraft being the reason of the unwillingness of many natives to resign themselves to the arms of Morpheus in that position. In the burial of the dead, none but persons accused of witchcraft are laid in the grave with the head to the south.

Two regular meals daily is the standard family arrangement. The first is eaten in the morning, at a variable hour before noon; the second is eaten just before lying down for the night. In the preparation and cooking of these meals the housewife finds a little occupation, but she is happily a stranger to that burden of responsibility which rests upon and so sorely oppresses the head of many a household in civilized lands, for there are no dainty or luxurious dishes to be prepared at the cost of much time and trouble and anxiety, and no pastry to be made with mathematical precision in regard to quantity and weight of the ingredients, and upon the cooking of which the most scrupulous care and unremitting attention must be bestowed, in order that the ideal standard of excellence may be attained, and the reputation of the mistress and the cook established. There is very little variety in the menu of the native meals. Rice is the staple article of food, and to-day's breakfast and supper are like yesterday's, and to-morrow's will be a repetition of to-day's. Boiled rice in the morning, and ditto in the evening, is the staff of life upon which the Malagasy lean from January 1st till December 31st, dating from the early months of existence, until, the end of life's journey being reached, they need the staff no more. In many families a small portion of meat or poultry is the accompaniment of the rice; but far more frequently, a broth made from indigenous vegetables is all that is taken with it.

The cooking is frequently done in the attic already referred to, at an open fire-place, the clay or iron cooking vessels being placed on tripods, and wood or grass being used as fuel. No provision in the way of a chimney is made for the exit of the smoke; if it can, it escapes from an opening found in the gable end of the attic, or it works its way through the thatch covering of the roof. A
considerable portion necessarily remains inside the apartment during the process of cooking and, in union with a forest of cobwebs, forms fantastically shaped pendants of soot, which adorn and give an appearance of antiquity to the interior of many a Malagasy dwelling, and which the owner looks upon, not merely with unconcern, but often with feelings of satisfaction and pride.

To pound the paddy rice, clean and winnow it, and afterwards to cook it, have already been stated to be woman's work. She too fetches the water needed for cooking and for other domestic and household purposes. Water supplied by companies is a thing unknown here; the primitive way in which all the wants of water are met carries you back in thought to those patriarchal times when the "daughters of the men of the city" went down to the fountains and filled their pitchers; and when, from one such evening rendezvous of the Oriental damsels, Rebekah went home with a golden ring in her nose, and bracelets on her wrists, and told of the stranger who had bestowed the jewels upon her, and who, after having travelled far seeking a wife for his master's son, at last lighted on the fair object of his search at the fountain's side. Water for most households is brought by the women from the springs or streams in earthen vessels, which they carry on their heads with exceeding gracefulness, and which they balance with a cleverness acquired by constant practice in the art from their early years.

As a rule, marriage takes place in early life among the Malagasy, and the proportion of the female population who enter the married state may, I think, in the absence of statistics, be affirmed to be greater than in some other countries—certainly it is greater than in England. It is quite the exception for a woman to remain a spinster; and those who have not been married at some period of their life are a very small per-cent age of the whole female population. The steps which lead to entrance into matrimony are generally only few in number, and these few are taken with a celerity which is not characteristic of Eastern conduct in many of the other departments of life. Social customs do not encourage the cultivation of intimacy, or the gradually ripening of acquaintance prior to marriage, and an interval of a few days, or weeks, is all that, as a rule, elapses between the date of a young lady's accepting an offer of marriage, and her becoming the wife of the admiring suitor. A recent laudable attempt to encourage two young people who had become betrothed, to wait a few months before consummating the engagement in marriage, met with signal failure. "Why should they delay?" From their stand-point, the argument is against any postponement of the nuptials. There is no elaborate trousseau to provide or prepare for the bride; no detailed arrangements of house furnishing to attend to; and although the income of the bridegroom may be altogether inadequate to enable him to set up even a humble establishment, and insufficient to support his young wife, or even himself, this is not considered an insuperable obstacle, for he and his bride will find a home with the parents, who are not unwilling to accept the responsibilities, and do not object to the increase in their family expenses. "Before thou marry, be sure of a house in which to tarry,"
is the voice of wisdom unto which young people in this country have not yet hearkened.

By the laws of the late Government, and also by the not less stringent and binding regulations of the social customs of the people, marriage is forbidden between parties of certain different clans and families, and also between those united by certain relationships of kindred. These legal and social prohibitions against intermarriage have some likeness to those found in the "Table of Kindred and Affinity," in the English Book of Common Prayer, and which may occasionally be found displayed in a conspicuous position in a few old churches, whereby the worshippers in those ancient buildings are reminded week after week, that "A man may not marry his grandmother," and that "A woman may not marry with her grandfather."

In the earlier days of my connection with Madagascar, the arrangements for a marriage were frequently made by the parents for their children while such were still in their boyhood and girlhood, and while they were yet far too young to have any desire or choice in the matter, and before either the boy or the girl was in the least degree under the influence of that true and deep-seated affection which alone justifies a betrothal, or union in marriage. After this fashion, the children of brothers* (i.e. first-cousins) frequently became united in wedlock. The supreme object sought in this was not so much the happiness of the young people, as a desire to prevent any of the property passing out of the immediate family circle. Such marriages are still arranged, but not so frequently as in past years. Even when the parents do not pre-arrange matters, and the choice of the partner for life is left to the contracting parties in their more advanced years, very few Malagasy enter the married state "through the porch of love." Pure, true and passionate affection for one another is not considered a sine qua non of mutual consent to become husband and wife; and I have found that advice on this point, and insistence upon the state of the affections being made the primary consideration, has met, not only with no response, but with a smile of incredulity as to the necessity for the existence of such feelings, and with an air of indifference to any such sentimentality. There are, no doubt, cases in which Cupid takes the hand of both the youth and the maiden and leads them towards one another, and where, by the magnetic influences of true affection, the heart of one is drawn to the heart of the other, but such cases are few in number; and, notwithstanding the great advances during the past thirty years in civilization, education and religion, the majority of the marriages in Madagascar to-day are entered into in a purely matter-of-fact and business-like way, and because to the contracting parties and their relations it seems to be a convenient, politic and worldly-wise arrangement. Thus it is that young women frequently consent to become united in marriage to widowers who have reached quite old age; and having regard to the wide difference in years between the bride and the bridegroom in such cases, these maidens may be said verily to "marry with their grandfather."

* Children of sisters never intermarry.
The necessary limits and the design of this paper will not allow me to enter upon any description of the marriage ceremonies which are followed by the people. There have always been civil forms to be observed before a marriage was considered valid; these are still in force, and have been made increasingly stringent by the authorities since the French became the rulers in the country. By the Christian portion of the population, the civil forms are frequently supplemented by a religious service, either at the home, or in the church. The friends of the bride and the bridegroom do not, as a rule, make marriage gifts or wedding presents. I, however, witnessed a departure from this at a wedding to which I was recently invited, where, at the close of the feast which was made on the occasion, the father of the bridegroom rose from his seat, and advancing toward the bride, laid before her a cardboard box containing three tablets of Calvert's carbolic soap.

There is no great reluctance on the part of women in Madagascar to be the second wife within a very recent date of the man having been made a widower by the death of his first. I was recently both surprised and shocked to find that R. had been thus married with one of the most intelligent natives with whom I am acquainted, within two months of the burial of the wife who was the mother of his nine children. In one extreme case which came under my observation, a woman entered into this relation within a fortnight of the death of the first wife; and a story appeared a few months ago in a newspaper now published here in the native language, in which such unbecoming haste was made the subject of severe satire. A friend of the widower was away from home when the wife died; but on his return, about a month after the decease, he went, according to native custom, to express his sympathy and condole with the bereaved husband. He found, however, to his surprise, that joyful congratulation was expected from him instead of sorrowful condolence, for the second wife had already been brought home, and was sitting by the supposed widower's side!

The desire to become a mother is general among all married young Malagasy women, but such desire is often unfulfilled. Sterility is very common, and abortion, brought on by disease, is alarmingly frequent. The latest published statistics of the Province of Imerina show 280,000 women, and (singularly enough) exactly the same number of children, i.e. an average of one child per head among the whole female population. Occasionally the maternal instinct is probably more than satisfied, as in the case of the wife of the late ex-Prime Minister, who was the happy (?) mother of twenty-two boys and girls; and of another worthy daughter of Eve, now living in the Capital, who gave birth only last year to her twenty-sixth child, twenty-two of whom are alive at the present time! Now and again twins are found in the native families; but the household is seldom startled, or the family suddenly increased, by the arrival of triplets. I have been told of one case, in which the three children are about fifteen years of age and are living some twelve miles from Antananarivo. They are said to be all perfectly developed and healthy girls, and much alike in personal appearance. The fewness of children in most families attracted the attention of General Gallieni, and in an official manner His Excellency promised concessions, and held out substantial encouragements to the people, and also an-
nounced certain legal, hygienic, medical, and other measures, which may tend to secure an increase in the population of this French colony.*†

Malagasy mothers, as a rule, are very fond of their offspring; that fondness is, however, more conspicuous than the wisdom with which the children are treated, either in relation to their physical well-being, or their moral welfare. The sound Scriptural advice: "Train up a child in the way he should go," has not yet secured the attention of very many parents. Topsy, of Uncle Tom’s Cabin fame, said that she supposed she "growed;" and this is what Malagasy children do—they grow, as wild flowers do, unaided by gardener’s skill or any careful attention, and yet, it must be admitted, occasionally developing striking beauty. As soon as an infant can put forth its hand to the rice-bowl, and has learned the route from that vessel to its mouth, the Malagasy progeny eat rice (more correctly, swallow it, for as yet the teeth have not appeared); and few are the mothers of these “wee things” who understand that such direct opposition to nature’s arrangement is disastrous in producing infantile disease; and they encourage rather than suppress the development of this early proclivity for a mixed diet on the part of these “little bits of themselves” (sombin’ aina), as they fondly call their young children. In the country districts, the children’s clothing is not a cause of much maternal anxiety, and does not cost the parents a very large sum of money, for the early months of infancy and the first two or three years of life are spent by many Malagasy children “in puris naturalibus.” In Antananarivo and the larger towns in the provinces it is not so; in these places an extravagant excess of clothing is sometimes seen, and it especially observable among the Christian population on the occasion of the public baptism of infants, when the poor bronze-coloured babies are decked out in robes and ribbons and head-gear of various and novel designs, which are intended to call forth the admiration and praises of the congregation, but which are altogether unnatural and absolutely unnecessary; and which not only annoy and irritate the infant wearers, provoking them to utter piteous appeals for deliverance, but also feed an unhealthy pride in the parents and relatives.

In Malagasy families, good home influences are too often nil, and not much is done, even by the most devoted and worthy among the parents, to foster right principles and encourage the development of moral beauty, or to strengthen the young people to resist those temptations which assail all youthful life. Happily there are now many excellent schools in the country, where, in addition to imparting a good secular education, those in charge make the moral and religious welfare of the scholars a matter of primary importance. The united testimony of several ladies who have the superintendence of these educational institutions is, that the Malagasy girls are by no means

* See Annual, 1898, p. 147: “The Population of Imerina.”
† The Journal officiel, giving a brief account of ‘La Fête des Enfants,’ held on the 3rd April, this year, and chronicling what was done by General Gallieni on that occasion, stated: “Il remit des gratifications en argent et des vêtements aux 56 familles ayant au moins 7 enfants au-dessous de 12 ans. Il complimente particulièrement neuf mères des dix enfants au-dessous de cet âge.”
deficient in mental ability. Not only are they taught the three R's, but grammar, geography, Scripture and sewing also form part of the daily programme in the best schools in Antananarivo and elsewhere, and now that Madagascar is a French colony, persevering efforts are put forth to make the scholars proficient in the French language. In acquiring the various branches of knowledge, the scholars shew a proficiency probably not surpassed in countries where education has long been encouraged and appreciated. At a recent examination at one of the girls' schools, the average total marks obtained by 18 scholars in the first class was 442, out of a possible 640—a little over two-thirds. There are, of course, cases in which the mental obtuseness is conspicuous; as, for instance, that of the scholar who was recently asked: "If a girl has two hands, how many hands have twelve girls?" to which profound mathematical problem, the teacher told me: "The young lass promptly replied: 'One hundred and four!'"

There is a popular expression among the Malagasy that marriage is like a fowl's clothing (feathers), which are only separated from the bird by death ("Lamban' akoho: faty no isarahana"). Notwithstanding this, up to the present date, few among them recognise that marriage contracts should cover the whole period of life and extend "until death us do part." The most common sources of conjugal discord, ending in separation and divorce, have already been mentioned, viz. (i.) the unwise conduct of parents in betrothing mere children, and (ii.) the unbecoming haste with which marriage contracts are often entered into. "In haste to marry, and in a flurry to part," is the translation of another of the sententious native proverbs. When Madagascar was reopened to Europeans in 1861, there was no conscience or public opinion found existing against divorce, and no laws of the kingdom made marriage vows binding. A woman, it is true, had not the power to divorce her husband, but the man had the law absolutely in his own hands in relation to the wife; and by the payment of a small sum of money to her, could put her away and turn her out of the home, at any period, and for any cause, real or imaginary, which he pleased to assign.

Those Protestant Christian missionaries who came to Madagascar in 1862 and 1863 and following years, soon gave the subject their grave consideration; and at a large gathering of the nominal Christian population held in one of the city churches, in the month of December 1868, they succeeded in creating some slight public opinion on the subject, and a resolution was passed at that meeting, declaring that any man professing Christianity, who put away his wife for any other cause than adultery, would no longer be recognised as a member in the churches, and would never be received back into membership, unless the wife he had divorced (if still living and unmarried) was taken back by him and reinstated in her former position. From that date a steady growth of healthy public opinion on the subject has been observable. During the reign of Ranavalona II. the Malagasy Government also gave some attention to the subject, and in the Code of Laws which was framed at that period, and published in the year 1881, there was one law which distinctly said: "Divorce between husband and wife cannot be allowed."
If there are sufficient reasons for separation, either party can appeal to the Government. If separation is countenanced under any other conditions, the fine will be fifty dollars, one-third of which the woman will have to pay.” Unfortunately that law, like so many others made during the good Queen’s reign, was never practically carried out to any wide extent. At that period in the history of Madagascar it was easier to make laws than to enforce them. With the advancing enlightenment of the people, and the growth of a higher standard of morality and equity among them, and the salutary influence which wise laws promulgated by the French Government will bring to bear on the questions of marriage and divorce, there is reason to hope that the conditions which have long been the cause of much domestic strife and sorrow, and which have given endless trouble and anxiety to all interested in the family and religious life of the people, will pass away and be succeeded by new conditions, under which the sacred obligations of marriage will be more generally recognised and more faithfully fulfilled, with the result that the position of married women will be improved, their lives become happier, and their homes be made brighter.

The average duration of life among Malagasy women is probably quite equal to that reached by women in France, or England, or America; some few live to exceptionally old age. One woman, whose history points to 1788 as the year of her birth, died as recently as September last year, making her 110 years old at the time of her decease. I conversed with her son a few months since, who, although over 70 years of age, is still strong and healthy; and judging from his present hale condition, he bids fair to attain to the years of his mother. Time dealt kindly with this Malagasy centenarian, for even in her very old age, Rafotsirény retained all her faculties, and such physical energy that, up till within a week of her death, she was able, unassisted, to ascend and descend every day a ladder (not a staircase) of fourteen rounds, which led to the apartment she occupied. During the last three years of her life her sight failed a little; but her hearing is said to have remained so remarkably quick that, in the words of her son to me: “A needle could not fall on the ground without her hearing it.” With the exception of two, this old lady could boast of still possessing the whole of her teeth, and she was buried with thirty of her own, in excellent condition, and in situ, in her mouth!

J. Pearse.
VIII. Content and Discontent (concluded).

592.—Tokam-pilana, ka tsy manam-po afa tsy ny rano.
To have one want, like the water-pot, and look for nothing but water.

593.—Ny antonony sarotra ilaina.
It’s hard to wish for what is suitable only.

594.—Raha mitsangan-ko mavo toa valanirana, aleo mi'petraka ho sam'pan-javatra.
Better sit down to be a branch of anything than rise up to be brown like a valanirana(1) tree.

595.—Ny vz'lanzy no vaky, ny mpandoatra no nimonjomono.
The pot was broken because the cook grumbled.

596.—Miangolangola manan-dro.fo Zara raha miz边界 hototoina.
Dissatisfied with good rice! You are lucky to have any at all to pound.

597.—Aza dongidongy mzendrz'ka androngo, ka mandany ny tsarama-som-bahoaka.
Don’t be sulky like a lizard, and consume the people’s beans.
As this seems scarcely intelligible, there is probably some mistake about the word androngo.

598.—IC'atsaka manz'ry an-tany mena: ka zara raha mahatana ny aina, fa ny baby telo no tsy misy.
Indian corn growing in red land: you are lucky if it support life, for there are not three ears (on one stalk).
The red soil, of which so large a portion of the interior of Madagascar consists, is really decomposed gneiss and not very productive. Rico is grown in the valleys and plains, where there is a good depth of dark vegetable soil.

IX.—Selfishness and Unselfishness.*

599.—Maka kitay manana ankizy; misorona afo manan-jiro; homa-maitizina ao am-pototry ny masava.
To fetch fuel having a slave, to feed the fire having a lamp, to eat in the dark at the foot of the light,
  i.e. the lamp, which would soon give light if you set it going and did not begrudge the fat or oil it would consume. Descriptive of a foolish miserly fellow, who makes himself suffer for his own meanness.

600.—Mpiasa tsy mahavoky tena.
A labourer who does’t fill his belly.
Not a man who can’t or doesn’t through idleness or want of skill, but one who stints himself to his own disadvantage.

601.—Lolo an-tanin' andro, ka tsy mahafoy tany hita.
A butterfly in the sun, he won’t give up his warm place.
Lit. the ground found.

* See also Nos. 260, 273, 414, 449, 802, 806, 1376, 1432, 1395, 1686, 1712, 1903-1907, 1958, 2109, 2101, 2263.
602. — *Mena maso an-따oka, ka manao fatra-maina.*
Ashamed about the meat, he deals out the rice without it.
Said of a parsimonious host, who keeps his good things in the background and makes a poor meal before his guests lest they should help him to consume them.

603.— *Aza ny hodzi-boanjo fanary no atao sakafa mahavita.*
Don’t let the husks of earth-nuts that are usually thrown away be deemed enough for a meal
— by reason of your niggardliness.

604.— *Mateti-pihavy, toa sotro kely izy.*
He comes often, like a little spoon.

605.— *Izay mahihitra lany be.*
The stingy spend much.

606.— *Izay tsy mahafoy kely tsy manana ny tiana.*
They who won’t give up a little can’t have what they wish.

607.— *Tsy manoyla vola amidy takotra ka manta vary.*
They won’t give money to buy a lid to the pot, so they have uncooked rice.
The native earthenware pots used for cooking rice are very fragile and very cheap.

608.— *Tonon-kena lasan-tsaka; omby an-tanan’ ny ory.*
A piece of roast beef taken by a cat; it has got into the hands of the poor,
for no Malagasy would think of giving such food to the unfortunate animals they keep.

609.— *Noson-kena omby an-tanan-tsaka, ka raha tsy didiana tsy azo.*
Meat in the paws of the cat, unless cut it can’t be got.
Said of anything got into the clutches of a greedy close-fisted fellow. The following is another form.

610.— *Las a tsy maz’verz’na, toy ny hena lasan-tsaka.*
Gone for good, like the meat taken by the cat.

611.— *Omby an-tana-mamba izy.*
It has got into the clutches of the crocodile.
A variation of the preceding one. Again, we get the prohibition:

612.— *Aza manao am-pih-mamba.*
Don’t clutch like a crocodile.
I.e. don’t be close-fisted.

613.— *Mahihitra an’ ombika izy ka mantsin-kena.*
He is stingy in the cutting up and gets stinking meat.

614.— *Ny an’ ny tena ratsy tsy afo atakalo ny an’ olon-tsao.*
The bad things that belong to yourself shouldn’t be exchanged for the good things of another.

615.— *Vilany be nandrahoan-kena, tsy ilaozan’ isay motimotiny ho diso.*
A big pot that has cooked meat has always some morsels left in it.
A favourite saying of artful dodgers on the look-out for scraps.

616.— *Raha miroborobo ny afo, miara-mamindro izy rehetra; fa ny tompon-trano ihany no manala ny lavenona.*
When the fire blazes up, they all get a warm; but it’s the host who has to throw away the ashes.
They join in the benefit; he has the trouble.
617.—Moramorain' ny an' olona, fa sarotsarotin' ny an-tena.
He is careless about other people's things, but particular about his own.

618.—Raha merika ny andro, asan' ilay mpanana omby, fa any kosa ny songo, sambatra ilay mpanana omby.
When the day is drizzly, it concerns the owner of the oxen (i.e., he has to endure it), but when the calf is born(t), he a happy man.
Lit. when the beatings come.

619.—Raha mahita ny asa-vadi-drano aho, dia alaiko ny maro; fa raha mahita ny amalom-boa-sira, izaho tsy manan-kavana afa-tsy ny maty.
When I see (t) there's hard work to be done, I call in others; but when I see a salted eel, I have no friends but the dead.
(1) Lit. the digging up of the rice-ground that is covered with water, the many are sent for by me.
Eels are considered a great delicacy, and one that is ready cooked and salted none can resist.
Another form is:

620.—Raha hihinana aho, alao ny vitsy; fa raha hanao, alao ny maro.
When I am going to eat, call a few; but when I am going to work, fetch many;
and again:

621.—Raha hanao zavatra, aza manao hoe: "Dombo ny angady;" nefa raha hihinana manao hoe: "Maranitra ny soto!"
When going to dig, don't say: "The spade is blunt;" but when going to eat: "The spoon is sharp."
Compare Nos. 632, 806.

622.—Avoivoin' ny wavany, ka sahalain' ny vintany.
Led wrong by his mouth, but put right by his lot (or destiny).
He claims much, but only gets his proper share.

623.—Nahoana no dia ny manam-be thany no mahihitra?
How is it that the rich only are niggardly?

624.—Ny ranovola no ho tsy misy ny sotro be no maranitra.
There is no rice-water because the big spoon is sharp.
Ranovola is a beverage made by pouring water into the pot from which the rice has just been taken and stirring it up well with the baked grains of rice which adhere to the sides. If much of the latter remain, there results, after boiling, a kind of liquid like coffee. If the spoon has been too sharp, however, and left but little of the baked rice behind, the ranovola is but poor stuff, not much better perhaps than boiled water only.

625.—Fiz'la ta-hanam-be: ka ny sini-be no enti-mantsaka, sobiky no enti-manjono.
A greedy fellow (t): he takes the big pitcher to fetch water in, and the basket to fish in.
(1) Lit. a desire to have much. The sini-be is the big store water-pot generally fixed in the ground, while the siny is the small one, usually taken to fetch water to put into it.

626.—Tsy mety raha manan-karem-boafady.
It will do no good to have wealth that you won't use, through a desire to hoard it only.

627.—Aza maniry ombin-tena.
Don't wish for your own ox,
as if you had it not. Don't pretend to be poor.

628.—Ny Andriandahy mpanao didy fisaka, koa ny Hovalahy manan-toana tsy voly.
The master is stingy, so the servant starves.
Lit. The nobleman (Andriana) is a cutter-up of thin slices, so the commoner (Hova) supporting him does not get sufficient food.
There is no cheating, only a little over for one's self.

Another form is:

Don't take something extra for yourself.

And again:

Don't know ten for yourself, and not know one for another.

When we see the shrimps, we are descendants of Andrianonivé, (1) but when we see the toho, (2) we are descendants of Andriamanantsihety. (1)

(1) Different tribes. (2) Name of a small fresh-water fish. Compare Nos. 620, 621.

Don't do like the niggardly big belly, i.e. begrudge your own things to fill it with.

The stomach cries for much, and the eyes go a straight road, i.e. do wrong in getting it.

The little bird that carried the locust: it brought one more than it could eat.

Lit., brought by its strength, but too large for its mouth. The sompanga is one of the largest kinds of locust.

The ants that caught the locust: the burden is come, but the mouth is too small for it.

The head of the dragon-fly was buried sure enough, but it did not become a bright and shining bead, as the child thought it would, So with other things: expecting too much, you get little or nothing.

If the peaches in the fosse are really to be gathered, then let Ilambosalama jump down.

He does not wish to lose a chance. Peach-trees grow well in the rich soil in the large fosses or hady that surround most of the villages, as they are less exposed to the wind and get plenty of moisture.

Sweet-potatoes in a fosse: they won't sell for money, and you won't exchange them for rice.

You want more for them than they are worth, so they remain on your hands. Sweet-potatoes planted in the fosse generally come to a large size, owing to the rich soil in which they grow: but they are always more or less insipid and sometimes altogether worthless.
641.—Na mahay mandrasa aza hianao, ny hoditra tsy azo ampombaina atiny.
Although you are well able to cut up, the skin can't be made to go
with the inside (or liver) only.
Referring to the cutter-up of the ox. Although he is a clever fellow, he can't take more
than his share.

642.—Tsy mety raha sady mandidy no homana.
It's unfair to cut as well as eat,
i.e. be a divider as well as a receiver, and so take good care of self. From the practice
of cutting up and dividing meat at any social or political gathering.

643.—Be hizarà, ka tzy manan-ko an-tena.
He gives away too much, (1) and has nothing for himself.
A great piece of folly, in the estimation of many. (1) Lit, Divider out of shares.

644.—Rehefa mahafy erany, mahafy hintsany.
When you give it full, give it brimful.
Give a trifle more, and you will be generous as well as just.

645.—Leh omby, ka miraoka ahyra ho an' ny trafony.
The tongue of the ox: it gathers grass for the hump.

646.—Tsy mety raha foay atsimon-trano ka tsy hafoя andrefan-trano.
It's wrong to give to one neighbour (1) and refuse to give to another.(2)
Lit, (1) south of the house; (2) west of the house.

647.—Vary lena voatoto : ka samy le-ho lohany.
Damp rice already pounded; each wants to be top.

648.—Tsy mahafy ny rojo aho.
I won't give up the best rice.

649.—Aza mitomany hena momba fanaky.
Don't grieve over the meat that goes with the axe.
Don't begrudge the worker his fee. In the cutting up of beef, the axe does a large share
of work. It would be parsimony indeed if the owner grieved over the small pieces
that stuck to the axe in the course of its work, or the piece that is hung across it when
the worker is carrying it home, as a reward for his labour. But the proverb is often
used by such as cunning head-men to defend their practice of receiving a little here and
a little there from those who may be under their authority. Thus we get:

650.—Tia kely, tahaka ny ambonin-jato malahelo.
He likes a little, like a poor head-man.(1)
(1) Lit, over a hundred.

651.—Aza manao tono vomanga sendra vahiny, ka manoto-davenona tsy ho hilany.
Don't do like the man who was roasting potatoes when surprised by a
stranger, and covered them over with ashes to prevent him seeing them.

652.—Aza manao many fo velona.
Don't attend only to your own interests.

653.—Aza manao hata-dava hoatra ny saka.
Don't be ever begging like a cat.

654.—Aza dia fatra-pandejitra toy ny mpivarо-tantely, ka ny tompony
indray no milela-tanana.
Don't be self-denying like the honey-seller: the owner licks his hands only,
when he might take a spoon and help himself to as much as he pleases. The seller
generally licks his hands after having served a customer.

655.—Aza manao toy ny lojo amoron-drano: mivelatra, hianao ihany;
mikombon-kombona, hianao ihany.
Don't do like the butterfly by the waterside; stretching out the wings,
it is you only; closing them, it is you only.
Meaning, Don't work for self only. or, probably: Don't be guilty of seeming inconsistencies,
656.—Aza manao amboan-dReningodona, ka izay mitondra kitafo arahina avokoa.
Don't do like Reningodona's dog, and follow every one that carries a bag.

657.—Aza manao: "Ny tiako no ho ahy" (na, "no hatao").
Don't say: "What I like is for me."

X.—Diligence and Idleness.*

658.—Izay maharitira ela tonga efa-dahy.
Continue long enough, and you will grow rich.
Lit. become four men. The positive of our "A rolling stone gathers no moss." Compare No. 677.

659.—Tongo-dava ahitan-kanina.
Long feet will find food.

660.—"Veloma, sodava tsara" tsy mahavelom-bady âman-janaka.
"May you live and prosper" (r) won't keep a wife and family.
(1) This is a common form of thanks from a master or employer on the completion of a piece of work; but the proverb itself only dates from about 30 years ago, and was originated by Mr. J. Parrett, formerly of the L.M.S. Mission.

661.—Ny fanirim-potsiny ihany tsy mahatanteraka ny zavatra noka-saina.
Wishing only won't do the work intended.

662.—Osa, ka tia vary aloha.
An idle fellow,(t) yet he likes the first rice, which is too lazy to plant. (1) Lit. weak, i.e. does not do a strong man's work.

663.—Be faniriy, kely fila; ny vary aloha tsy atao'ny ny kamo.
To want much and do little,(t) the first rice is'nt planted by the idle.
(1) Lit. seek little.

664.—Tsy misy mafy tsy ho latry ny zoto.
There is nothing so hard that it cannot be overcome by diligence.

665.—Vary iray no nafafy, ka vary zato no niakatra.
One measure of rice was sown, but a hundred measures have been reaped.

666.—Tsy ny nato: ka izay manoka (na, manoboka) indroa no manana ny antitra.
It is like dyeing (cloth): those who dye twice have the best.(r)
(1) Lit. the old or permanent.

667.—Raha manao ka tsy ambininy, ampisambory, fa havana ory; fa raha mirarivavy tanana tsy miasa, avelao hivarina aman-tany.
If he tries and does'nt succeed, lend to him, for he is an unfortunate brother; but if he won't work at all, (1) let him suffer for it.(2)
(1) Lit. lets hands hang down. (2) Lit. fall down to the earth.

668.—Ny zoto handrahoana; ny laina itonoana.
A good meal for diligence, a bad one for idleness.
Lit. Diligence is boiled for; idleness is roasted in the ashes for; or (The food is) boiled because of diligence, and roasted because of idleness. Such a thing as a roasted joint is scarcely known. All the meat is well boiled. But a piece is only occasionally baked in the ashes and eaten half raw because of haste, or idleness. Note the following:

669.—Mitono manao mantamanta; mahandro manao lozodozotra; ka ny atao ihany no mankarary ny am-bavafo.
Roast in the ashes and get it half raw; boil over the fire and get it half cooked; it's what you do gives the stomach-ache.

* See also Chaps. XXX, XX, XXI., and Nos. 1095, 1221, 1537, 1780, 2002.
670.—Tamam-pany many, ka mihady ny fahany.
To be accustomed to sweet sugar-cane, and dig at the root.
To be in earnest about a thing you like.

671.—Aiza no dia ho anao avoka ny valala manatody sy ny fandria-maraina?
How can you have both the locust laying its eggs and the lying in bed in the morning?
As "the early bird catches the worm," so does the early rising native catch the laying locust, which is thought to be full grown and of good flavour. Locusts are more easily caught in the early morning, while their wings are still wet with dew.

672.—Raha sady tsy hitery no tsy hihazon-janak' omby, fa hisoroka ny herotra ihany, dia tsy mety.
If you'll neither milk (the cow), nor hold the calf, you ought not to skim off the cream.
The native cow gives no milk unless the calf is first allowed to suck a little, and then is held by the side of its mother.

673.—Tsy mety raha mbah manantena hanan-asy mamanga.
You can't expect to have if you don't trade.

674.—Nakaono ho ny mihazakazaka no tratan' ny miadana?
Why are the fast (1) overtaken by the slow?
(1) Lit. those running. A case of "the hare and the tortoise."

675.—Manaoa toy ny miaramila: mifoha alohan' ny goaika, mahatsiaro alohan' ny fitatra.
Do like the soldiers: rise before the crows, and wake before the singing bird (fitatra) (1).
Poor fellows; they frequently have to go very long distances to attend fortnightly drill (i.e. in former times). It is not a case of will, but a case of must. (1) Fitatra, a species of warbler: Pratincola sybilla, L.

676.—Raha maharary aza ny'tanana, jereo aloha ny kibo tsy misy hanina.
Even though the hands are painful, look first at the empty stomach.
Digging with the long-handled native spade makes the hands sore, especially if they are unaccustomed to work with it, and the handle is not well greased.

677.—Mandehana dieny malaz'tza, fa ralza mazoto, angamba tsy afai(a.
Go when you don't want; for when you do, you may not be able.

678.—Aza mandry a'kaihy toa menaka.
Don't stop close at hand like grease.
Hot grease soon cools and stops running.

679.—Aza mitady tan'any malemy hanorenam-pangady.
Don't seek soft earth to dig in.
Lit. to set up a spade on; see No. 1957.

680.—Aza malainana manan zavatra; fa ny mosary indray maraina tsy efa foana.
Don't be an idle worker; for food for one morning's famine isn't easily found.

681.—Aza manao tsinjo voro-mazoto.
Don't take a mere look at a diligent bird; i.e. Be diligent likewise.

682.—Aza manao tsidi-pahitra.
Don't take a mere look into the cattle-pen, but attend properly to the wants of the inmates. Often used to exhort those who make a mere pretence of work. Compare No. 697.

683.—Aza miála safay.
Don't shirk work.
Another form of the foregoing.
684.—Aza kely faka kitay, ka be bahana.
Don't fetch but little fuel and scarcely get a warm.
Lit. stretch out the legs wide, so as to get all the warmth possible from the tiny fire.

685.—Aza manao kamo be tenda.
Don't be an idle fellow with a big throat.
For be sure that "If you will not work, neither shall you eat."

686.—Aza mitoe-poana hoatra ny vato : ny lehibe tsy miteny, ny kely tsy misy mpananatra.
Don't sit still like a stone : the big not speaking, and the little having no advisers.

The big usually means the rulers, and the little, the people they rule.

687.—Aza manjenjena toy ny valaia manatody.
Don't skip about like a locust laying its eggs.
Stick steadily to one place. Compare No. 658.

688.—Aza ny andro iray tsy iasana no anaovana ahy amboalambo.
Don't call me an idle vagabond for one day's holiday.

689.—Tsy mety raha fony mitoetra tsy miraharaha ; koa lasa vao be hafatra.
It's wrong to say nothing while you remain, and plenty directly after,
when it's of no earthly use.

690.—Aza manantena lain-tsokina ku tsy mety mihaza.
Don't look for a hedgehog's train (1) and be unwilling to hunt him.

(2) Lit. dung. Sokina, one of the Centridae, Echinops Telfairi.

691.—Aza manao ariary zato am-pandriana.
Don't make a hundred dollars on the bed.
Get up first and then see what you can do. A Malagasy version of "Castles in the air,' or "Chateaux en Espagne."

692.—Aza manantena ny 'Aza mandry, fa anateran-kena.'
Don't hope for 'Don't lie down, here's a present of beef.'
Don't be like Micawber—everlastingly expecting 'something to turn up.' Find your own beef.

693.—Aza manantena lambo hiakatra, ka tsy midina any an-ala.
Don't hope for the wild-boar to come up, instead; if going down into the forest (to seek it).

694.—Aza mandrava trano mafy, ka mitady izay romoromony hataina.
Don't destroy a good house to get fuel for the fire.
Fuel is very scarce in the central provinces, and rather than go far to seek it, lazy folks burn whatever they can lay hold of—their very bedstead not unfrequently meeting with a fiery fate before its time.

695.—Aza mitonantona toy ny havana nalaina.
Don't gaze idly about like a friend (or relative) just fetched,
—and who either does not know the work to be done, or isn't interested in the doing of it.

696.—Aza manao toy ny tsingentana : intelo miofo, ka vantony ihany.
Don't do like the locust; cast your skin thrice, and still be a young one.
The tsingentana is one of the many kinds of locust; compare No. 829.

697.—Aza manao ombilahy misalovan-kosy.
Don't do like a bull that passes by a rice-field to be trodden.
Compare No. 682.

698.—Aza afa-po toa an-dRahisatra.
Don't be self satisfied like Mr. Slowcoach.
699.—"Izay takatry ny aina no atao vovy," hoy ilay mamahan takatra. "Use all your strength," says the one fed by the Tufted umbre. A pun on the words takatra—reached up to, and takatra—the Tufted umbre.

700.—Tsy misy raharaha, toa landihazo be. Having no business is like having much cotton. Perhaps it should be landy—silk-worms. They will give him enough to do, as will also idleness.

701.—Aleo maty olo malaina toy izay vaky vilany an-efitra. Better let a lazy fellow die than have a pot broken in the desert, where another can’t be found.

702.—Tekatehaka tsy mampihempa-panana. Clapping won’t skin the hands.

703.—Ny ao amoron’ ala tsy manana trano be. Having no business is like having much cotton. Perhaps it should be landy—silk-worms. They will give him enough to do, as will idle.

704.—Ny hakamoana no hitiafaan-borodamba mandavatona. Idleness will cover with rags all the year round.

705.—Ny hakamoana no handriam-potsiny fararano. Idleness finds no work in harvest, for it prepared none in seed-time.

706.—Ketsan’ Amboasary: izay tsy mifoha marazna tsy manana. The young rice-plants of Ambôasâry: they who don’t get up in the morning have none. Ambôasâry is a village on the banks of the Sisaona, one of the tributaries of the Ikopa. Its waters soon rise in summer and, overflowing their banks, flood the low ground on either side. The people who don’t keep a sharp look-out after their young rice-plants, and remove them in time to fields on a higher level, often suffer loss.

707.—Tafandry maraz’m-boafady, tsy ny mifoha vorodamba. Lie in bed in the morning, and you’ll get what you don’t want, like the wearer of rags.

708.—Ilay kamo mindram-pangady; koa, "Aza mahita anie aho." The lazy scamp that went to borrow a spade; t’was, "May I not find one." Compare No. 1263.

709.—Ny mody mandry sy ny mifoha; ny mody mandry misimisy kokoa. Better go one day and come another (1) than go and come the same day, for it shows more diligence and is likely to bring more profit. (1) Lit. spend a night before coming home.

710.—Tanim-barin’ ilay kamo: rano fotsy mangeningena; harefo mahadifotra olona. The rice-field of the lazy: the clear water overflows it, and the rushes are tall enough to hide people. Both sure signs of neglect. Cf. Proverbs xxiv. 30, 31.

711.—Manantena ny fa azo, ka tsy mandray ravin-dena. His hopes are raised by what he has found, but he takes no care to preserve it. (1) Lit. does not get a wet leaf.

712.—Akory ihy ilay malaina no mitarehin-jaza aizina ka mavozon’ ny hakamoana: mararin’ ny tazon’ ny fahalainana ary mitarehim-balala maty. Aha! this lazy lout; he looks like a sick child (1) and is enfeebled by laziness: he’s ill of the idle fever and looks like a dead locust. (1) Lit. the youngest child of the family when the mother is again pregnant—and who is supposed to be made ill by that event,
The natives believe that the new child in the mother's womb causes the illness of the other, not thinking that the real reason is the diminution and ultimate stoppage of the supply of milk. Children are regularly suckled for about two years, and occasionally for a much longer period; one can scarcely believe his own eyes on seeing great strong children running and playing about one minute, and drawing comfort and sustenance from the maternal breast the next.

713.—Akory ity ilay malaina: asaina miasa lohataona, toa vaky lafika; asaina manosy fahavaratra, mararin' ny taso; avela an-tanana, tsy mahamasaka hanina.

Oh! this idle rascal: bidden to plough in the spring, his feet seem bad; told to tread the rice-fields in the summer, he seems ill of fever; left at home, he seems unable to cook a meal.

Truly a worthless fellow, who doesn't deserve to eat,

714.—Antoandro faka ronono, ka nilaozan' ny omby nihahaka.
He went too late to milk the cows, and found them all gone.

Lit. Had left (him) and scattered.

715.—Tsy ny tanin' andro havina, ka kely no ananana azy.
Like sitting in the evening sun; only enjoyed for a short time.

716.—Ny hamo ihany no ho sasatra.
It's only the idle will be tired.

717.—Nahoana no atao: "Be ny raharaha, ka ny voly vary indray no tsy efa"?
Why is it said: "There's much to be done, yet the rice isn't planted"?

—that is surely the principal thing and should be first attended to.

718.—Zana-dambo, mitrongy vao homana.
A young boar: he turns up the earth before eating.

719.—Ny tenin' ny mpisampina tsy mba inoan' ny mpisikina.
The word of the idle is not believed by the diligent.

Lit. (1) the one who has his robe over his shoulders, and (2) the one who ties it firmly round his waist, to enable him to work freely.

720.—Mpampakatrafeta tsy madity, ka avy ny orana, dia akipany.
Build a wall with bad clay, and get it wasted away by the rains.

Clay walls are generally tolerably durable, but if the builder scamps his work and does not pound the clay well, the rain soon discovers his idleness.

721.—Manao rafi-maroroka, ka malaky mirodana.
Build in a hurry, and it will soon come down with a run.

722.—Homana ila, hoatra ny rafi-dratsy.
Half do it, like bad workmanship.

A thing is very often done by halves or portions, especially if it requires the union of many, for some will do their share, and others shirk theirs.

723.—Fela-tanam-papango: tsy manjaitra ny rovitra.
A Kite's claws: it doesn't sew up what is torn.

Eager to tear but not to mend. Said of an idle worthless fellow.

724.—Andro hahamaisan' ny trano dia manao afo am-bilany hely, fahampisalo manao afo am-borodamba.
When the house is burned, you fetch fire in a little pot, but to-morrow you will fetch it in a rag.

Matches are scarce and comparatively dear. When people want a light, they fetch embers from their neighbour's fire in a small pot or piece of a broken one; but when they are too idle to look for the pot, or too careless about it, they take a piece of rag, or anything else that happens to be at hand, and not unfrequently set the thatch of the low roof on fire.
725.—Rano tsy andrana tsy maňafaka-teroka; ny lamba tsy atafy tsy maňafana; ny vary tsy hanina tsy mahavoky; ny raharaha tsy atao tsy mety lavorary.
Water not washed in won't remove the oil; a garment not put on won't keep out the cold; rice not eaten won't fill the belly; work not attended to won't be successful.

726.—Tongo-boromahery tsy maka ny ankasarotana.
A Falcon's claw: it doesn't take hold of the difficult parts.

It gets hold of what is nearest and easiest; so do idle persons.

727.—Sasa-lamba hariva (or, mitsidika andro); manaram-po ampanasana, fa kely andro anahazana.
A washing of clothes in the afternoon; washing them leisurely, but there's little time to dry them in.
Clothes are washed in the streams and dried in the sun on the banks.

728.—Raha vazo mitovitovy ihany, dia ny tsy mita rano no alaiko.
If the things are about equal, then I prefer what can be got without crossing the water.
Vazo may be a bird or person, perhaps a sweetheart.

729.—Manetsa mahalana; ka ny ataon' ny tena ihany no alaina.
Plant sparingly, reap sparingly.
Lit. Plant widely apart, and the thing done by yourself is what is taken.

730.—Tajika efa nidika ka tsy azo ajanona.
A war expedition once set out, it can't be stopped.

731.—Tongotra omby an-dakana, ka tsy mahazo misody.
The foot is in the canoe: it can't draw back.
A favourite proverb to urge perseverance. Compare No. 899.

732.—Izay lava dinika lava rariny.
Examine long, be in the right long, or, altogether in the right.

733.—Nahoana no dia mpamafy ka dombo antsy?
How is it that being a smith you have a blunt knife?
Compare No. 703.

734.—Lany andro am-pisesahana ka tsy mitondra mody.
To spend the day in gossipping and take nothing home.
Compare No. 2251.

(To be continued.)

J. A. HOULDER.
EARLY NOTICES OF MADAGASCAR FROM THE
OLD VOYAGERS; PART VIII.:  

EXTRACTS FROM "A VOYAGE TO INDIA," ETC., BY DR. EDWARD
IVES, OF HIS BRITANNIC MAJESTY'S SHIP 'KENT';
IN THE YEAR 1754.

(Concluded from ANNUAL XXII.)

His majesty of Baba resides in a town built with mud, which stands up the country, about twelve miles from St. Augustine's Bay. About four days after our arrival, he came down with his family into our neighbourhood, and sent his heir apparent on board, accompanied by the duke of Baba, and other great personages of his court, to congratulate the admiral on his arrival at Madagascar, and to know on what day he intended paying him a visit. The admiral made each of these ambassadors a present of a pair of pistols, a gun, a sword, and some bottles of brandy; appointed a day for paying his respects to the King, and sent them all ashore in the highest spirits, and perfectly happy. On the day which had been fixed for his public audience, the admiral, attended by all the captains and other officers of his squadron, walked about half a mile from our own tents down to those of his majesty, and was ushered into the largest of them by the beat of two drums, which by the particular desire of Robin Hood had been sent from on board the Kent; this prime minister declaring, that as the admiral was a great man, and the king of Baba a great man also, the admiral should bring his music to do honour to the king; and the king's music in return (which consisted only of two pairs of great conch-shells) should sound in honour of the admiral. As nobody objected to this reasonable proposal, the admiral was received in the manner prescribed by Robin Hood.

The king was about sixty years of age, very corpulent, and had at that time a violent fit of the gout. He was sitting on a grass mat spread on the ground, with a wrapper round his middle, and on his head he wore a Dutch grenadier's cap, a foot and a half high, faced with the arms of the Dutch East India company cut in brass. He took the admiral by the hand, and enquired how King George did: when he was told that he was now in health, but had lately been in great affliction on account of the death of his eldest son, he feelingly replied, "Ay, I have likewise lost my Prince of Wales." He then enquired of the admiral, what presents he had for him. These, consisting of fire-arms, swords and spirituous liquors, were immediately given; but none seemed to please him so much as the brandy; he only found fault that there was not enough. His three queens, and many other ladies of the court, attended this meeting. They too had their presents. And the admiral, to treat them, as he thought, the more genteelly, ordered three or four dozen of bottles of white wine to be brought; but upon their tasting it, they spoke
of it as insipid and, like the king, preferred brandy as the better liquor. *Mr. Watson* apologized for his not having a greater stock of it; but assured them, and his majesty of *Baba* also, that the next time he made this voyage, he would not fail to bring them a much larger quantity. Before the audience broke up, the king asked the admiral, whether he had any doctor with him? who replied, Yes. He then asked, "*Is he a great doctor!* *A king's doctor?*" to which the admiral replied in the affirmative. "*Let him* (rejoined the king) *give me some mahomezets* (that is, some medicines) for my sick knee." The admiral then spoke to me, who stood near him; when addressing myself to the king, I gave him my word, that he should not be many days without them. The admiral having mentioned to the king of *Baba* the provisions he wanted for his squadron, the latter gave orders to his pursers that we should immediately be supplied with them. Then the admiral, after thanking the king for his civility and assistance, took his leave.

Before I close this scene, I cannot omit describing the grotesque dress and figure of one of the favourites at his court, who in his younger days had been in *England*, where he acquired a taste for the *European* fashions. They called him Captain *J'om Hill*; he was a little old man, had neither shoes, stockings, breeches, nor shirt on, but wore a wrapper round his thighs, and an old silk waistcoat next his skin, ornamented with a bugle fringe. An old tattered blue coat, an old grey tye-wig, a silver-laced hat, and a sword without a scabbard, made up the remainder of his dress, and all together presented a most ridiculous figure.

The generality of my readers, will probably look down with wonder and pity, if not with contempt, on the rude simplicity and unpolished manners of the people now described, But let them turn back to the annals of our *English* history not two thousand years ago, they will have the mortification to find the ancient *Britons* equally unacquainted with the polite arts, and quite as barbarous and uncivilized as the present *Madagascarians*. And if our rude forefathers, by a persevering virtue, a noble disinterestedness, and a passionate love for their country, could erect a kingdom so capable of exciting admiration as we have now the happiness to boast of, why should not the descendants of the brave *Madagascarians*, at some future period, emulate the glory of our ancestors, and lay the foundations of an empire as great and extensive as our own, and as much celebrated for the glory of its arms, height of genius, and delicacy of taste? The presumption is neither groundless nor extravagant; for the island of *Madagascar* is very fertile, and near a thousand miles in length, and at its widest part, three hundred miles broad, situated in a healthy climate, full of the finest timber, and furnishes many other valuable materials fit for shipping; by which her natives

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* Interiores plerique frumenta non serunt, sed lacte & carne vivant, pellibusque sunt vestiti. Omnes verò se Britannii vitro inficiunt, cernuereum officit colorem; atque hoc horribiliore sunt in pugna aspectu; capilloque sunt promisso atque omni parte corporis rose, præter caput & labrum superius. Uxores habent domi duodenique inter se communes, & maximo fratres cum fratres parentesque cum libris. Sed si qui sunt ex his nati eorum, habentur liberi, a quibus primum virgines quæ quæ ductæ sunt.—*Cæsar, De Bello Gallico, Lib. v.*
might be enabled to equip formidable fleets, extend their commerce over all the known part of the habitable world, and perhaps carry the terror of their arms into countries hitherto undiscovered. These islanders, likewise, are not at all deficient in that active and enterprising spirit so necessary for perfecting such glorious undertakings.

Whilst we continued on this island, we found ourselves frequently robbed of our linen, as it was hanging out to dry; yet it was always stolen in so artful and dexterous a manner that we never had it in our power to detect one single culprit during the whole time of our being there. One poor wretch indeed, who was concerned in this kind of theft, making his escape with his booty over the river, unfortunately stuck in the mud, and was drowned. The following instance will show the great presence of mind, and exceeding dexterity of these islanders, in thievish exploits. One evening, as thirty or forty of our men were sitting round a fire, boiling their victuals in their iron pots, without the least suspicion of a thief's being near them, a Madagascarian with wonderful agility jumped over their heads into the circle, took one of the pots by the handle as it stood over the fire, and ran off with it towards the river. Our people for a time continued looking on each other with amazement; but before any of them had so far recovered themselves as to think of pursuing the thief, the fellow had made such good use of his legs, as to be quite out of their reach.

Among the great variety of women that daily resorted to our tents, I observed one, who, as to her make and symmetry of features, was a perfect beauty. The Duchess of Baba was also handsome; but the king's two daughters were far otherwise. The eldest of these two ladies was extremely coarse in her person, and no less masculine in her behaviour. The youngest was not quite so plain nor masculine as her sister, tho' she had not much delicacy to boast of: they were both unmarried. One of them had completed her fortieth year; the other was not quite so old. They were of the company at court, when the admiral visited their father; and soon afterwards, the eldest of these princesses condescended so far as to call upon the agent victualler at his tent. She carried a heavy musket on her shoulders, of which she appeared to be extremely fond, talked with great pleasure of the execution she had done with it in times past; but as the lock of it was now spoiled, she desired the favour of him to get it put in proper repair for her; and added at the same time, that she should be much obliged to him for his kindness. In short, our agent-victualler caused her musket to be repaired, and seemed to stand very high in her good graces. But not many days passed before he unfortunately fell into disgrace, and too sensibly experienced the effects of her resentment.

All the Madagascarian women, except those who are very poor indeed, wear a covering over their breasts and shoulders, ornamented with glass beads; and none go without a cloth over their hips. They commonly walk with a slender long stick, or rod. The men are allowed to have as many wives as they please, or can support. The king has three; the Duke of Baba but one; John Anderson two. Their children they often name after any English officers who happen to be there at the time of their wives' pregnancy, or delivery. One of
John Anderson's wives was with child while we were there, and he assured Sir William Hewet, that if she brought him a boy, he would give the child his name and title.

The men often present (or, as they term it, salamanca) you with an ox, calf, goat, &c., and in return expect to receive its full value in silver, or some other commodity. They without scruple tell you, in their broken jargon, "If you my friend, I your friend. You no my friend, I no your friend. I salamanca you, you salamanca me." Their wives, without restraint, visit you in your tents, with or without their husbands, and make you presents on the same footing as do their husbands. If a wife is surprised by her husband in the act of adultery, we were told, he never fails to put her and her gallant to death; but if they are discovered by any other person, the crime is sometimes compounded by a present of cattle, or slaves. These are the chief, if not only riches of the Madagascarians, for they have no money; and except those who inhabit the Mud Town, they all live either in mat cabins, or huts made with boughs. The grandees have a fence round their cottages, with a courtyard, and distinct apartments for their different wives and children, as well as for their slaves.

During our stay at this island, I observed with great concern several miserable objects in the last stages of skin disease. They had not been able to find any cure; and as far as I could learn, their doctors are totally ignorant of medicine. The only method they use for curing all complaints, as well outward hurts as inward diseases, is the wearing on their arm or neck a particular charm or amulet; or besmearing the part afflicted with earth moistened with the juice of some tree or plant, and made up into a soft paste.

The country, besides large timber-trees of different kinds, abounds also with a variety of shrubs and succulent plants. The sugar-canies are as thick as a stout man's wrist, and so full of juice, that a foot of them in length will weigh two pounds, being much larger and finer than any in the West Indies. When the Madagascarians travel, they take a sugar-cane on their backs to subsist upon, which will serve them two or three days. The tamarind tree grows in great plenty; the leaves of which are like our common fern; the tree is about the size of an English pear-tree, and not much unlike it. The fruit is contained in pods about the size of those of the bean, which, when fit to gather, are brown, hard and brittle.

A good beginning for a collection of curious shells might be made on the shore of this island; they are now much more scarce all over India than they were formerly. The Tabularia, a bastard kind of coral, is found here.

The rivers, besides their abounding with great quantities of excellent fish, are full of alligators of enormous size. The duke of Baba frequently accompanied our parties in shooting at them; and when our gentlemen in one of these excursions came to a creek, which they were obliged to ford, his grace, to save them the trouble of undressing, with great good nature took them one by one upon his back and carried them over. He was a brisk little man, about 28 years old, nephew to the king, and was particularly fond of a drum which had been given him by Commodore (late Admiral) Griffin, on
which he could beat a march and the reveillée with great dexterity.

The island produces a great plenty of Guinea-hens; and all the rocks round about, both in Prince Will's and in the king's country, are stocked with an abundance of mococks,* which is an innocent, pretty animal, of the squirrel kind, about the size of a cat, with a sharp head, like a young fox, a long bushy tail, black and white hair of exceeding delicacy and softness. It has feet like the monkey and usually sits like that creature on its breeches and two hind legs, basking with its belly exposed to the sun.† Its tricks are of the monkey kind. Guanas, chameleons, serpents, tarantulas and a kind of bat, called flying-foxes, are found here; their wings from the tip of one, to the extremity of the other, are five or six feet, and they are a foot and a half in breadth.

But the most extraordinary thing on the whole island is the innumerable quantity of locusts it abounds with. These rise from the lowlands in thick clouds, which are sometimes extended to an incredible length and distance. The natives eat these insects, and even prefer them to their finest fish. Their method of dressing them is to strip off their legs and wings, and fry them in oil.

It has been generally supposed, that a mixture of the Mahometan and Pagan religion is professed in this island; but though this may be true, yet during our stay here, we saw no signs of the first: the word Mahomet indeed is frequently used by the natives, under which general term they include all kinds of medicines, every sort of charm or amulet, and also a sacrifice and prayer: hence it seems as if some account of the religion of Mahomet had reached the island in past ages from the neighbouring continent; and also that it had been favourably received by the natives, though the present generation appeared to be entirely unacquainted with its principles and rites. I took some pains to acquaint myself with their religious tenets; and they appear to worship one universal Father, whom, when they speak in English, they call God, and in whom they conceive to reside all kind of perfection. The sun they look upon as a glorious body, and I believe, as a spiritual being, but created and dependent. They frequently look up to it with wonder, if not with praise and adoration.

I had the curiosity to attend a sacrifice at the hut of John Anderson, whose father had for a long time been afflicted with sickness. At about sunset, an ox was brought into the yard, and the son, who officiated as priest slew it; an altar was reared nigh, and the post of it was sprinkled with the blood of the victim. The head, after it's being severed from the body, was placed, with the horns on, at the foot of the altar; the caw! was burned in the fire, and most of the pluck and entrails boiled in a pot. The sick man, who was brought to the door, and placed on the ground so as to face the sacrifice, prayed often, and seemingly with great fervency: his eyes were fixed.

* [Can this word be a corruption of the word Macaco or Macaque, the Black Lemur (Lemur macaco, L)?—J.S.]
† [See ANNUALS XVII, and XIX. pp. 75, 268.—J.S.]
attentively towards the heavens, and his hands held up in a sup­plicating posture. The ceremony ended with the son's cutting up the ox into small pieces, the greatest part of which he distributed among the poor slaves belonging to his father and himself, reserving however some of the best pieces for his own use. Upon the whole, I saw so many circumstances in this Madagascarian sacrifice so exactly resembling those which are mentioned in the Old Testament as offered up by the Jews, that I could not turn my thoughts back to the original, without being sensibly struck at the exactness of the copy.

It happened fortunately for me, who constantly resided at the sick tents ashore, that at the request of several officers of our squad­ron, who promised to accompany me, and intended themselves much innocent pleasantry in singing the grand chorus anthem of God save the king, long live the king, on the occasion, I had delayed giving his majesty of Baba the medicines I had promised him; for the very night following that, in which I was to have delivered them, he died suddenly. Now, tho' his death, by all the accounts we could pick up, was certainly occasioned by a violent fit of the gout in his head, and which probably was brought on by the too free use, and inebriating, inflammatory quality of the brandy, which he had been presented with, yet, there is no room to doubt, but that his loyal and resentful subjects would have imputed his demise to another cause, and revenged themselves on me as the poisoner of their king, had he chanced to have taken the smallest quantity of my medicines.

The chiefs seemed deeply concerned at this sudden and unexpected event, and were very desirous that the king's death should be kept a profound secret. But finding this impossible, about 11 o'clock of the same evening in which he died, they repaired to the Mud Town, carrying with them the corpse of their late monarch, and were accompanied by the several branches of the royal family. But before their departure, they took care to set fire to every one of their tents. All the inhabi­tants in the neighbourhood soon followed the example of the court in repairing to the Mud Town, and left not the least thing behind them, save the dogs of the village, which made such a hideous howling all the night, that it was impossible for any of us to get a wink of sleep; but we had another reason to prevent our taking any repose, and that was, our having observed the most evident marks of great dis­order amongst the natives, which we thought obliged us, for our own safety, to keep a watchful guard the whole night. Frederick Martin, before he went off, came to take his leave of us, and beg­ged with great earnestness for a fresh supply of gunpowder: he whispered that the king was dead, and that in all probability they should go to war about making another. We had been before told that the Duke of Baba would certainly succeed to the throne; but we afterwards learned, that Philibey the general, having espoused the cause of Rhapani, the late king's son, and taken him under his tute­lage and protection, this youth, who was only sixteen years of age, succeeded his father as King of Baba.

It was a lucky circumstance for us that our agent-victualler had, before this event of the king's death, amply furnished all the ships of the squadron with fresh provisions; for as after that event all
kind of business was at a stand, we consequently should else have been under a necessity of going to Johanna or some other port to have taken in the remainder of our supplies.

It may be of use to future navigators to be informed, that no good water is to be had at St. Augustine, unless they send their boat four or five miles up the river; and instead of filling their casks at low water (as is the case in most other rivers) they must begin to fill here at about a quarter's flood. The reason assigned for it is, that the river has a communication with the sea at other places, as well as with this channel of St Augustine's Bay; and by experience it has been found, that the sea water brought into the river by the flood tide, is not discharged till a quarter's flood of the next tide in St. Augustine's Bay; and for three miles at least up the river, the water is always very brackish, if not quite salt.

I cannot finish my observations on this island without hinting that such quantities of limes and oranges grow here, the largest casks may be easily filled with their juices, and that at a very small expense, as they may be purchased with iron pots, muskets, powder, ball, flint, etc. etc. It is sufficiently evident that a small quantity of these juices mixed daily with the seamen's common drink would in great measure prevent their falling into the scurvy; a disease so frequently attending all long voyages, and which by sad experience has been known to have deprived the nation of many more valuable men than hath all the power of the enemy. It is, therefore, an object highly worthy the attention of Government, that every ship of war which shall happen to touch at this island be provided with the juices of the lime and orange at the public expense; with the addition of such a quantity of rum, or other spirits, as shall be necessary to preserve the juice from corruption. During our stay here, I procured and preserved about half a hogshead full, which proved of essential service to the Kent's crew against the scurvy, both before and after the squadron got into the Ganges.

On the eleventh of August, having completed our stock of water, and taken in as many live cattle as we could stow, with a large quantity of limes and oranges, we left the island of Madagascar; steering the proper course for our East India settlements.

As the accounts hitherto given of this part of Madagascar, its productions, etc., by all former writers, have been very superficial and imperfect, I presume the supplying this deficiency will at least merit the indulgence of the reader.

Extracted by

S. Pasfield Oliver,

Late Capt. R. Artillery, F. S. A.
A PHILOLOGICAL SKETCH OF THE AFFINITIES OF THE MALAGASY LANGUAGE
WITH JAVANESE, MALAYAN, AND THE OTHER PRINCIPAL LANGUAGES OF THE INDIAN ARCHIPELAGO.*

More than a century ago, William Marsden, in a letter to Sir Joseph Banks, president of the Royal Society of London, set forth his views on the languages in use in the island of Sumatra, and called the attention of Orientalists to a fact of the greatest importance, viz., the manifest connection between a great number of words employed by the islanders of the oceans between Madagascar and the Marquesas group.†

In 1840, the founder of the teaching of Malayan and Javanese in France, M. Edouard Dulaurier, in a report addressed to the Minister of Education, upon the Malayan and Javanese manuscripts preserved in the London libraries, expressed himself thus: “Among the studies undertaken by mankind, there are few which, since the close of the last century, have made more progress than those which have for their object the languages and literatures of the far East. Among the interesting researches which they originated, a large place now belongs to the study of the languages spoken in the very different and widely scattered countries which form the Asiatic Archipelago. The voyages around the world, which for a half-century past, have added so much to our geographical knowledge, have acquainted us with the existence in what may be called the Oceanic or maritime world, of a system of languages, united to one another by numerous affinities, a system which extends from the Cape of Good Hope to the furthest islands of the great ocean, and which embraces in its entirety the languages of the Asiatic Archipelago. It is from this connection, which may be regarded as an ethnological fact of far-reaching importance, that science ought henceforth to set out to solve all the questions which relate to the origin and the migrations of the oceanic races, which form so considerable and yet so little known a portion of the great human family.”

Since the time when M. Edouard Dulaurier wrote these lines, great labours have been accomplished, works of the greatest value have been

* [Translated from a paper in the Actes du Congrès international des Orientalistes tenu en 1883 à Leide. Section polynésienne, Leide: 1885; pp. 57-81. Although the subject of the connection of Malagasy with the Malayo-polynesian languages has been already treated of in the ANNUAL (see XVIII. p. 155, XIX. p. 345, etc.), yet the following paper touches upon so many points of interest not yet noticed in our pages, that it appears to me to be well worthy of preservation in one of our numbers.—J.S.]
† “From Madagascar eastward to the Marquesas, or nearly from the east coast of Africa to the west coast of America, there is a manifest connection in many of the words by which the inhabitants of the islands express their simple ideas, and, between some of the most distant, a striking affinity. The links of the latitudinal chain remain yet to be traced” (W. Marsden). Even before Marsden suspected the existence of the language to which he gave the name of the great Polynesian,” the Dutch savant Reland, in his dissertation “De linguis insularum Orientalium,” had already pointed out the singular connection which exists between Malagasy and the languages of the Indian Archipelago, but from this very interesting fact he did not draw any conclusion, and for a long time Europeans remained in almost complete ignorance of the language of Madagascar.
published, especially by the Royal Institute for Philology, Geography, and Ethnology of the Netherlands (the Hague), and by the Society of Arts and Sciences of Batavia. Not only Malayan and Javanese, but also Kawi, Bugis, Maduran, Balinese, Sundanese, Macassar, Alfurese, Tagal, Bisayan, and Malagasy, have been the subject of works by Roorda, de Groot, Gericke, Veth, Kern, Pijnappel, Freidrich, Freede, Meinsma, Niemann, de Hollander, Wijnmalen, Van Musschenbroek, Hamme, Matthes, Klinkert, Van der Tuuk, etc., etc. The Dutch Orientalists, to sum up in one word, have made themselves such undoubted masters of this immense domain of Oceanic philology, that a fellow countryman of Marsden, of Logan, of Raffles and of Crawfurd, Mr. Maxwell, declares in the preface of the "Manual of the Malay Language," which was published at London, that "any one aiming at a thorough knowledge of the language, literature, and history of the Malay people should commence his task by learning Dutch." This statement of an English Orientalist is perfectly just and true, but we French ought to add that Dutch Orientalists have often courteously given us, in our own language, lessons on Oriental philology, history, geography, and ethnology. Thorough students, they bring to their work of enlightenment and of civilization all willing workers, and they encourage and reward their labours. Emboldened by this conviction, I here offer the result of researches having for their object to weld together, perhaps more firmly than has hitherto been done, the Malayo-Malagasy ring, at the western extremity of that great latitudinal chain of which Marsden speaks, which traverses the Indian Archipelago, the Netherland Orient, so as to bring together the shores of Africa and America.

I.—The Origin of Malagasy: the Sanscrit, which occupies so large a place in Javanese and Malayan lexicology, occupies an almost imperceptible place in Malagasy.

It is no longer possible to believe, with Sir William Jones, that all the Malayo-polynesian languages are derived from the Sanscrit, and that the Malagasy are the descendants of Arab sailors and traders. Hardly thirty years ago, Logan, the editor of the Journal of the Indian Archipelago, at Singapore, maintained that all the Malagasy were varieties of the African negroes, and had no connection with the Malayan race. Crawfurd, who had only discovered in Malagasy fifteen Javanese words, and sixty-three belonging at the same time to Malayan and Javanese limited to these numbers their common roots; and he explained this fact by supposing that certain Malayan prahus must have been driven by a tempest across the Indian Ocean as far as the shores of Madagascar. William von Humboldt, who has given us a comparative table of a hundred and thirty words in nine Malayo-polynesian languages, pointed out that the Malagasy language has great affinity with the Malayan; and he was led to think that a Malayan colony must have settled in Madagascar. The Englishman Pritchard adopted this opinion of Humboldt's, and also that which considers Malagasy as more nearly related to Tagal than to any other Polynesian tongue. The missionary and historian Ellis thought that the Hova, the present dominant tribe in Madagascar, were the descendants of a colony coming from Java. Lastly, M. Van der Tuuk admits that Malagasy had its source in the languages of the Indian Archi-
pelago, but he believes that it became separated from them after the civilization of continental India had influenced Java and Sumatra.

In a learned memoir read before the Royal Asiatic Society of London, in May 1865, M. Van der Tuuk affirms that there are in Malagasy some Sanscrit words, and that these have undergone the same changes as the native words. Contrary, however, to this assertion of the learned author of the Batak-Dutch Dictionary, solely based on the five or six Sanscrit words which he was able to discover in Malagasy, I believe that Malayan immigration into Madagascar took place before the time of the settlement of Hindus in Java and Sumatra. How otherwise can we explain why a crowd of purely Sanscrit words should be found in the languages of the Archipelago, while these same words remain completely unknown in Malagasy? Is it not indisputable that if these Sanscrit words, which are found in the different tongues of the Indian Archipelago with invariable marks of their perfect identity, do not exist in Malagasy, it is because Malagasy had already become separated from its allied languages when the Sanscrit words were introduced into these latter tongues?

In proof of this opinion, numbers of examples can be given. Among the islanders, fishing was always one of their principal occupations, and the net, the appliance for fishing, must have very soon received a special name. Now while in Malayan, Javanese, Sundanese, Batak, Dayak, and Macassar, the name of the fishing net is *djala*, that is to say, the exact Sanscrit word for it, this root is completely unknown in Malagasy.* The word for *bread* is *rouiti* in Sanscrit. This is also the term found in Malayan, in Javanese, in Sundanese, in Macassar, and in Bugis; in Malagasy the word is *mofo*. In the Indian Archipelago, *honey* is denoted by the purely Sanscrit word *madou*; it is expressed in Malagasy by *tantely*. The Sanscrit root *goula* (sugar) is found, without the least alteration, in the tongues of the Archipelago; it is completely unknown to the Malagasy, who call sugar *sirumany*, lit. ‘sweet salt.’ The Sanscrit *soutra* (thread) has passed into Mal., Jav., Sund., Batak, Macas., Bugis, and Tagal, and in them it always means *silk, silk thread*; in Malag. the word *soutra* is unknown, and its native equivalent is *landy*. The Sanscrit root *karpasa* (cotton) is found in Mal., Jav., Sund., Dayak, Macas., and Bisayan, under the form *kapas, kapasa, gapas*; it altogether unknown to the Malag. vocabulary, which employs instead the word *landishazo*, lit. ‘tree silk.’ In Sanscrit, *kac’a* is the name for *glass*; in Mal., Jav., Sund., Dayak, and Macas., this word is written and pronounced *katcha*; in Malag. the word is quite different, *fitatatra*. *Ivory*, or the tusk of the elephant, bears the Sanscrit name of *gading* in Mal., Jav., Sund., Batak, Macas., Tagal and Bisayan; Malagasy knowing nothing of this root has adopted our French word *ivoire*, or rather the English *ivory*, which is more conformable to their language, and is easier to pronounce. The name of the elephant itself (in Sanscrit *gadja*) has been carefully preserved in all the tongues of the Indian Archipelago; but the Malagasy know nothing of it, and have been taught our European word (spelt *elefant*) for the great pachyderm.

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* Fishing net = *harato* (in Malag.).
To denote the word 'arms' (i.e. 'weapons') in its general meaning, the Malagasy employ the word fi-adi-ana, whose root is ady (fight); while the Kawi, Mal., Batak, Tagal, and Macas. use the words san-djāta, sendjāta, sondjāta, sandāta, which come from the Sansc. root sadja, which is never met with in Malagasy. In Jav., Mal., Sund., Batak, Dayak, and Macas., they call by the name kountch' the appliance by which a house is protected from intrusion, whether the key itself, or the key together with the lock. This word, of Sansc. origin (konc'ika), has never reached the Malagasy. In that language mangāla-hidy signifies "to take away the shut up," that is to say, "to open," and fanālahidy is the name of the instrument which "takes away the shut up," which "opens," that is to say, the key.* In the Philippines, as in Java and Sumatra, the name of the pigeon is palapāti, perapāti, merapāti, darapāti, which are evidently derived from the Sansc. para-pata. In Malagasy the pigeon is called vōromailāla, or, more fully, vōromahailāla, literally, "the bird which knows the way." [More probably, "the bird accustomed to love."] The lion, as well as the elephant, is not met with either in the Archipelago, or in Madagascar, but its Sansc. name singha is perfectly well known in the Indian Archipelago, while the Malagasy do not know anything of this word, but have simply borrowed the European word, spelling it liona. In Malagasy there is not found the least trace of the fabulous serpent of the Hindus, the naga, of which the legendary stories of the Malays and the Javanese make such frequent mention; neither is there any knowledge of the fabulous griffin of Vishnu, the famous garouda, whose name, purely Sanscrit, is found unaltered in Jav., Mal., and Macas.

The words for number are almost identical in Javanese, in Malayan, and in the other tongues of the Indian Archipelago, and in Malagasy. The decimal enumeration, written or spoken, is founded absolutely on the same principles. At the same time it is worth noting that the purely Sanscrit root angka (figures) used in Java, Sumatra, Borneo, Celebes, etc., is unknown in Madagascar, where they express the idea of figures by the compound word sora'itsa ("likeness of number").

The advanced state of a people in civilisation is now unfortunately measured by its more or less perfect means of attack or defence in war. Owing to the progress in European artillery, the citadels and fortifications constructed by Vauban are no longer a sufficient protection against an enemy. In continental India, the fort or strong place is no longer what it was formerly, but it has preserved the primitive name of kōta. This technical term, purely Sanscrit, which goes back to a high antiquity, has passed into Javanese, and from thence into the other languages of the Archipelago, especially into Tagal and Bisayan; but it does not exist in Malagasy, where the word rova, primitively used in the sense of palisade, is now extended to denote

* Except in places frequented by ships, on the eastern coast of Madagascar among the Betsimisaraka, it is sufficient to have a rod planted before the door of the hut, which nothing can close effectually (from its fragile materials), to indicate the absence of the owner and warn off passers-by. The horror in which theft was held was so great that whoever was in the least suspected was often obliged to leave the country in order to escape general scorn. See Carayon: Histoire de l'Établissement français à Madagascar; 1845, p. xii. [I fear that such primitive simplicity is to be found nowhere in Madagascar at the present day.—Ed.]
a strong place, or one defended by ramparts. [Also, a royal or chief's compound or enclosure.] In Tagal and Bisayan this same word *kota* often takes the sense of 'prison.' In Javanese and Sundanese the proper word for prison is *koundjara*; in Malayan, Dayak, and Macasar it is *pandjara*, from the Sansc. root *pandjara* (cage). This root does not exist in Malagasy, and the idea of prison is expressed by the words *traînô-maîsìna* (i.e. 'dark-house').

It is known that the Javanese vocabulary contains a score of different words, which correspond to the various attitudes which people take when they stand up, or sit, or lie down. Among these attitudes or postures, there is one which is remarkable among all the others; it is that of a man remaining sitting, with the figure erect, and the legs crossed, in the attitude of the statues of Buddha. The Sanscrit root *cil* (to meditate in this seated fashion) is preserved in Jav., in Sund., in Mal., and in Tagal, under the form *sila* ('sitting with crossed legs'). But the Malagasy, which also possesses a great variety of words to express the various postures people take, only employs in this special case the verb *mitamboho-pösa* ("to squat with crossed legs" ["like a crab," *föza"], which presents nothing in common, and has no connection with the Sanscrit root. Certainly, if the Malagasy should show anywhere in their language any trace of remembrance of Buddhism, it would be in this instance.

From *vôrotra* (commerce) Malagasy has formed *mpivôrotra* (merchant, trader). It knows neither the Persian *saudâgar*, used in Jav., in Sund., in Mal., and in Macas., nor the Arab word *khawadjah*, nor the word *baniya* of the traders of continental India, used in Tagal and Bis., under the form *baniyagã*. This example is sufficient to show how little the Malagasy have borrowed from the foreigners who, in the course of centuries, have touched on their coasts.

I might continue this series of examples, but those which I have given are doubtless sufficient; at the same time it will not be without service to confirm them by a few others, examples borrowed from an entirely different class of subjects, that is to say, borrowed from ideas purely abstract and metaphysical. They will show this fact very distinctly: when the words used in the languages of the Indian Archipelago do not come from a Sanscrit source, they are generally found in Malagasy; when, on the contrary, they come from a source purely Sanscrit, they will not be found in Malagasy.

Thus, the idea of 'thought' is expressed in the languages of the Archipelago by the help of the two roots, *tchita* or *pzödr*; the first coming directly from the Sansc. *c'itta*, the second from the Arabic *fikir*. Malagasy draws from neither of these two sources; it has its own word, *hevitra*. The Sansc. root *vaça* (authority); Kawi, *wasa*; Jav., Mal., and Macasar, *kowâsa*; Day. *kowasa*; has for its equivalent in Malag. the root *didy*, a primitive word of Mal. polyn. origin, which is no other than the *titah* of Mal. and Sund., and which doubtless was used before the importation of the Sansc. word into the Archipelago. To express the ideas of 'origin, race,' these same languages have adopted the Sansc. root

* The Tagal-Spanish Dictionary defines *banyaga*, as "a petty trader or pedlar, who goes from village to village selling his wares." In Bisayan the word has acquired a bad meaning, for it has become a synonym for "rogue, rascal, scamp, etc."
vangpa; the Malagasy does not know this and employs no other word but karādana [from rādana, ancestor]. The Malagasy language, to express the abstract word 'religion,' has never made use of the Sansc. root agama, which is employed without the least modification of form in Jav., Sund., Mal., Dayak, Macas., and Bugis. This shows that the language of the Malayo-Javanese immigrants in Madagascar had remained, from the epoch of the immigration, untouched by the religious proselytism of India. From the root ānātra (advice, counsel, lesson) the Malagasy have the noun of the agent, mpavanāntra, spiritual teacher, and they have not in their language any word which recalls the Sansc. guru, while this word has been reproduced and preserved in Jav., Baly, Madurese, Sund., Mal., Batak, Dayak, Macas., and Bugis. This shows, by the way, that the Hindus had only become the spiritual teachers, the gurus, of the different peoples of the Indian Archipelago after the epoch when the immigration into Madagascar was made by representatives of the Malayo-Javanese peoples. It is still the Sanscrit which has given the root bāsa, under this form or that of bahasa, to all the languages of the Archipelago, to express our word 'tongue' or 'language.' This root does not exist in Malagasy, where they employ, in its stead, one of the two words tėny or volahana.

It would be superfluous to continue this line of observation, which one might still apply to a great number of abstract words, such as commencement, study, face, form, taste, custom, history, instruction, lesson, reading, praise, price, witness, etc., and it may be admitted as a theorem sufficiently demonstrated what we have tried to prove, viz., that the Malayo-Javanese immigration into Madagascar took place before the introduction of Hinduism into Java and Sumatra.

To this proposition we may add some others which may be formulated thus:

1.—The Malagasy language belongs to the same family as the principal tongues of the Indian Archipelago.

2.—Its grammar is founded upon the same general principles as the grammars of Javanese and Malayan.

3.—Its vocabulary includes a cloud of words which are common to it and to Javanese, Malayan, Batak, Dayak, Macassar, Bugis, Tagal, and Bisayan, that is to say, with the different languages of the Indian Archipelago, which have as their primitive basis the wide-spread Polynesian.

4.—The Malagasy language possesses only a very small number of Arabic roots, and a still smaller and quite insignificant number of Sanscrit roots.

5.—Of all the existing Oceanic languages, it is the Malagasy which seems the most useful to inform us as to the Polynesian, of which they are all offshoots more or less divergent.

II.—Grammatical Affinities of Malagasy with Malayan, Javanese and the other languages of the Indian Archipelago.

* If from the abstract words 'tongue,' or 'language,' we pass to the words 'voice,' 'sound,' we shall find in the Malayan and Javanese swara, and in the Batak swara, the Sansc. root swara; while in Malagasy the equivalents of this root are feo, voice, emo, sound, which have no connection at all with the root swara adopted by the three languages just mentioned.
In each of these languages the grammatical system is founded upon the same bases, and the derivation of the words is effected by the help of affixes, which are often the same, and give to the words so derived an analogous meaning.

These various affixes, it is well known, play an important part in the structure of the Oceanic languages. They are, as it were, the key, and when the regular working of these particles is once understood, it becomes easy to conjugate a root-word into the different forms of noun, adjective, verb, participle, and adverb, and to give to each of these forms the proper shade of meaning which belongs to it, as distinct from the general and proper sense of the root itself.

The euphonic laws which regulate the employment of these various affixes, whether they are prefixes, suffixes, or infixes, have many mutual relations. It is the same with the laws which regulate the different parts of a sentence.

The Noun.—The noun or substantive does not admit any modification of form to denote gender or number. The masculine and feminine, the singular and the plural are shown by the help of auxiliary words. To give only one example: the masculine gender is indicated in Malag. by the word lâhy, in Mal. by laki, in Batak by lakî, in Bisayan by laïake, etc. [In prov. Malag. also by lâky and lâkilâky.]

The nouns are primitive or derivative. The most important class of derivative nouns is that which comes from verbs or adjectives, and which is composed chiefly of abstract nouns. These derivatives are formed in exactly the same manner in Malagasy and the languages of the Archipelago. E.g., from mōra (easy, cheap), Malagasy derives the noun ha-mor-âna; Mal. and Tag., ka-mourâ-an; and Batak, ha-mourâ-an. (We shall see further on that the aspirated ha of Malag. and Batak very frequently replaces the guttural ka of Jav. and Mal.) In Bisayan the particle ka is sufficient by itself to give to the nouns to which it is prefixed the abstract sense; e.g. ka-pouti (whiteness), from pouti (white). If these roots have at the same time the additions of the prefix ka and the suffix an, they then take a collective sense; it is thus that with the words for numbers, two, three, four, five, they form the multiples by tens, ka-louha-an (twenty), ka-llov-an (thirty), ka-pal-an (forty), ka-lim-an (fifty).

Another class of derivative nouns is that which indicates, either the place where such and such an act is usually done, or the means which are used for performing such act. This special category of derivative nouns is characterised in Malagasy by the prefix fa or fân, and the suffix an; in Jav. by the prefix pa or pân, and the suffix an; in Mal. by the prefix pe or pen, and the suffix an; in Tagal by the prefix pan, with or without the suffix in.

It is known that before proper names of people of low condition, the Jav., Mal., Batak, Macas., Tagal, and Bis. use the particle si. It is the same in Malagasy, where the particle i is usually placed as a prefix before proper names which are divested of the particle Ra, which characterises people of higher rank.*

* Among the Hova, the names of relationship, and the personal pronouns, subjects of verbs, are alike preceded by the particle i. In Tagal the particle si plays the same part before relationship names. We shall see further on that Malagasy frequently omits the sibilant s at the commencement or the end of Malayian or Javanese words. This is why the prefix si in the Archipelago languages becomes i in passing into Malagasy.
In all these languages, to denote the genitive, they place the noun which is governed after the noun which governs it, and with which it is in connection, and that immediately and without the intervention of any preposition.

The Adjective.—The adjective is unchangeable. It is placed immediately after the noun or substantive with which it is in connection, the qualifying or descriptive word coming after the noun which it qualifies or describes. The numeral adjectives follow invariably this law. Thus in Malagasy, they do not say, in the same order as in French or English, “a hundred persons,” but quite in the reverse order, “persons a hundred (djona zato).” Instead of “a thousand villages,” they say “villages a thousand” (tanana arivo).

It may be said with truth that the real adjectives are as much root-words, and that they are not really derivative adjectives. Those which assume this form are participles taken adjectively. One class of adjectives, however, must be excepted, those having ma as their prefix, and yet these adjectives are often equivalents of neuter verbs and are conjugated like them. E.g., ma-làma (smooth, slippery), ma-nàra (cold), ma-zàva (bright, shining), màmy for ma-hamy (sweet), màsina for ma-hasina (saltish). In Tagal and Bisayan, this particle ma, by being prefixed to an abstract root, makes it a qualifying adjective.

The adjectives used to express diminution are often formed by doubling or repeating the root.

The Pronoun.—The first and the second personal pronouns are absolutely alike in Malagasy and in the different languages of the Indian Archipelago. These personal pronouns, besides their original form, have another form reduced by apheresis. The personal pronouns of this shortened form are placed immediately after the verbs with which they are in regimen, and also after nouns or substantives; in respect of these they play the part of possessive adjectives.

In all these languages there exists a double plural for the first personal pronoun, “we;” the one is inclusive, the other exclusive. The inclusive signifies ‘we together with you;’ the exclusive signifies ‘we without you;’ in other words, the inclusive ‘we’ includes, with the person who speaks, those to whom he speaks; while the exclusive ‘we’ excepts the person or persons to whom he speaks. The inclusive is tiska, nisika, and the exclusive, sahdy, isahay, in Malagasy; in Mal., Tagal, and Bisayan, the inclusive is kita, in Batak, hita; the exclusive is kami in those three languages, and ham in Batak.

To express the reflexive pronoun, use is always made of nouns, which are added to the personal pronouns, and which in each of those languages signifies ‘body’. In Malagasy this is tina; in Javanese it is batan, which is also found in the Malagasy word vátana.

In the Malagasy interrogative pronouns, when one wishes to point out clearly the plural, for they are the same in the two numbers, one has recourse to the word sidhby,* or more often to the Hova word rehetra, which signifies ‘all,’ and each of which implies distinctly the idea of plurality. It is worthy of notice that these two Malagasy words sidhby and rehetra are found, the first in the Jav. habel, and the second in the Tagal lahát.

* [Prov. for tay aby; and in Hova, aby simply.]
The Javanese and Malayan interrogative pronouns, in taking the duplicate form, become indefinite pronouns; it is the same in Malagasy. Only in that language, reduplicated forms must each be preceded by the particle na; e.g. iza? 'who?' aiza? 'where?' become 'whoever,' na iza na iza, and 'wherever,' na aiza na aiza, by this use of the na. Our French indefinite pronoun on is expressed in Malagasy, in Javanese, and in Malayan by certain words which, although quite different at first sight, are all derived from the same source and are of the same nature.

The Verb; the Passive Verb.—The verb in its primitive or root form, that is to say, deprived of every special affix, indicates the passive sense. This is true both in Malagasy and in all the languages of the Indian Archipelago. It is these various affixes added to the verb which make it active, or neuter, or causative, or reciprocal, or frequentative, etc.

In the Oceanic languages the passive form of the verb is employed in speaking, in preference to the active or transitive form.* This fact constitutes a linguistic peculiarity worth notice, for, with the systematic employment of affixes, it is one of the fundamental bases of Malagasy, Javanese, Malayan, Batak, Tagal, Bisayan, and other languages.

The Active-transitive Verb.—To denote the verbs of active-transitive meaning, they employ

in Javanese the prefixes a, an, ang, am.

,, Malayan ,, ,, me, men, meng, men, mem.

,, Malagasy ,, ,, man, mang, mana, manka.

,, Tagal ,, ,, ma, mag, man, maka, makpa.

The Substantive Verb.—The substantive verb exists, so to say, in a latent state, since it is almost always underlying or understood in sentences. Ana in Javanese, ada in Malayan, ary or isy in Malagasy, ay or mey in Tagal, moe in Bisayan, etc., are all condemned to this part of inactivity. Considered as an auxiliary verb, the substantive verb remains almost unused. If a Malagasy has to express such a phrase as, "I am little, and thou art great," he would say: "kely aho. J.J' Manao," literally, "Little I and great thou;" and its allied tongues in the Indian Archipelago would express it in a similar fashion.

The Frequentative [or Customary] Verb.—In order to indicate the continuity of an action, or the repetition of an act, the verb is given a duplicated form, following a prefix, but without doubling the prefix as well. This grammatical procedure is the general custom. As for reduplication of words, it is usual in all the languages of the Indian Archipelago, more frequently, however, in Malagasy than in Malayan and Javanese.

* To give an example; to express this thought, 'I love him,' a Malagasy says: 'Tiaho isy,' that is, literally, 'Loved (by) me ho.' In the languages of the Archipelago the same rule is followed.

+ It is this multitude of words commencing with the initial m of the prefixes which led M. l'Abbé Dulong to believe and say that the greater part of Malagasy verbs begin with m in the infinitive. See Vocabulaire et Grammaire pour les langues malgaches, sakalava et botsimisara, l'Is Bourbon : 1842, p. 99.

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* OF THE MALAGASY LANGUAGE.
The Participle.—The passive past participle, which is the most used of the participles, is formed by adding an auxiliary word to the root, a word, which, by its own signification, denotes past time; these are *wis, ovwis* in Jav., *soudah, talou* in Mal., and *efu, voa, tafa* in Malagasy; all these words having the same sense, viz., 'done, finished, accomplished.' There is in Malagasy another class of passive participles; these are formed simply by means of the prefix *a*. This class of participles is a direct derivative from the Javanese participles formed by the prefix *ka*, without the addition of a suffix; the Jav. *ka*, in passing into Malagasy, has become *ha*, or simply *a*, as in Batak. There is still, in Malagasy, a third class of participles; these are formed by the help of adjectives and adverbs, to which is given the prefix *ha* and suffix *ina*. This class of participles corresponds exactly to the participles of Jav. and Mal. transitive verbs, formed by the prefix *ka* and the suffix *an*.

Lastly, an altogether special class of passive participles is formed in Malagasy by help of the intercalary particle *in*, which is inserted in the root-word, immediately after the initial consonant. E.g. from *jitaka* (deceit) is formed *finitaka* (deceived, one who has been deceived); from *gidra* (letters), *ginadra* (put in irons, one who has been fettered). This occurs exactly in the same manner in Javanese, where the particle and its mode of insertion in the root are identical with that followed in Malagasy, the modification of the sense which thus results being in other respects perfectly equivalent. This is equally the case in Tagal; e.g., from *hanap* (to seek) is formed the passive participle *hinanap* (sought, the one who has been sought). Besides the intercalary *in*, there are also in Tagal the intercalaries *ing* and *oum*, which appear in the same form in Javanese and in Malagasy, and have in each the same characteristics. The intercalary suffix *oum* plays a very important part in the formation of Tagal verbs. It may be remarked that these particles are more used in Javanese and in Malagasy than in Malayan.

**Tenses and Moods.**—The tenses of verbs are denoted by means of special words which indicate the past, the present, and the future. These auxiliary words are in Malayan: *telah, soudah, habis*, for the past; *akan, hendak, nanti, maou*, for the future; and when this is considered necessary, *sakarang, lagi*, etc., for the present. Malagasy makes use of analogous auxiliaries, as do all the Oceanic languages; but it employs also another very ingenious plan; a simple changing of the prefixed particle suffices, in most cases, to indicate the tense of the verb, that is to say, to show if the verb is in the past, the present, or the future. E.g.: *mi-jery aho*, I look; *ni-jery aho*, I looked; *hi-jery aho*, I shall look. The *n* is part of *no*, a particle which marks the past; *h* is part of *ho*, a particle which indicates the design, the desire, the future. This is also a preposition, which signifies *for*, and corresponds with *akan* in Malayan.

This practice, which is not employed in Malayan and in Javanese, is, however, not confined to Malagasy. It is found in Bisayan, where

[* The "intercalary particle" of M. Marre is the "infix" of Rev. L. Dahle and later writers on the Malagasy language. As Mr. Dahle showed in his valuable paper on "The Infix in Malagasy: a Malayan feature," in the second No. of the Annual, 1876, pp. 169-172, the infix takes not only the form of *in* but also of *oum.*—J.S.]
the adverb of time *na* (equivalent to the Latin *jam*) is prefixed also to the verb, to mark the past tense. It is found in Tagal, where the preterite is formed by changing to *n* the letter *m*, which is the initial of the verbal prefix *mag*. E.g. from the root *larou* is made *mag-larou ahou* (I play) and *nag-larou ahou* (I played); and if one wishes to mark the past tense with greater force and precision, one can add as a suffix to the verb the particle *na*, and *nag-larou-na ahou* then signifies not only "I played," but, "I have finished playing."

In Malagasy, as in Javanese, the suffix *a*, or one of the varying euphonics *ya* and *wa*, takes a prominent position among the verbal suffix particles. It serves in each language for the formation of the imperative mood. To express the imperative it is sufficient to add to the termination of the indicative present the final vowel *a*. This rule is identical with that of the Javanese grammar. Besides the imperative of the active form, there is yet the imperative of the passive form. In Malagasy, the characteristic of this imperative (more frequently employed than the other) is the final vowel *o*. As in Javanese, it is sufficient to suppress the initial nasal (which gives the active sense), to give to a verb its own original passive sense; so also in Malagasy, to form a passive imperative from a verb in the active mood, it is sufficient to leave out the *m*, the initial of the verbal prefix, and this being done, to add, as a terminal, the suffix particle *o*.

There is in Javanese an expletive particle *bok*, which gives the imperative sense, and can be translated by 'then,' 'therefore.' There is in the same way in Malagasy an expletive particle *beka*, which has the same sense and plays a similar part. [Only in prov. Malagasy.—ED.]

Side by side with the imperative mood properly so called, where there is a positive meaning, there is also the imperative in a negative sense, which is usually called the prohibitive mood. In Malagasy, this last mood is expressed by the help of the word *asa*, which is no other than the *adj* of the Javanese. This word means exactly "keep thyself from." To form the prohibitive it is sufficient then to place this word (*asa* in Malag., *adj* in Jav.) before the present indicative of any verb. Such are, in short, the principal characteristic features impressed on the grammar, which show us the affinities in structure of the Malagasy language and tongues of the Indian Archipelago. Having sketched this summary of them, we shall now pass to the examination of the lexicological affinities.

**III. Lexicological Affinities of Malagasy with Malayan, Javanese and the other tongues of the Indian Archipelago.**

Wallace has reckoned up 49 languages or dialects in the Indian Archipelago. Dr. Robert N. Cust has counted up many more.* We will not follow him in this field, which might be divided and subdivided ad infinitum; and we will content ourselves by comparing Malagasy with the principal languages spoken in the Peninsula of Malacca, and the islands of Sumatra, Java, Borneo, Celebes, and the

*On the Languages of the Indo-Chinese Peninsula and the Indian Archipelago, p. 18.*
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Philippine Archipelago, that is to say, with Malayan, Batak, Lampong, Javanese, Kawi, Sundanese, Madurese, Balinese, Dayak, Macassar, Bugis, Tagal, and Bisayan.

Speaking ethnographically and geographically, a much wider sense has been given to the word "Malayan" than belongs to it from a purely philological point of view. The Malays had their cradle in the country of Menangkabou, in the island of Sumatra. In early times, by their commerce, their maritime expeditions, and their colonies, they spread the use of their language over the Malaccan Peninsula, over Sumatra, Borneo, and on the coasts of almost all the islands of the Indian Archipelago. Thanks to its distinctness, softness of pronunciation, and the simplicity of its grammar, the Malayan language has become a sort of lingua franca in the far East; it serves as a common link between the peoples of the Archipelago, as well as between the coast peoples of Annam, of Cochin-china, and even of China itself. For many centuries Malayan has been the language of commerce and of business in this part of the world. In the Dutch Indies, they speak Malayan to servants, and the children of Europeans learn it before understanding their parents' own language. The intrinsic qualities of Malayan, its power of adaptation, its wide diffusion, the employment which it now makes of the Roman character in writing it—all these secure for it a preponderance over the other languages of the Oceanic world, and will certainly cause the disappearance of many of the languages now living, but condemned to perish in a not very distant future.

In the interior of Sumatra, a people of brown colour and of Malayan stock, although they were convicted of cannibalism in the first half of this century, possess an alphabet peculiar to themselves and a certain amount of literature. The language which they speak, the Batak, is altogether different from Malayan; the learned works of M. Van der Tuuk have made it known to Europeans. A comparative vocabulary shows the remarkable resemblance between it and Malagasy.

The Lampong is spoken by a people of Malayan stock, who occupy the southern coast of Sumatra, and are only separated from Java by the Straits of Sunda. This is a distinct language from Malayan and Javanese, and has its own proper character.

The Javanese is spoken by the inhabitants of Java, and by a part of those of the islands of Madura, of Bali, and of Lombok, that is to say, by more than eighty millions of souls. The Javanese is the richest and most perfected of the Oceanic languages, its alphabet serving to write not only Javanese itself, but also Sundanese, Madurese, and Balinese. The general characteristics of its grammar are the same as those of the Malayan. In Javanese two forms are distinguished: the Kromo, high or ceremonial Javanese, and Ngoko, low or vulgar Javanese.

Archaic Javanese is called Kawi, i.e. polished, cultivated, or refined, in opposition to djawi, a word which signifies common, vulgar. According to the eminent Dr. Kern, of the University of Leyden, Kawi is the parent of modern Javanese, and he recognised Sundanese and Malayan as its near relations. By its genius and structure, Kawi
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is plainly a Polynesian language, and by no means an artificial and secret language, in which there might be preserved a learned literature and religious writings.

The Sundanese, Madurese, and Balinese may be considered as three sisters of Kawi. They differ essentially from Javanese, although coming from the same source.

Sundanese is the language of the mountain tribes of the west of Java; it is spoken by more than four millions of souls, and presents a very special interest, because it has escaped up to the present day the influence of foreign innovations.

Madurese is the language of the inhabitants of the island of Madura; it is ruder and poorer than Javanese.

Balinese is the special language of the island of Bali; it is still spoken by half a million of souls, and retains many terms borrowed from Sanscrit from Kawi, and from Javanese. It is in this island that most valuable treasures of Kawi literature have been discovered, Bali having been the refuge of Hinduism, Brahminism, and Buddhism, since the Mussulman invasion of Java.

The shores of Borneo have been inhabited since time immemorial by Malayan peoples; the Bugis, of Celebes, have settlements on the eastern coast, the Chinese have established themselves on the northern coast, but the Dutch hold the government of the greater part of this island, the largest of Malaysia, and [almost] of the whole world. The native population of the interior is still little known, and bears the general name of Dayak, which is also the name given to the language which they speak.

Celebes is the centre of an ancient civilisation independent of that of Java. Its language and its literature differ essentially from Malayan and Javanese, or more correctly, its "languages and literatures," for in Celebes there are two distinct principal languages, Macassar and Bugis, which are as distinct from each other as Spanish and Portuguese. The Bugis people are of hardy and interprising character; they occupy the largest part of Celebes, and have settlements in the Peninsula of Malacca, in Borneo, and in the island of Sumbawa.

The Philippine Archipelago presents us two leading languages, which are written in the same native characters, Tagal and Bisayan. They each have remarkable resemblances to Malagasy, but no one would recognise with William von Humboldt, in Tagal, the mother-tongue of the Malayan family, and the most perfect example of the Oceanic languages.

Among all these languages, the two first places belong, without any doubt, to Malayan and Javanese; one might say with truth that in all those islands where they have penetrated they have become means of civilisation and powerful factors of moral and intellectual progress among the native populations, either those half civilised or entirely barbarous. As we have already made some extracts from its vocabulary, it is right to mention a race which is found at the same time in Celebes, in the Philippines, in the Moluccas, and as far as New Guinea and the Papuan region, although it may be distinct at the same time from the brown Malayan race and from the black Negrito race—we mean the Alfuros. From the beginning, and in all
the countries where they established their power, the Portuguese gave 
this name to the independent native tribes who lived beyond their 
authority and influence. So that this name of Alfuro is not, properly 
speaking, a generic name applied to a people or a particular race, but 
it has been applied generally to the inhabitants of the interior of 
the islands, in order to distinguish them from the subjected coast 
tribes; so that this name has become generally used in the Moluccas, 
in Celebes, in the Philippines, and in New Guinea.

One language, in different forms, has then overspread all the 
islands, great and small, of the Archipelago; it is the stock common 
to Malagasy and all the languages we have here described; and it 
has left in their respective vocabularies numerous proofs of this com-
mon origin. In philological science demonstration by examples is 
of much greater value than a collection of purely theoretical consid-
erations, however skilfully combined they may be. The agreements 
and relations of these different languages with one common root, 
which are apparent, in some cases by identical forms, and in others 
by slight alterations in pronunciation by each people, will show clear-
ly the lexicological affinities of Malagasy with the principal lan-
guages of the Archipelago. This is the principal object of our little 
securematic comparative vocabulary.

We have divided it into eight sections, under these distinct head-
ings:

(1) Parts of the body both in men and animals. (2) Names of 
animals, of plants, and of minerals. (3) Natural phenomena. (4) 
Tools, utensils, and common objects of domestic life. (5) States and 
qualities of persons and of things. (6) Principal verbs serving to 
express physical acts. (7) Principal verbs serving to express the 
acts of intellectual and social life. (8) Names for numbers.

In Malagasy, as in Javanese and in Malayan, the roots are almost 
all dissyllabic, and the special affixes have one or two syllables in 
addition. It is then an error to say, as Dr. R. Cust has done, 
that Malagasy has "prefixes and suffixes of three syllables, 
extending the length of some words to a monstrous extent.")

What has given rise to this erroneous assertion is, that in Malagasy, 
as in Malayan, the root is often accompanied by two or three pre-
fixes as well as by suffixes, and that it can besides be also given in 
a reduplicate form, which is frequent in Malagasy. In Malayan, to 
cite only one example, from the root kata is formed the derivative 
di-per-kata-kan-na-lah, and even di-per-kata-kan-na-lah-kah, if one wish-
es to give it the interrogative sense.

The primitive alphabet of the Malagasy people remains unknown up 
to the present time. The vowels become with them only orthographical 
signs added to the consonants or principal letters, the aksara's of the 
Javanese and the Sanscrit. It is from this doubtless that there comes 
the term of sana-tsiratra (lit. 'children of letters'), which they give to 
vowels. It may be remarked that in Batak the vowels bear the same 
name of anak ni sorat ('children of letters'), and that in Macassar, by the 
testimony of our learned colleague, Dr. Matthes, while there is no 
special name which corresponds with our word 'vowel,' to make amends 
for such omission the consonants or principal letters are there called
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anrong lontarà, that is, 'mothers of writing.'

Every Malagasy syllable is terminated by a vowel. When the final syllable of a root of one of the Indian Archipelago languages is a firm one, that is to say, formed by a vowel inclosed between two consonants, the last of these consonants is not found in Malagasy, or at least it is replaced by one of the three syllables ka, tra, or na. E.g. soulour, sarat, pilin, panas, toulong, toumout, sisip, kambar, toumit, sorat, osik, konil, iby of the Archipelago, become in Malagasy; sôlo, sara, fidy, or fîlo, fana, tônotra, tônotra, sisika, kâmbana, tômitra, sôratra, hêlsika, hôdîtra, tsiôha.

The three final syllables ka, tra, na, very frequent in Malagasy, are called mute syllables, because often they are suppressed in writing, and are only slightly sounded in pronouncing them. These syllables produce euphonic modifications in the nature of the initial letter of the word which immediately follows them, when this initial is one of the consonants va, za, ha, fa, ra, la, sa. These modifications are governed by very strictly formulated rules, for the knowledge of which I refer the reader to my Malagasy Grammar. It is these changes that made it said at Leyden, that it was more difficult to find the root in a Tagal derivative verb than in an Arabic word; and that made Père Juan, author of the Bisayo-Spanish Dictionary, published at Manilla in 1851, say, that the variations and changes of letters, one into another, were for him "incomprehensible mysteries."

The Javanese, Malayan, and Malayo-polynesian k is usually replaced by h at the commencement and even in the body of the Malagasy and Batak words. It is thus that the words karang, boukit, takout, laki, akou become in Malagasy harana, vôhitra, tôhotra, lahi [lakilaky in some Malagasy dialects], and aho.

The soft guttural g, which is always pronounced hard (gue), never je, is also often replaced by the aspirated h, especially at the commencement of words. E.g. ganiong becomes in Malagasy hântona; sometimes also it is suppressed; e.g. ganti of the Archipelago becomes ândry in Malagasy.

The strong palatal tch is softened in Malagasy and is represented by ts. Thus tchetchak becomes tsôtsaka. The Tagal and Bisayan replaces tch, z, and j by s.

The soft palatal d} of Javanese, Malayan, Batak, Macassar, and Bugis is softened into za in Malagasy; it does not exist in Tagal and Bisayan. In these two last languages for Juan they write Suan. The soft dental d of the Indian Archipelago is usually transformed into r in Malagasy words. Thus doua, dano, kamoudi become râa, râno, kamôry. The rough d of Javanese changes in the same way into r, dr, and tr in Malagasy; depa becomes rêfô, toudouh, tôro; dada, tratra; and dendo, rindrâna.

The strong labial of the Archipelago, pa or p, is very often expressed by fa or f in Malagasy; e.g. pira=fîlo; tapa=tôfa; pitou=fîlo; penouh=feno. The soft labial ba or b is often replaced by va or v in Malagasy; e.g. boubou becomes vovo; bato, vato; bolo, volo.

The liquid l is often changed into d in Malagasy, and often into the other liquid r. Tali becomes tôdy, and souling becomes solina.

[* It is exactly the same in Malagasy, where the consonants are called réni-sôratra, 'mothers of writing.'—J.S.]
It should be remarked here that the Bisayan does not know anything of the liquid \( r \), and that it replaces it sometimes by \( d \), and sometimes by \( l \). It therefore never appears in a purely Bisayan word. Thus, to express the word \( kris \), a Bisayan says \( kalis \); and he pronounces the two Spanish words \( procurador \) by \( polocoladol \), and \( confesar \) by \( kompisal \).

The sibilant \( s \) of the Archipelago is often omitted at the commencement and at the end of roots. Thus, the Malayan roots \( soumpah, si, soungey, tipis, lepas \) in passing into Malagasy become \( õmpa, i, ôny, tify, ëfa \).

Lastly, the semi-vowels \( ya \) and \( wa \) have as their substitutes in Malagasy \( za \) and \( va \); e.g. \( kayou, hazo; walou, walo; lawas, ldva; wouwou, vovo \).

If one meets with no Malagasy word ending in the vowel \( i \), although, as we have said, all the words in this language finish with a vowel, it is because the missionaries, whether Roman Catholic or Protestant, have agreed in laying down this orthographical rule (purely arbitrary, yet which they observe in all the Malagasy books published at Antananarivo), that this vocal \( i \) should always be written \( y \) at the end of words.

These preliminary remarks, although very brief, will render more striking and more evident the lexicological affinities of Malagasy roots compared with Javanese, Malayan and Malayo-polynesian roots.**

*Translated from the French of Aristide Marre
by James Sibree, Ed.*

[* I do not here give the Vocabulary which follows the foregoing essay, because in No. XXI. of the Annual, the principal portion was given in a tabular form by Rev. W. E. Cousins; see Christmas 1897, pp. 49–52.—J. S.*]
ADVENTURES AND EXPERIENCES AMONG THE SOUTH-EAST MALAGASY.

TRAVELLING in Madagascar, at least by the main lines of road, is fast losing some of its former characteristics. Along the easy gradients, the bridged streams, and the embankment-crossed swamps traversed on such a high road as that from Tamatave to the Capital, one is apt to forget how our bearers used to climb up rugged ascents, ford rivers, sometimes up to their necks in rushing water, and flounder through morasses. In fact, the bearers are becoming somewhat demoralised by these easy and smooth roads, and we now need to take a ride "across country" to realise what our early experiences here were. And the people are changing also, of course in some respects for the better, but they are fast losing many of those features which gave such a freshness and novelty to travelling in Madagascar in the olden time. A few leaves from an old journal, therefore, describing some of these former experiences, may not be without interest, especially to new-comers, who have seen little of the Malagasy as untouched by European civilisation.

We, that is, the writer and a good friend, a Mr. S., were on our way on an evangelistic and exploring tour, from the Betsileo province to the south-east coast. On a Wednesday morning in June 1876, we left our quarters in the spacious native chapel at the Hova military post of Imahazony, to take a perfectly new route (to Europeans) through the great forest. (Native chapels, by the way, were the usual "travellers' bungalow" in those by-gone days.)

Betsileo Houses.—About two hours' easy ride brought us to the foot of a high hill, on which Ivalokianja, a large village, is situated. The hill is beautifully wooded, there being great numbers of the graceful hãośina (a species of Dracana), some of them very large trees, among the other foliage. Their fan-shaped clusters of sword-blade leaves give quite a character to the wood all round the hill. We went into a house, the best in the village, for our lunch; it was the largest there, but was not so large as our tent (11 feet square), and the walls were only 5 ft. 6 in. high. The door was a small square aperture 1 ft. 10 in. wide by 2 ft. 4 in. high, and its threshold 2 ft. 9 in. from the ground; so that getting into many of the Betsileo houses is quite a gymnastic feat. Close to it, at the end of the house, was another door, or window (it was difficult to say which, as they are all pretty much the same size!), and opposite were two small openings about a foot and a half square. The hearth was opposite the door, and the bedplace was in what is the window corner in Hova houses*. In this house was the first example I had seen of decorative

* In Imerina, the hearth is north of the central house-post, and the fixed bedstead is at the north-east, or sacred corner. Honoured guests are always invited avána-páțana, 'north of the hearth'. The door is at the south end of the west side of the house, and the window at the north end of the same side.
carving in Malagasy houses; the external faces of the main posts being carved with a simple but effective ornament of squares and diagonals. There was also other ornamentation, much resembling the English Union-jack. The gables were filled in with a neat platted work of split bamboo. The majority of the houses in this and most of the Betsileo villages are only about ten or eleven feet long by eight or nine feet wide, and the walls from three to five feet high. Hereabouts, the doors seem generally to face the north or north-west, and the house runs nearly east and west. Hova houses of the old style, on the contrary, are always placed with their length running north and south, and their single door and window facing the west, that is, on the lee side of the house.

A Free and Popular Exhibition for the 'Natives.'—As Ambinâny, the Tanâla chief, whose village we were bound for, did not make his appearance, we went off in the afternoon to another village, Iolomâka, about three or four miles away to the south-east. It was a cold unpleasant ride in the drizzling rain. We reached the village, which is situated on a bare hill, in an hour and a quarter, and with some difficulty found a tolerably level place on which to pitch the tent, but everything was wet. The rain came down faster than ever, and began to come through the canvas in some places. During the afternoon we in our tent formed for the villagers a free, and evidently popular, exhibition, which might have been entitled: "The Travelling Foreigners in their Tent." We and our belongings, and our most trivial actions, were the subject of intensest interest to the people. They came peeping in and, uninvited, took their seats to gaze. I suspect they thought we travelled in a style of Oriental magnificence, for my companion's gorgeous striped rug evidently struck them as being the ne-plus-ultra of earthly grandeur. But we did not look upon ourselves this evening quite in that light; for the slightly higher ground on two sides of the tent led the water into the structure, and there was soon a respectable-sized pool on my friend's side of the tent, above which the boxes had to be raised by stones and tent-hammers; while the drip upon our beds raised the probability that we might be able to take our baths in the morning before getting up. It was our dampest experience hitherto of tent life.

The following evening found us at Ivohitrôsa, after one of the most difficult and fatiguing journeys we had ever taken in Madagascar. It was quite dark when we arrived here, wet, weary, muddy, and hungry, having eaten no food since the morning.

But to begin at the beginning. Bed was so much the most comfortable place, with a wet tent, a small pond at one end of it, and a mass of mud at the other, that we did not turn out so early or so willingly as usual, especially as there was a thick mist and heavy drizzle, as there had been all night. The general public outside, however, evidently thought it high time the exhibition opened for a morning performance; and so, without our intending it, there was a performance, which, if there had been a daily paper at Iolomaka, might have been described as consisting of five acts or scenes, as follows:—Scene first: Distinguished foreigners are seen lying in bed, so comfortably tucked up that they feel most unwilling to get out on to the wet and muddy floor. Cur-
tains only half drawn (by an eager public) during this act. *Scene second*: Somewhat of a misnomer, as D. F. were, by the exercise of some ingenuity, not seen during the operations of bathing and washing. *Scene third*: D. F. seen by admiring public—who again admitted themselves—in the act of brushing their hair and performing their toilet. *Scene fourth*: D. F. seen at their breakfast, the variety of their food, dishes, plates, etc., a subject of mute amazement. *Scene fifth, and last*: D. F. seen rapidly packing up all their property for their approaching departure. N.B., probably their last appearance on this stage.

I should have added that our departure was also delayed through our not knowing the rather important point of which way we were to go. Our friend Ambinany had not yet made his appearance, and all our enquiries about the road to Ivohitrôsa amongst the people of Iolomaka were met by a most dull-headed stolid obstinacy. They would neither guide us or even point out the road. However, we packed up in the heavy drizzle, and fortunately, just as we were about to start, three or four Tanala came up and agreed to be our guides. We had to wait until they had their rice, but at last we got away soon after ten o'clock, rather too late, as it turned out.

*A Tanala Forest.*—Our way for more than two hours was through the outskirts of the forest: a succession of low hills partially covered with wood, and divided from each other by swampy valleys. In these we had two or three times to cross deepish streams by bridges of a single round pole, a foot or two under water, a ticklish proceeding, which all our luggage bearers did not accomplish successfully. After crossing a stream by the primitive bridge of a tree which had fallen half over the water, we entered the real forest, our general direction being to the south-east.

And now for an hour and a half we had to pass through dense forest by a narrow footpath, where no *filanjana* (palanquin) could be carried (at least with its owner seated on it). Up and down, down and up, stooping under fallen trees, or climbing over them, soon getting wet through with the dripping leaves on either hand, and the mud and water under foot,—we had little time to observe anything around us, lest a tree root or a slippery place should trip us up. At 2.15 we came to an open clearing, and thought our difficulties were over, but presently we plunged into denser forest than over, and up and down rougher paths. Notwithstanding the danger of looking about, it was impossible to avoid admiring the luxuriance of the vegetation. Many of the trees were enormously high, and so buttressed round their trunks that they were of great girth at the ground. The tree-ferns seemed especially large, with an unusual number of fronds; and the creeper bamboo festooned the large trees with its delicate pinnate leaves.

It soon became evident that we were descending, and that pretty rapidly. For a considerable distance we had a stream on our left hand, which roared and foamed over a succession of rapids, going to the south-east; and every now and then we caught glimpses of the opening in the woods made by the stream, presenting lovely bits of forest scenery in real tropical luxuriance. The sun shone out for a few minutes, but presently it clouded over, and heavy rain came on.
The increasing roar of waters told of an unusually large fall, and in a few minutes we came down to an opening where we could see the greater part of it, a large body of water rushing down a smooth slope of rock about a hundred feet deep, at an angle of 45 degrees. Three or four times we had to cross the stream, a rather risky proceeding, on rocks in and out of the water, with a powerful current sweeping around and over them. We found after a while that we had come to the side of a wide and deep gorge in the hills, which rose hundreds of feet on each side of it; and down which the stream descended rapidly by a series of grand cascades to the lower and more open country which we could see at intervals through the openings in the woods.

**Tandala Scenery.**—At half-past four we emerged from the forest, and came down by a steep slippery path through bush and jungle. And now there opened before us one of the grandest scenes that can be imagined. The principal valley, down which we had come, opened into a tremendous hollow or bay, three or four miles across, and more than twice as long, running into the higher level of the country from which we had descended. The hills, or rather, edges of the upper level, rise steeply all round this great bay, covered with wood to their summits, which arc from 2,000 to 3,000 feet above the valley. Between these bold headlands we could count four or five waterfalls, two of them falling in a long ribbon of foam several hundred feet down perpendicular faces of rock. Between the opening points of this great valley, three or four miles across, could be seen a comparatively level undulating country, with patches of wood, and the windings of the river Mátitanana. On a green hill to the left (north) side of the valley stood a group of houses, which we were glad to hear was Ivo-hitrosa. This hill we found was 700 feet above the stream at its foot, but it looked small compared with the towering heights surrounding it. At last we reached the bottom of the valley, crossed the stream, and presently commenced the steep ascent to the village. It was quite dark before we reached it, muddy, wet, and tired out; we had been eight hours on the way, and five and half on foot over extremely rough and fatiguing paths. Ambinany and his people had overtaken us in the forest, and went on first to prepare a house for us.

**Tanàla Princesses.**—We found that the best dwelling in the village was ready, and a bright fire blazing on the hearth. It was with some difficulty that we got all our belongings arranged inside, for although the largest house available, it was rather smaller than our tent, and nearly a quarter of it was occupied by the hearth and the space around it. At one side of the fire were sitting three or four young women, the daughters of the chief. A glance at these young ladies showed us that we had come into the territory of a tribe different from any we had yet seen. They were lightly clothed in a mat wrapped round their waists, but were highly ornamented on their heads, necks, and arms. A fillet of small white beads, an inch or so wide, called màsonam♣ªla, was round their heads, fastened by a circular plate of tin on the forehead. From their necks hung several necklaces of long oval white beads and smaller red ones. On their wrists they had
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silver rings, and a sort of broad bracelet of small black, white, and red beads; and on every finger and on each thumb were rings of brass wire. In the glancing fire-light they certainly made a striking picture of barbaric ornamentation; and notwithstanding their dark skins and numerous odd little tails of hair, some of them were comely enough. We had soon to ask them to retire in order to stow away our packages and get some tea ready. The house was raised a foot or so from the ground, the inside lined with mats, and so was a pleasant change from our damp lodgings of the previous evening.

After an interesting stay of three or four days at the Tanala village of Ivohtrosa, we proceeded to the south-east, along the valley of the Matitanana river, towards the Hova military post of Ivohipeno. On the Thursday following, we knew that we ought to get over the Matitanana that afternoon, but our guides wanted us to stay for the rest of the day doing nothing. However, as we found we were not far from the water, we set off again immediately to see for ourselves about getting over, and in less than half an hour came down to the river. The Matitanana is at this point a very fine broad stream, with a rapid and deep current. It flows here through a nearly straight valley for four or five miles in a southerly direction, with low bamboo-covered hills on either side, and its channel much broken by rocky islands. To cross this stream, about a hundred yards wide at this place, no canoes were available, but there was a bamboo raft called a zahitra.

A primitive Bamboo raft.—Of all the rude, primitive and ramshackle contrivances ever invented for water-carriage, commend me to a zahitra. This one consisted of about thirty or forty pieces of bamboo, from ten to twelve feet long, lashed together by bands of some tough creeper or vahy, which said bamboos were constantly slipping out of their places and needed trimming at every trip, and the fastenings had to be refixed. The zahitra would only take two boxes and one man at a trip, besides the captain of the craft, and when loaded was from a third to a half of it under water. The civilisation of the people about here seemed to have not yet produced a paddle; a split bamboo supplied (very imperfectly) the place of one. Owing to the strong current and the feeble navigating appliances available, not more than about four trips over and back again could be made in an hour. And so there on the bank we sat from a little after two o'clock until nearly six, watching the ferrying over of our baggage, and then of our bearers. At sunset a good number of our men were still on the wrong side of the water, and so, as there was no possibility of getting them all over that day, and neither Mr. S. or I relished the prospect of a voyage on a zahitra in the dark, we crossed at a little after sunset. We made a safe passage, but got considerably wet during its progress: Mr. S. took an involuntary foot-bath, and I a sitz-bath. The rest of our men returned to a village overlooking the river, while we went a little way up the woods, and finding a level spot, pitched the tent there, our bearers who had crossed occupying two or three woodcutters' huts which were fortunately close at hand.

A Tanala village Belle and her get-up.—During the three or four hours' waiting on the river bank we had a good opportunity of observing the
people from the village just above, who came down to watch our passage over the water. Amongst them was a girl whose appearance was so noticeable that I must attempt a description of her. She was a comely lassie, though a dark skinned one, and was so ornamented as to be conspicuous amongst her companions even at some distance. Round her head she had the same kind of fillet of white beads with circle of tin in the front which we had observed at Ivohitrosa, but from it depended a row of small beads like drops. On each side of her temples hung a long ornament of hair and beads reaching below her chin, several beads hung from her ears, and a number of white and oblong beads were worked into her hair at the back. Round her neck she had no less than six strings of large beads, and another passing over one shoulder and under the arm. On each wrist were three or four silver rings, while on every finger and each thumb were several coils of brass wire. Her clothing was a piece of bark cloth fastened just above the hips, over a kitâmbay or long apron of mat; and on each toe was a brass ring. Thus "from top to toe" she was got up regardless of expense, and certainly made a striking appearance; she was probably the daughter of the chief, anyhow, she was evidently the village belle, and seemed to be well aware of the fact.

After a variety of experiences at the chief centres of population on the south-east coast, we at length turned our steps northwards, and after about three weeks were on our way to the Hova military post of Ankarana; on Wednesday, July 12th, we came to the river Mananivo, soon after crossing which we approached the foot of the ridge on which Ankarana is situated. In this flat part of the country it forms a striking feature in the landscape, being about four hundred feet above the general level.

_Reception at a Hova military post._—Ascending a slippery and steep red clay road, at one o'clock I found myself on the top of the ridge and close to the stockaded rôva or Hova fort, a much larger place than we had expected to see, as hardly anything of the town could be seen from below. Mr. S. being ill with fever had gone on before, while I brought up the rear. Coming to the gate of the stockade, my men were about to take me in at once, but the people near requested me to stop, as the officers were coming out to escort me in. This I rather unwillingly did, as a very heavy shower came on just then. Presently the rolling of drums announced their approach. First came a file of soldiers, then a number of officers, then the lient-governor in filanjâna, and then the governor in ditto, a little active old man in regimental red coat and cocked hat. They all came forward and shook hands, and the Queen was evidently about to be saluted and a kabary made; but the rain pelted down so furiously just then that they thought better of it, and we made our way through the double stockade into the Hova town, with its lines of houses, and then into an inner stockade inclosing the lâpa or Government house, with a flag-staff and several large houses. We took shelter under the raised verandah of one of these, while a dozen unfortunate individuals, soldiers and petty officers, had to stand out in the pouring rain, and present arms, support arms, etc., etc.; and then of course came enquiries after the Queen and the great people at the Capital.

The governor then led me into the temporary lâpa, a large
rough-looking room, where was a table spread with dishes, plates, etc. He apologised for there being no meal ready for us, as our coming was unexpected, but wine and biscuits were brought, and we drank the Queen's health, and they drank our health, a flourish of music and drums following each toast. This extreme politeness, so soon after the marked discourtesy of the Vangaindrano people, astonished and amused me not a little. I was gravely consulted as to whether the royal flag might not be hauled down, as the day was so wet; I accordingly graciously signified my approval of their doing so. As soon as possible, I intimated that I would like to go and see my friend and companion. The governor leading the way, I was taken to a house at the far end of the stockade, where I found Mr. S. in bed, very unwell indeed. But the house was large and dry, a fire was burning on the hearth, and we were thankful to get our wet things dried. Several of our men were also ill with fever, so I had my hands pretty full with dispensing medicine and nursing. Besides this, numerous callers had to be talked with, and presents received.

The following morning most liberal gifts of provisions of all kinds were brought to us early by the governor and his people. The pastors of the congregation also came, and from them I found that there were ten villages in the neighbourhood of Ankarana, where the people meet together for worship on Sundays. There are ten people here who are church members, and about twenty who can read. During the forenoon I went to the small temporary chapel to see the school children, but found only about a dozen who could read, and these not children, but young men, and two or three elderly ones. I urged these to do their best to help others, and gave them a quantity of lesson-sheets and books. Close by the temporary chapel they were building a new one of large size, and the noise was so great that it was impossible to speak or hear with any comfort. From this cause also I was prevented from getting a service with the people, as I had hoped to do. But in the afternoon I met the singers in one of the houses, and taught them some new tunes, and practised others they knew but imperfectly. The former lapa (governor's house) had been taken down, and the immense central posts and main timbers were lying about the unoccupied centre of the courtyard. From the size of these it must have been a very large building, as lofty as the one at Mâhamâmina.

A noisy Malagasy Feast.—Soon after four o'clock the sound of music and drumming in the courtyard told us that the time was approaching for the feast they were going to give us; and presently the governor and all his people came to fetch us. My companion was unable to go, but I was led by the hand and had to receive all the honours. In the open central space all the military force of the town, about five and twenty soldiers, were drawn up, and the royal flag was flying. On one side, the ladies, the wives and daughters of the officers, were arranged, dressed in their best; on the other side were row after row of pots with fires under them, where the feast was being cooked. There was a terrible din of drumming and music going on. After a prayer, salutes, speech-making, including a
long flourish in our honour, and presentation of another immense heap of provisions, I was again taken by the hand, and led into the government house for the repast. I should add that the governor also gave us ten dollars for vatsy (food by the way), counting them into my hand in English numbers.

The dinner was I think the longest, and certainly was the noisiest entertainment at which I have ever assisted. About a score of the officers were at the table, and seven of the ladies. After a long grace from the pastor, dinner was brought in, and consisted of the following courses: 1st, curry; 2nd, goose; 3rd, roast pork; 4th, pigeons and water-fowl; 5th, chicken cutlets and poached eggs; 6th, beef sausages; 7th, boiled tongue; 8th, sardines; 9th, pigs' trotters; 10th, fried bananas; 11th, pancakes; 12th, manioc; 13th, dried bananas; and last, when I thought everything must have been served, came hunches of roast beef! All this was finished up with coffee. By taking a constantly diminishing quantity of each dish I managed to appear to do justice to them all. Claret went about very freely, and at length some much stronger liquor; and the healths of the Queen, "Our friends the two Foreigners," then those of the Prime Minister, Chief Secretary, and Chief Judge, were all drunk twice over, the governor's coming last; all followed by musical (and drum) honours. As already remarked, it was the noisiest affair of the kind at which I have ever been present. There was a big drum just outside in the verandah, as well as two small ones, besides clarionets and fiddles, and these were in full play almost all the time. Then the room was filled by a crowd of servants and aides-de-camp, and the shouting of everybody to everybody, from the governor downwards, was deafening. The old gentleman directed everything and everyone, filled up everybody's glass, and in fact, filled up his own more often than was quite good for him, so that he became a little incoherent in the last toasts he proposed; so that I was glad when the finishing one arrived, and I could take my leave after nearly two hours' sitting. But I was not to leave quietly; again I was taken by the hand, the big drum being hammered at in front of us all the way, and followed by a posse of officers and ladies, was escorted home by the governor. My invalid friend could well have dispensed with the big drum; however, being a little better, he and I managed to say a few earnest words to them about 'the praying;' after which they took their leave. I had afterwards to pay quite a round of visits to our men who were poorly, some with fever, others lame, with feet hurt with thorns, stumbling, etc.

"A fine old Malagasy gentleman, all of the olden time."—It was fine on the following morning, and as my companion's fever had left him, although he was still very weak, we determined to get off; but first, there were more visits to be paid, and more presents to be received. Mr. S. left first at half-past nine, but I waited until all the baggage was off, and then went to wish our old friend the governor good-bye. But I was not to get away so easily; I was again taken into the chief house, the claret was brought out, and the Queen's health and our own drunk with military honours. Then I turned to say Veloma; but no, the vigorous old
AMONG THE SOUTHEAST MALAGASY.

A gentleman was going to escort me out of town, and his wives were to accompany us. But some time elapsed in seeking bearers for them, during which I had to go to the lieut-governor's and drink coffee. On returning to the courtyard I found the governor putting a couple of bottles of claret and another of rum into his palanquin, as well as glasses and cups. Sufficient bearers could not be procured for the ladies, so we wished them good-bye, and set off in the following order:—Soldiers; musicians, with drums, clarionet, and violin; "ny havantsika ny Vazaha" (our foreign friend); the lieut-governor; the governor; aides-de-camp, soldiers. And so escorted, with the drums, etc., in full play, we marched out of the town. I had supposed that as soon as we were fairly at the foot of the hill the governor would take his leave, but he went on and on for an hour until we came to a rapid stream, the Månantsimba. Here we halted; the claret was poured out for more health-drinking, with musical honours; my bearers were obliged to take a glass of rum all round; and then the whole of the governor's men were ordered to take me safely across the river, which they did. From the opposite bank I bowed and shouted my last adieux, and so parted from one of the jolliest old gentlemen I have ever met with in my travels. It struck me as irresistibly comic, that as soon as we had fairly started on our way from the river bank, the musicians struck up a most melancholy strain. As my men said, the governor appeared to be low-spirited at parting with us.

I must add a word or two more about this "fine old Malagasy gentleman, all of the olden time." It appeared that he had been governor at Ankarana for more than twenty years, and before then was lieut-governor at Månanjara. We were somewhat shocked to find that each of the three buxom ladies who accompanied him about was his wife, and further, that he had another as well, whom we did not see. The pastor told us that he had been admonished as to the impropriety of his conduct in this respect, but he had been unable as yet to make up his mind which of them to put away, and which to keep, out of the four. He seems quite a little king in the district he commands; and our servants told us that he was a most courageous old fellow, delighted to hear of there being any enemies to be met with anywhere, and going off to fight them with the greatest alacrity. Yesterday, when the feast was being cooked, he sat in the courtyard, gun in hand, shooting first a fowl, then a pigeon, and then a pig, all of which, in addition to what was already preparing, he ordered to be instantly cooked with the rest. They also say that he is very rich, owning 500 cattle and 200 slaves, and that he is always most hospitable to all strangers. Certainly we found him to be so. Besides the abundant kindness he showed us at Ankarana, he sent with us as escort and guides, twelve soldiers, two officers, and a drummer, besides as many baggage bearers as we required to replace the men who were ill.

A curious Native Boat.—The Sunday following our visit to Ankarana found us at the port of Ambâhy, where, as my companion was still unwell, I took the service entirely. The church was at the village on the other side of the river, and in going over to service I had a sail for the first time in a built boat made in Madagascar. These boats are here called sâry, and are about thirty feet long by eight feet beam, and easi-
ly carry fifty people. I examined with interest the construction of the craft; for the planks, about eight inches broad, were tied, not nailed, together by twisted cord of anivona fibre, one of the toughest known vegetable substances, the holes being plugged with hard wood. The seat boards came right through the sides, so as to stiffen the whole, for there were no ribs or framework. The seams were caulked with strips of bamboo, loops of which also formed the rowlocks for the large oars of European shape. The ends of the boat curved upwards considerably; and from its whole appearance it seemed likely to stand a heavy sea without danger. These boats are made for going to the shipping, for no canoe could live in the surf constantly rolling along these shores.

From an old Journal by
JAMES SIBREE, ED.

SALUTATIONS AND OTHER CUSTOMS AMONG THE MALAGASY,
CHIEFLY THE SOUTH-WESTERN TRIBES.

Salutations.—The salutations in use amongst the various Malagasy tribes differ somewhat in form and idea, but not so much perhaps as might be expected, when we consider the varying circumstances of each people. The forms in use among the Hova are full, and are more expressive of politeness than those of the other tribes. This was to be expected, seeing that the Hova, in their use of words and in their manners, are the most polite of all the Malagasy people. The common Hova form of salutation is:

Hova. Mana no no hia no? How are you?
Resp. Tsara ihanv alo, fit misa ota no. I am very well, I thank you.

A salutation to a Hova person of noble descent is as follows:—
Tshirovo, tampoko !
Resp. Velana, sotova tsaruv. Good-bye, may you be well and prosperous.

Sakalava, North. Akory anana? How are you?
Resp. Mavo a, akory anana? Well, how are you?

Akory anan, ankai. How are you, friend?
Resp. Tsara be, akory anao? Very well, how are you?

Sakalava, South. Salama aminao, akory anao? Peace with you, how are you?
Resp. Bosoa, akory anao? Very well, how are you?


Antanohy. Akory anana ara? How are you here?
Resp. Ahy, izahav ara. Yes, we are here.

Ee aminao e? We leave you well and safe, eh?

Salamanao e? We leave you in peace and safety, eh?
SALUTATIONS AND OTHER CUSTOMS.

Betsileo. Filahitra anaveo. May you be happy.
Resp. Filahitra. (And you also) happy.

Betsimisaraka. Finaritra anao. May you be happy. used by men to women, and women to men.
Resp. Finaritra. (And you also) happy. used by men to women.
Finaritra anao. May you be happy. used by women to men.
Finaritra ny hisany. used by women to women.

From a study and comparison of the forms of salutation in use in a country it is evident that much may be learnt of the history, past and present, of the people. The ease, grace, politeness, and respect shown in the salutations in use amongst the Hova tribe point to a people enjoying a state of safety, ease, and prosperity, also to a well-established form of society, having its respective grades. Among the Northern Sakalava we may imagine a state of simple independence and equality, together with mutual regard. Among the Southern Sakalava the elements of fear and doubt come in: Salama anao: “Is all well with you? Is it peace? Do you come in peace to me? Are you at peace with others?” or: “Have no doubt regarding myself, for I am at peace with you.” All this points to a country in which intrigue and cunning are at work, and an unsettled state of society.

The Mahafaly salutation is as abrupt as the people who use it. There is no beating about the bush with them: “Is it peace or war? Do you come as a friend, or an enemy?” In the Antanosy salutation we may trace the signs of mutual interest, mixed with a fear of dangers from outside: “Are you still all right? No evil has happened to you?” Or, on leaving: “You feel we are leaving you in a state of safety?” Such terms and ideas might well be exchanged by a people whose country is surrounded by tribes ever ready to attack, whenever they see a favourable opportunity, and being among themselves broken up into a number of petty sub-tribes, each of which is ever on the alert to attack, kill, steal cattle, and carry off people as slaves.

The form of salutation used among the Betsimisaraka and Betsileo tribes points to peoples who have long been accustomed to dwell in a country blessed with comparative peace and exemption from continuous raiding and fighting—a quiet agricultural people, rather than great cattle-keepers. The use of the second person singular in nearly all the provincial salutations points to the meagre measure of respect and regard accorded to the female sex. This is shown especially amongst the Sakalava and southern tribes; while the esteem, and probably also fear, with which men are regarded by women, is shown by their almost invariable use of the second person plural when they address any of the male sex.

It is quite likely that, at the present time, all these various salutations are simply used as a kind of formula, without any regard to or interest in their real meaning, rather, in fact, as a kind of introduction to further conversation than anything else; but this does not detract from the value of the formule, nor is it a reason why they should not be regarded as a kind of depository of the history of past times, if not of the present. Most of the past history of uncivilised tribes is lost through want of written records; but yet how much

* Kita means ‘play, amusement’ in the east coast dialects.
still exists, hidden somewhat, in the old words, forms, and phrases still in use; and how much does a careful study and examination of salutations, proverbs, conundrums, tales, legends, and traditions reveal of a nation's past history, the peoples' thoughts and habits of life, their condition, pleasures, and troubles.

Conundrums, etc.—In every country a store of riddles, tales, legends, and similar lore, is to be met with, and Madagascar is not without its full share. Often have I sat by the village or camp fire, as the case might be, while the men, and women also, if any were present, squatted around, enjoying the early hours of the evening, telling tales (fables) and putting conundrums. Several of these riddles and also some proverbs I collected while in the Antanosy and Sakalava countries, of which I here append a few examples. The person proposing the riddle says “Takasiry,” to which the people answer: “Ee.” The following are from the Antanosy people:

1. Raha raify mikaro amin’ ny angarin’ ny olo: Something mixed up with the name of the person. Answer: Vaka, a basket, or Makiety, a kind of sweet-potato, because Teaka and Makiety are used as women's names.
2. Randria ombo an-dranoo, olo-menty omba tambo: The king goes by water, the black man goes on foot, or by land. The answer is Vavy, rice, and Varondra, sweet-potatoes, because rice is generally conveyed by canoe, and sweet-potatoes in baskets overland.
3. Zanaka Randria teri patera an-doaha: The child of the king is not slapped on the head. The answer is Raiketo, the Malagasy name for a species of Opuntia, the prickly-pear. This is so full of thorns that no one would think of striking it with the hand.
4. Zanaka Randria miampata ang-abo: The child of the king looks down from above. The answer is Akondro, bananas, because of the great head of bananas hanging down from the fruit-stalk, and seeming to look down on the ground.
5. Tyrano-le teri tafana: A big house not roofed in. Answer: Zaliky or Valonomby, the cattle-yard, which is a large enclosure without any roof.
6. Raha hany, raha sy hany: A thing to be eaten, (and) a thing not to be eaten. Answer: Saviky, a calf, and Fariky, a bee. A calf can be eaten, but not a bee. This is simply a play on the two words saviky and fariky, but it is not perfectly correct, for some large species of wild bee (or wasp), when in the larval state in the comb, are roasted and eaten.
7. Angicro Zanahary misy rato an-troby: God's stick has water in its stomach. Answer: Fary, sugar-cane, because of the water or juice there is in it.
8. Raha kolikely mahay mitrambiky: A rather small thing that knows how to leap. Answer: Dinta, a leech, because of the leech seeming to leap from the ground, or from the grass, and fastening itself to the bare legs of the passers-by.
9. Dimy lahy misatrolca bohy: Five men (each) with a round hat. Answer: Tondro, the fingers; the finger-nails are the round hats.
10. Ny maty no mitaizy ny velo: The dead which carries the living. Answer: Kidany, a bedstead, because a framework like that of a bedstead is used for conveying the dead upon to the grave.
11. Maro anpinga, maro lefo, fa teri mahaleo miambhy vady aman-janany: Plenty of shields, (and) plenty of spears, but (still) unable to guard his wife and children. Answer: Traka, a lemon tree. The spears and shields refer to the thorns of the tree and the hard green rind of the fruit.
12. Mandey teri lo: Buried, but not rotting. Answer: Volo, hair, because it does not quickly rot in the ground.

Many more examples might be added to the above. There are many others also, which, though useful in throwing light on the modes of thought and customs of the people, are yet not suitable for publication.
Changes in Words.—We will now turn our attention to some remarkable features in the Malagasy language, some of which are also common to the languages spoken in the Eastern Archipelago.

Royal Words.—It is interesting to notice the causes which lead to changes in the meanings of words, and sometimes to their temporary or even total disuse. These changes are brought about in a variety of ways, but almost invariably in some connection with the king or head of the tribe. There are many words which are used in a certain sense to the king (or queen, if she is head of the tribe), and these words cannot be used in this special sense with common people. Especially there are those which have reference to the state of health of the living king. In the following list separate words are given, denoting first those referring to the people, and then, opposite to them, the corresponding words used in connection with the sovereign:—

- miri, sick, mafi, warm.
- mity, dead, fo, broken.
- folo, sudden death, foloka, broken at the forearm.
- misaona, wailing, misitori, to offer tears.
- alevina, buried, afo, hidden.

There are several other similar words. Members of the royal family when dead are said to be diso, missing, not mity, dead, nor losa, gone, nor, as some say, latsaka, fallen. Among all the western and southern tribes the greatest respect is paid to the king or whatever appertains to him. It is sufficient to say "an-donaka," to restrain any busybody from even touching anything belonging to the king, or coming from the king's residence, the lonaka.

The Word 'Biby.'—The word biby is used in a rather curious manner amongst the Sakalava of the north-west and west coasts of Madagascar. The word is most probably the Swahili biby, meaning 'grandmother, lady, or mistress' (used by slaves), a name of honour. It is the custom among some of the Sakalava queens to take for a husband a young man from the Swahili-Arab population. This young man receives the title of Biby, and is subject to certain rules similar to those which bind the wife of an influential Arab or Swahili. He is not supposed to go out of the house in the day-time, or to be seen by the people generally. When he goes out in the evening, or goes on a visit to another place, he is always accompanied by three or four female slaves, who keep about him in much the same manner as if they were waiting on a lady. Among other rules, he is bound to remain faithful to the queen; should he violate the marriage contract, the penalty is death. The queen of Katsépy, a Sakalava district opposite Mojangà, is married in this manner, and has an Antalaotsy man for her biby. I do not think this term is given to the queen's husband, should he be a Sakalava chief, or to the wives of chiefs, though the Swahili-Arab population would naturally apply the term to the wives of the Sakalava chiefs, or, in fact, to any woman whom they wished to please.

Words common to Kings and Chiefs only.—Besides special words which are the exclusive property of the king and queen, there are a number which are common to kings and chiefs, but cannot be used in the same manner by the other people, as in the following list of words.
### Salutations and Other Customs

<table>
<thead>
<tr>
<th>King's word</th>
<th>People's word</th>
<th>English</th>
<th>King's word</th>
<th>People's word</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mikama</td>
<td>mihina</td>
<td>to eat</td>
<td>Fantsonga</td>
<td>oro</td>
<td>nose</td>
</tr>
<tr>
<td>Panjektezy</td>
<td>tanga</td>
<td>hand</td>
<td>Fandy'ava</td>
<td>sava</td>
<td>mouth</td>
</tr>
<tr>
<td>Fandra</td>
<td>tomboho</td>
<td>leg</td>
<td>Fandrusa</td>
<td>nify</td>
<td>tooth</td>
</tr>
<tr>
<td>Kabeso</td>
<td>loha</td>
<td>head</td>
<td>Famelyki</td>
<td>laha</td>
<td>tongue</td>
</tr>
<tr>
<td>Fihena</td>
<td>maso</td>
<td>eyes</td>
<td>Feang'aka</td>
<td>trafo</td>
<td>chest</td>
</tr>
<tr>
<td>Fianvao</td>
<td>lavosy</td>
<td>back</td>
<td>Samaky</td>
<td>teoky</td>
<td>a woman who has borne children</td>
</tr>
<tr>
<td>Moroy</td>
<td>colo</td>
<td>hair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tontan-ity</td>
<td>maoky</td>
<td>heard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitandzy</td>
<td>mandeha</td>
<td>to go</td>
<td>Mitambosatsy</td>
<td>mitabika</td>
<td>to leave</td>
</tr>
<tr>
<td>Misavy</td>
<td>manondy</td>
<td>to sleep</td>
<td>Sahaika</td>
<td>satroky</td>
<td>cap or hat</td>
</tr>
<tr>
<td>Mahakama</td>
<td>hany</td>
<td>food</td>
<td>Mang'iolo</td>
<td>ampondrano</td>
<td>plate or dish</td>
</tr>
<tr>
<td>Mang'ona</td>
<td>mangataka</td>
<td>to fish</td>
<td>Fiaky</td>
<td>sotro</td>
<td>spoon</td>
</tr>
<tr>
<td>Misontsy</td>
<td>mizako</td>
<td>to talk</td>
<td>Misandrano</td>
<td>miang'aitsoy</td>
<td>evacuate</td>
</tr>
<tr>
<td>Mahena</td>
<td>mahiti</td>
<td>to see</td>
<td>Mianky</td>
<td>maty</td>
<td>dead</td>
</tr>
<tr>
<td>Tzavembo</td>
<td>lambo</td>
<td>clothes</td>
<td>Fiang'itsy</td>
<td>fisofa</td>
<td>bladder</td>
</tr>
<tr>
<td>Menkahalcy</td>
<td>homehoy</td>
<td>to laugh</td>
<td>Diso</td>
<td>lina</td>
<td>dead</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lonaka</td>
<td>trano</td>
<td>house</td>
</tr>
</tbody>
</table>

### Change of Name at Death of Kings, Chiefs, and Notable Persons

Again, a considerable effect on the language is produced at the death of kings, chiefs, and any persons of importance, or notable in any way, even if they are poor. The mention of the name of the king, that is, the one which he bore while living, is tabooed to all the people of his kingdom. The name of a chief is tabooed to all in any way connected with him, and that of a notable person to all belonging to his or her family. This change of name is often made as a mark of respect for a friend, as in a case which happened at Nosive; a woman named Nafeniko died; her friend, not of the same family, but bearing the same name, changed it for Ranja.

### “Fady” Words and Substitutes

Again, the king has power to make certain words fady, i.e. to prohibit their use, it may be for a time only, or entirely; and then other words must be adopted in the place of the fady words. For instance, Tømpomàna, king of the Southern Sakalava, had occasion to visit Manombo, one of his chief towns, on the west coast, in order to perform the ceremony of washing the jiny, or relics of the departed king. On this occasion he made a number of words fady, amongst them being the following, which are given with their substitutes:

- Panaky
- Renaky
- Lehilały
- Mahay
- Balahaso
- Koso
- Tsyky

Now, tsi avia mang’aa an-donaka, an axe.
- beti, a child.
- jaojao, a man.
- mahakasa, to know.
- majora, cassava.
- fitso, a pig.
- besanta, tsihahaky, a pumpkin.

Words containing part of the names of the king or queen are prohibited. Among the western and southern peoples of Madagascar, great changes are made in the use of words by the prohibition of such particles. This custom has undoubtedly done much to produce
the differences existing between neighbouring dialects; and its influence in this connection may be estimated when we consider the number of petty kings there are, and that the name of each one produces a more or less permanent change in the language.

It is considered an honour to the dead to change their name. I was once travelling along the west coast in my laka (canoe), when in the distance we heard some guns being fired off, denoting a death. Shortly afterwards, passing another canoe, my men made inquiries as to who was dead. It was the grown-up daughter of a certain person, but the people in the canoe were careful not to mention her name. On asking the reason, I was informed that the name of the deceased person was to be changed, and they did not yet know what new name would be adopted for her. She was not a person of great family, but had won the esteem and regard of the principal people on account of her quiet demeanour and respectable manner of living, and on this account was to be honoured.

General Use of the Custom of Changing Words.—This custom of changing names and words seems to be common throughout Madagascar. It is everywhere in use along the western and southern districts of the island, amongst the Sakalava, Mahafaly, Antandroy, and Antanosy. The names given to the deceased kings and chiefs are invariably formed of three words, of which the first is always Andrâna, i.e. lord; the second is some word denoting respect or honour, or pointing to some characteristic of the deceased; the third and last part of the name is always arivo, i.e. a thousand; thus, the name of Raimôsa, a Sakalava king, was changed to Andria-mandio-arivo. Any mention of the name borne by a chief or king while living is strictly prohibited after the death of the said king or chief. The violation of this law is severely punished, and the offender may even have to pay the penalty with his life. Even among the common people it is considered highly indecorous to mention the name of a deceased person.*

J. T. Last.

* For further information on this subject, see papers in the Annual, Nos. I, p. 25; IV., p. 459.
BETSILEO HOME-LIFE.

This article is too discursive to possess any depth or unity, and only professes to be a readable description of the indoor-life of a Malagasy tribe of much lower intelligence and civilization than the Hova. Yet since they are a branch of the human family, possessing its fundamental instincts and, withal, a peculiar variety, with ideas and customs unknown at least among European races, the narration of these should not be without interest to the student of ethnology.

To be veracious will necessitate the portrayal of much that is unideal and unfavourable, but such things are the natural concomitants of a corrupt heathenism.

The Betsileo have not yet been much influenced by Christianity, owing, no doubt, to the fact of its being presented to them largely through their Hova conquerors, and being associated in their minds with oppression. Only since the Hova have lost their predominance, and the people have begun to attend Christian worship of their own free-will, can we gauge their actual attachment to it, or hope for its full effect on their thoughts and lives.

Another factor that is making for the disappearance of Betsileo heathenism is European civilization, introduced since the French conquest. The people realize that they belong to the great Republic, and that their native customs should be simplified or abolished. And this is a strong reason that these should be verbally photographed before they pass out of living memory, without leaving a trace behind.

The physiognomy of the Betsileo is inferior to that of the Hova; they are less lithe and handsome, more uncouth and awkward. Their speech too is a dialect of Malagasy somewhat outlandish and unmusical, but these outside disadvantages are soon got over.

Their Houses, Dress, and Occupations.—There is almost as much symbolism in a Betsileo house as in an Egyptian pyramid. When anyone contemplates building, he consults the medicine man (ombisy) as to the site and time for laying the foundations. Many things have to be considered in deciding these, e.g. the day and month of the occupant's birth, since a mistake here may cause his untimely death.

The houses are made to face west, except in special cases, and then the window is an important matter, and is independent of such unpractical considerations as prospect or hygiene. The deep circular pit in which 20 or 30 oxen are penned at night is dug and walled round the side to the west of the patriarch's (dan'andriana) house, and his married children or dependents have to build east of this. The houses are made largely of wood, some being carved in an elaborate manner, and are filled in with bamboo, the roof being thatched. They are cool in summer, but cold in winter. The occupants lie with their heads to the south, it being tabooed to lie in any other direction. The aged members of the family take up their quarters south of the fire (which has no chimney), partly for warmth and partly to be out of the way. The husband and wife have a carved cage bedstead (not curtained) on the east side of the room, while all subordinate members of the household sleep
upon the floor, on and under mats, when the nights are cold. The one­roomed house is of fair size, but always crowded. The small low door­way requires much genuflexion, otherwise the non-Betsileo gets a sharp crack on the head. Ranged along the sides are water-jars, baskets of rice or sweet potatoes, sitting hens or geese, a corner pen for sheep and pigs, and stacks of wood or cowdung drying over the fire­place. It is tolerably quiet in the house in the day-time, but in the even­nings, when the creatures are turned in, there is a terrible turmoil. Fowls often settle under the bed, where the cock acts as repeating alarum, beginning at the small hours of the morning, to the infinite disgust of any European who omitted to have him removed on the previous evening.

Vermin of all sorts also do not seem to be objected to, and the cats are generally incapable of keeping down the rats and mice. When the reserve mats are laid down for the reception of European travellers, there is an appearance of cleanliness, but it is only skin-deep. The smell from so many creatures living together is occasionally nullified by a roaring fire. The walls are embellished with large iron hooks and cooking utensils, and the dishes and spoons are kept in covered baskets on the shelves. A tin box serves as wardrobe. Betsileo clothing is comparatively simple, a loin cloth and a calico ‘lamba,’ sometimes supplemented by a straw mat tied round their lower parts, comprise their apparel. The coarser and dirtier the garments, the more at home they seem in them. They are sometimes washed, but many are literally ‘filthy rags.’ They are not fastidious either as to what they put in their pockets, among other odds and ends there is often a lump of fat pork saved from the last meal.

The work of the women is to fetch water, clean the house, cook the food, weave ‘lamba’ in their looms, or plait mats which they sell or store up for special occasions, such as a family funeral or wedding. Some are very quick and ingenious in these household arts. Serving out the cooked rice at meal time devolves on the mother, but in her absence the female members of the family take it in turn. They are very particular, however, in this matter, refusing to do more than their share. The men do out-door work, attending to their rice-fields, planting sweet potatoes, manioc, etc., but the ‘pater-familias’ delights to spend his days looking after his oxen (which are his ‘peculiar treasure’) as they graze in the hollows, and building air-castles by means of the multiplication table.

The ox is the one and only subject too of juvenile art (not trees, houses, or people), as witnessed on walls of houses and in clay models, in fact everywhere, and I should hardly be surprised if it were engraved on their hearts.

Children may not sleep on the parental bedstead, nor occupy their father’s chair on any account. It is the seat of honour and authority, not to be usurped by juniors. The Betsileo have a dislike to beards, and pull them out with tweezers, but no youth may presume to pull out his own whiskers until he has paid a royalty of sixpence or more to his sire. And married sons are not allowed to build their houses higher than their father’s, and thus overshadow his, as that would be disrespectful, unless indeed they have purchased permission with a cow or pig.
The French authorities have vastly improved the sanitary condition of villages and dwellings by proper drainage and insisting on the animals and fowls being kept in pens outside.

Their Wealth.—Until they were ruled by the Hova, the Betsileo used no money, but carried on transactions by barter. The ox was the standard of value. People began in a small way by rearing fowls. A dozen of these were equal in value to a sheep, eight or ten sheep were the equivalent of an ox, and these last were indefinitely increased.

The rice-fields are regularly worked; many work very hard when it is in their own interest. At harvest time the rice (in the husk) is stored in large circular holes in front of their houses, from which a supply is got up weekly. Betsileo wives are essentially human and domestic, and harmony depends much on the food supply. Should it fail from any cause, there is a perceptible falling off in wisely attention, and unless things improve, it is soon mooted that 'the bird has flown' (back to her parents).

The staple of Betsileo wealth is cattle, but fowls, ducks, geese, and turkeys are reared in quite large numbers for the table or for sale in the weekly markets. Nearly all their money is invested in live stock, the remainder is hidden in some rocky crevice, or in a corner of the house. To prevent its loss to their family, however, in case of sudden demise, the whereabouts of the money is confided to the eldest or most trustworthy of the children, and the confidence is not often misplaced. Although some Betsileo live up to their means, indulging in such luxuries as fat poultry, and wearing decent clothing, one rarely knows a rich person by his dress or appearance. Since, in former times, wealth excited the cupidity of others, especially of the Hova officials, who were veritable vampires, it was found politic to conceal all signs of opulence; and so it comes about that many well-to-do Betsileo even now spend hardly anything on their outside or inside, being as ragged as Egyptian beggars, and frugal to miserliness in their food. Such people, though they have poultry, pigs, etc., in abundance, never eat meat except at other people's tables and at funerals. It is a saying that they are 'too stingy to have a palanquin ride whilst living,' that 'they are dead and unconscious before they get their four bearers.' It is a good trait perhaps that such persons as have risen in life do not forget former associations. One man had such an affection for his old habiliments that he preserved them religiously until his death, and then willed that they should be buried with his body which they had covered in his early days. And frequently such unæsthetic relics are bequeathed as heirlooms. There is a deal of sentiment in this, but it is a pity that sentiment is not allowed to come more into their living relationships. Husbands and wives are mean and suspicious of each other, especially in matters of money, food, and clothes. Nasty little tricks are resorted to in order to detect waste or theft. One man, who thought his wife went too often to the cupboard, covered the rice-bin over and put a mouse inside; when he returned shortly after and found that the mouse had gone, he had safe ground for his accusation, for had she not 'let the cat out of the bag', as the saying is. Wives sometimes show spirit, and when they begin to make distinctions between the 'meum' and 'tuum,' and no longer to speak of 'ours' and 'we,' it is a sign that they are 'on the wing.'
woman is separated from her husband, she is entitled to take away only her personal belongings and one each of the pots and utensils. There are many risks and uncertainties to which Betsileo wealth is exposed on account of the rapacity of legal or illegal rascals, so that in the absence of Prudential Insurance Offices, owners have recourse to the diviner, who provides them with a charm against all such dangers. This is their only hope, so they make up their minds not to lose faith in it, whatever happens. The price paid is usually an ox.

Some of the people who have been accustomed to live from hand to mouth, if they do happen to get a windfall from any quarter, consume it in a few enormous meals, according to the materialistic adage, 'Blessed is he who makes sure of a stomach-full to-day and leaves the morrow to look out for itself.' Gormandising is certainly a common failing. One wife was delicately reproached with having 'the inside of a mule and the face of a pig.'

Their Food.—Betsileo women are clever at cooking as Malagasy go. The chief food is rice, eked out by manioc, greens, etc. They are fond of onions, salt, and cayenne pepper. The morning meal is at 7 o'clock, and the other, which is much more substantial, at about 6 p.m. When the rice is boiled, and all the members of the household are seated around the room with plates and spoons ready for action, the mother serves out on a large plate about a third of the rice for the father's and visitor's share. He dashes it with cold water and then eats, the juniors looking on in silence. Then his meat is handed (literally) to him and eaten, after which he drinks gravy from a basin, and finally takes a draught of water from a tin cup. When his meal is finished and his mouth rinsed, the others commence their meal. The remainder of the rice has cold water added to bring up the quantity, and then the same order is followed, rice, meat, gravy, water. But again precedence is observed, the eldest son gets his meal first, and so on down, last of all the mother, and the scrapings of the pot are given to the dog. In some parts, the mother bares her arms as a special mark of respect to her husband. She is always of less importance than her children.

Parsimonious or poor people have only one course for the meal, either greens or sweet potatoes, and only occasionally a meal of rice. Some high-class Betsileo have a peculiar way of eating. They hold the plate close to their mouth and tip the rice in with a spoon. Also if a visitor wishes to drink from their cup, he is not allowed to touch it with his mouth, but it is held at a distance and the water poured in. They are also very scrupulous about their plates and spoons. No one else is permitted to use them, even though they should be washed afterwards; and they refuse to eat from anyone else's plates and spoons. For this reason, on their visits and journeys, they always carry their own utensils. This is a time-honoured custom, the non-observance of which is believed to bring trouble. The wife has control of the food supply (or is supposed to have), but in other matters she is made to feel her limitations. The man, as bread-winner, owns the domestic property, she simply takes care of and has the use of the same.

Betsileo men in particular have a tendency to over-eating. Some dispose of three or four piled-up platefuls of rice, and gorge until they cannot sleep for discomfort. But this propensity is sometimes checked by the
opposite one of stinginess. The working out of this dilemma can best
be illustrated by a few stories from life. X always elected to be cook
at the evening meal, and served his family with meat first, taken from
the top of the saucepan. Then came his own, which the shrewd wife
got to know was always the prime parts from underneath. One evening
he was called away from his post for a few minutes, during which she
adroitly turned the meat out and reversed the strata. The husband
came back, asked a blessing, served out the meat as usual, did not make
any remark, but seemed slightly non-plussed. When in bed, he rolled
about a good deal as if in pain, and when asked the reason, replied that
the meat had been turned upside down in process of cooking and had
disagreed with him.

Another, a father who indulged in a daily bottle of milk all to himself,
had marks scratched on the bottle as a check against theft. One day,
although there was no diminution in quantity, the milk was thin, and, in
his obtuseness, he proposed this conundrum to his giggling family: 'The
right measure, but weakened,' what is it? The idea of adulteration had
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Sometimes both husband and wife are addicted to the habit of eating
on the sly, but it is soon found out and an understanding come to. A newly
married pair found themselves in this ridiculous position. The man cram­
med a piece of meat into his mouth, and hurried to a quiet corner to
masticate it. The wife unwittingly followed him on the same business.
'Ah,' he said, 'there is no need for us to inconvenience ourselves by
coming here, since neither can get the advantage of the other.'

There are certain things which, according to the Betsileo code of
honour, are unhandsome, and ought not to be done, and any persons
detected doing these are as ashamed and confounded as if they were
guilty of treason. One bride was so over-nice in the matter of eating
that, at the first meal in her husband's house, she would scarcely touch
food; but when left alone, nature asserted itself, and she ate ravenously.
She even broke the meat bones to get at the marrow, but unfortunately
jammed her finger so far up that she could not extricate it. The poor
girl hid her hand, bone and all, under her 'lamba' for a week, but when
the husband did discover it, he sent her back to her mother self-convic­
ted of 'picking and stealing.'

When parties are introduced to each other's relations, with a view
to marriage, they sometimes assume a stoical indifference to food.
A certain Betsileo paid such a call. When he was left alone, seeing
some kind of nuts roasting on the fire (he had declined to take any a
moment before), he put a handful into his hat to eat outside. His
hostess coming back suddenly, he slipped his hat on his head. She
detained him some minutes, enquiring about his family affairs, but noticed
that he seemed uneasy, and that tears were falling down his cheeks. He
made excuse that he was 'chewing the cud of bitter reflection.' Unable,
however, longer to bear the scorching nuts on his bald head, he precipita­
tely rose to go, but forgetting to stoop, his hat was knocked off by
the doorway, and the nuts rolled over the floor. He was so mortified
that he bolted, and could not face the people again.

Another, a young woman, was extravagant with the rice, according to the
husband's ideas. She cooked enough for three or four people instead of
two. He hesitated to find fault with her, and so took this roundabout way of letting her know his thoughts. One night he snored a good deal, and soliloquised in an undertone, 'This girl's mother has not taught her to be careful.' Unable to understand the allusion, she mentioned it to her mother-in-law, who very soon suggested what it might mean. She took the hint to use less rice, and then the husband had another snoring fit, with the comfortable message, 'This girl has been taught to be careful.' And there the matter ended.

The Betsileo are sociable and fond of visiting. But one newly married pair, fearing that hospitality might prove a drain on their provisions, made this agreement. If one of them was outside the house, and saw people coming to call, he or she should give warning to put all food and plates out of sight. The word 'kalita' was fixed on. When the wife's people came next day, the man outside promptly enough cried 'kalita,' and no food was forthcoming. Soon after, the woman was outside, and saw the husband's friends approaching, so she gave the sign. But the too partial husband, when he knew who they were, wished to give them refreshment, and reprimanded her for always calling 'kalita.' She replied that 'what was sauce for the goose was sauce for the gander.'

Another family noticed that their father often went out of doors just before the evening meal, with the excuse that he was uncomfortably warm. They did not see him put salt (which is a delicacy) on his rice, it is true, but knowing him to be close and mean, the wife quietly followed him to the place where she found his salt-jar. The reason of his getting 'uncomfortably warm' so regularly was not far to seek. They were all so annoyed at this selfish conduct, that they left him to enjoy his salt and home by himself.

Another Betsileo of this class was quietly taking his rice and milk, but on hearing some relatives' footsteps, slid the plate on to a shelf overhead, and then coolly declared there was no food in the house. But just then, as if in judgment on him, the plate, which was insecurely placed, fell down and covered him with confusion and milk.

There is much low selfishness in the Detsileo, which, though very disgusting, is not without a comical side. They work hard in the fields nearly all day, get tired and hungry, and then give themselves up to the pleasures of eating.

Their Children.—Betsileo children's troubles begin early. The day after they are born, they are forced to eat some half-cooked rice to support their non-independent existence, and as a prophecy of good things to come. They are spanked until they open their mouths, and then it is gently pushed down. Generally speaking, the Betsileo love their children, and err on the side of indulgence. Incessant crying and temper go unchecked, and they put up with much from their progeny, but when it gets beyond a certain point, the hapless youngster is taken in hand and receives a sound thrashing. They have the idea that if administered occasionally, it becomes efficacious and memorable. Should, however, parental discipline fail, the father forthwith went (formerly) to the authorities, paid the one dollar fine, and disowned his unfilial son.

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The prejudice against education used to be so inveterate that a favourite child was kept from school, even though it meant being heavily fined.
Other, and particularly disliked, children were made to undergo elementary education, which is considered to be an innovation of human rights. The three R's and the Christian Religion do undeniably sharpen the wits and improve the morals, but this 'culture' is thought to interfere with sordid drudgery, which is the only way to get on.

As a rule, the eldest and youngest are the favourite children, the latter being privileged to sit on his father's knee at meals, and eat from his plate. If a wife is divorced, being with child by her then husband, when it is known that the child is born, he claims it and rears it in his home.

The Betsileo step-mother bears a bad name, which is even shown in proverbs. The father seems indifferent to the rights of his children, and tamely submits to the rule of his new wife, who makes the motherless barns feel that they are really paupers and only allowed in her home on sufferance. They are set to do dirty work connected with the cattle and pigs, to roast their own yams in the field for mid-day meal, and when they return home in the evening, have the grief of seeing her children eating rice and meat with their parents, while they are thrown some akotry (rice in the husk) and bones to make the best of. Their unenviable lot is often cut short by disappearance. They are practically orphans, and henceforth become vagabonds, or get a precarious livelihood among friends. Of course there are many exceptions, where things are altogether different.

**Illness and Death.**—When a Betsileo is sick, his illness is attributed to one of three causes: either he has come into collision with a ghost, who stalks about disconsolate in the dark; or has been bewitched; or, if he is rapidly losing flesh, his spirit has forsaken his body, leaving it a prey to disorders. The relations of the sick man at once prepare for a house-warming, kill a bullock, cut the meat into strips to dry, deck the patient with flowers, then, amid the clanging of metal, yelling, and clapping of hands, they push and poke him about until he sometimes swoons under the ordeal. And while the incense of burning fat is filling the room, they symbolically conduct back the spirit to its mortal tenement. If perchance he continues ill, the bed is shifted from one corner of the room to another, because his fate (vintana), or a certain ghost, is rooting about where the bed is, and if they come into conjunction, the patient will die.

In case of unaccountable illness, the diviner is sent for, who, after looking at the tongue and eyes, solemnly gives the opinion that the patient is troubled by a bad spirit that has found its way into the house. He thereupon examines the room carefully, sees a death-moth (which he has probably brought with him), darts about in pursuit, finally pins it on the wall, makes it squeak (like Punch and Judy), and shows its blood on his hand. Then he pronounces the danger to be past, and announces that the patient will recover.

When a noble or wealthy person dies, the mourning and feasting are proportioned to the property of the deceased. An ox is killed every day or so for the open house-keeping, which is an exceedingly popular institution, and causes the departure of great personages to be borne with astonishing fortitude. As many as 30 heads of cattle are sometimes seen mouldering on the tombs, showing the number of beasts
eaten at the funeral ceremonies. The body, which is sometimes kept unburied in the house for weeks, is affirmed to be 'fragrant' (mánitra), a most palpable fiction. On the day of the burial, before the bier, there is a drove of oxen belonging to the deceased, followed by youths expert in the art of bull-baiting, who receive money and rum according to their success in foiling the infuriate animals. They undergo vaccination (being scratched with a piece of a broken bottle on their chests) with a liquid charm to defend them against being gored, but as often as not they do get injured and sometimes killed. The more stimulants they take, the more venturesome they become. This is done in sight of the bier and mourners, accompanied by singing and dancing, and a free supply of food and spirits, all of which continue through the night. The graves are near to the house, and there is a mournful song ending with the refrain: 'Ao madina' ('there he lies, whenever we pass or repass, go out or come home, there he is always lying'). Over the body the eldest surviving relative (or his deputy) records the history of the fatal illness and the treatment followed, laying emphasis on the money and things spent on the native doctor, and winding up with the words 'tsy nahafaka', that is, 'But it was all of no avail, for his time had come.' Then, before committing the body to its resting-place, he commends it to the ancestors (rdzana), charging them always to keep a sharp look-out on the new ghost, lest, peradventure, he find his way back to molest the living, and so come to grief at the hands of the medicine-man.

Their Religion and Superstitions.—The Betsileo are deeply superstitious, and full of timidity and apprehension, which make them an easy prey to designing persons. They have a full-blown belief in witchcraft, and nearly all diseases and misfortunes are saddled on witches and ghosts. The persons who profess the black art and evil eye gloat in death. When a neighbour is dangerously ill, they hang about the house at night, dancing and howling and peeping in at the window. And no doubt they are directly responsible for many of the sudden deaths that take place, since they have knowledge of poisons, and there are no inquests. But on a different and higher level of society are the ombyaya or medicine-men. These are clever fellows, who remind one of Greek oracles, in that they collect information about everyone and everything, and then startle people by their preternatural knowledge. They bring rain in time of drought, prepare potions for every conceivable ailment, and manufacture charms and idols. They are consulted on all matters of importance, such as building, journeying, or marrying. They foretell future events, particularly the demise of obnoxious persons. And such predictions are heard with profound concern. The ombyaya lies on his back under the open sky for two successive nights and a day intently watching the signs of the heavens. He can visualize a funeral procession with coffin and bearers, oxen being killed, the mourning friends, and the open grave with perfect clearness, and, worst of all, he can recognise the deceased who, he has learned, will actually die at a certain time (generally at the fall of the leaf). If any seem incredulous, he undertakes to make them see the same mysteries, but few have the temerity to accept the challenge. In many instances death takes place at the time stated, doubtless through fear and nervous
shock. Sometimes, however, the *ombiasy* actually makes it known that the event is not foreclosed, and may be set aside by his intervention. A fat bullock or pig generally settles the matter. In a cloud of incense and incantation it is arranged with the deity. Fetishes (*ady*) and idols (*sampy*) are sometimes made in the form of men and women, and are representations of gods, to be prayed to and trusted in. They are kept in the house or worn on the person. One such is a charm against lightning. The possessor sits on his door-step with a fire inside the house, and calls out to the storm-spirit, *'maleme,'* *etc.,* i.e. *'Don't be alarming or destructive, and only send the rain down.'* This is the talisman too if the charmed person is journeying and overtaken by a thunder-storm, and anyone who presumes to go in front of him is sure to be struck by the lightning.

On the east inside wall of Betsileo houses are placed three small shelves (*kipa*), the highest one being dedicated to the Supreme Being (*Zanahaty*), the middle one to their ancestors, who are supposed to have become minor deities (*rasana*), and the lowest to former slaves of the family (*an­dëvo*). On ordinary days, before eating, they throw a little rice on the *kipa* of their ancestors to show honour and to obtain their good offices, sometimes on the *kipa* of the dead slaves to remind them of the position to which God has called them and their duties to their betters in the spirit-world. To *Zanahary* is offered rice, meat, and a hornful of rum on special occasions only, such as harvest or circumcision ceremonies, when the dedicated morsels are scrambled for by the female members of the family to ensure conception of children.

Old Betsileo have the idea that if they embrace Christianity, which involves union with God, they will not live out their days. A certain heathen father once heard his son singing the hymn, *'Avia, Jehovah,* etc.* ('Come, Jehovah, Lord, Listen to our prayers*'), when he was deeply distressed, stopped him to explain that the Deity was too august and powerful to come into relationship with men, and that such presumption must be attended with disaster.

When Betsileo heathen call on *Zanahary* to accept their offerings, they beseech Him to return immediately to His celestial abode and to leave them to themselves. A Norwegian missionary tried to show to an old man that he was a sinner in need of pardon and salvation, but he scouted the notion, saying, *'I have reached old age, Zanahary has given me a good wife and many children, and crowned my life with peace and prosperity; would He thus have favoured me if I had been a guilty sinner?*'

Another, of a practical turn, who was not 'righteous overmuch,' made one prayer over his rice at the ingathering, but refused to return thanks at succeeding meals, maintaining that it had been done once for all. Many make the Sunday 'praying' do for the whole week, having no liking for the exercises of religion. Another Betsileo, in discussion with a missionary, mentioned the case of a man who was well off, but who stole an ox belonging to a neighbour. In the scuffle that arose in consequence he was killed. Now came the argument. They had plenty, and knew the risks of cattle-stealing, and there was no reason on earth why he should do such a thing; therefore the act was instigated by the Almighty! They think that God *does* 'lead into temptation.'

It is a difficult thing to get the Betsileo to believe in the resurrection
of the body. They admit the existence of a spirit-world somewhere, but how the body can be raised after dissolution is the difficulty. 'Besides,' said one, 'if I climb on a house-top even, I turn giddy, and so naturally have no wish to be elevated through unknown space. I should feel safer and more comfortable if let alone in the ground.'

The people are much exercised on the subject of comets. They are supposed to be supernatural portents of catastrophe. One theory is that, on the appearance of a certain comet (let us hope that it is still distant), all the white races of the globe will perish (is the wish father to the thought?). Many decline to plant trees on account of a subtle connection between the life of the tree and that of him who plants it. As the one increases, the other declines. Their minds are full of groundless fears born of ignorance, and they are slow to comprehend even mundane laws and relations. A man who had been on the coast and seen the ocean and ships (at least in the distance) seriously asked me if the imported horses and mules were 'swum' all the way across the deep, or whether they were brought in ships. When informed that it was necessary to bring them in ships on account of perils and possibility of drowning, he asked again if they stood perfectly still all the time, since he feared their movement might capsize the ship. His ideas on the subject were confined to native canoes and the swimming of rivers, and he could not conceive of anything on a larger scale. His incapacity reminded me of another (not a Malagasy), who had observed the phenomenon of tides, and wished to take a bottle of sea-water to his island home. He took the precaution of only partly filling it, in order to leave room for the tide to rise.

Since writing the above, two incidents worthy of mention have occurred in my travels among country churches. One day when crossing a lonely mountain pass, we suddenly came to a sacred spot where there were two people in the very act of performing heathen rites. There was a heap of stones with a stick at the top, on which was skewered the head and feet of a fowl just killed, the blood having been poured on the stones, while over the fire was being grilled the fowl itself, to be eaten on the spot by the worshippers. It was an impressive sight, the still morning, the wild, lonely mountains, the piled-up heap of stones, the smoke and sacrifice, the scared man and woman, who expected to be shot or something of the kind for this illicit paganism; then too there was the story of the woman, told with trembling, how that she was suffering from an internal malady, and how the sorcerer, a Mr. Dogood (Ramahasoa) had directed her to this altar, to honour and supplicate the gods. After giving her counsel on the folly of such expectations, we urged them to try some of our European medicines, which they consented to do, but suddenly disappeared, and we saw them no more.

Another day one of our country workers took me to the house of a woman diviner or witch. We came upon her in the very act of working the oracle for a young man (crossed in love?), who was seated by her side. She shuffled the sacred beans aside as I appeared, and coolly denied having any dealings in 'the art.' She was an unwholesome, toothless, old creature, who had practised it for many years with much success (to herself), and had lately married an inoffensive husband, who
found safety and medicine under her wing. She was very sullen for some time, but when told that I was a missionary who wished to learn the ins and outs of her art, and that if she was straightforward and showed me all, no harm should come to her, on my word of honour, she was prevailed upon to produce and put in action the whole bag of tricks. She was very uneasy, however, and often cast sly glances at me as I watched the grouping of the beans and tried to understand the principles of divination; and once, when being so quizzed, I burst out laughing, after which, and a good look into each other's eyes, we seemed to understand one another better. Before leaving, however, I gently insisted on relieving her of some of her plant, ten of her 30 beans and a piece of sacred wood, not part of the true Cross, but, nevertheless, said to work miracles, chiefly of a mental and imaginary nature. She seemed glad to give anything to get rid of me, since it was the incongruity of darkness and light, which I tried to show her. She was a deep-dyed, evil, old woman.

Their Vices.—The Betsileo, as a people, are corrupt and immoral. Much open prostitution goes on in the weekly markets. Marital relations were formerly loose in the extreme. 'Off with the old love, on with the new' was the common thing. Parties lived together for a few months or weeks until they got tired of each other, and then separated. They hardly expected to get settled until the third or fourth attempt. Some who trade from place to place keep an additional wife, who, when the real wife is rumoured to be near, is quarrelled with and cleared out. Bad sides of character often turn up in this connection. Once I had to go into the case of a manservant accused by his wife of misconduct with another woman. He came downstairs, New Testament in hand, with a serene countenance, and maintained his innocence with much volubility. But when his wife came on the scene and opened fire with her evidence and scorn, the Testament disappeared, and the offender collapsed. His face was a picture. It was all too true. Some who interlard their conversation with the Divine name and pious remarks call to mind the profane sailor, whose whole body was tattooed with Scripture texts, but of whom it was ironically said, 'his system was free from it.'

Many Betsileo women are strong-minded and inclined to be amazonian. They do not admit the mental or even physical superiority of their husbands. Married pairs sometimes quarrel and fight, picking up anything handy to belabour each other with. A diminutive husband that I lately heard of, being worsted in a conjugal encounter, was taken up bodily in his wife's arms, kicking and struggling, and carried upstairs as a proof of her invincibility.

Another original and high-handed wife, who was always complaining of her husband's tongue, was one day so enraged at his prating, that she picked up a burning stick and, quick as thought, pushed it into his mouth, exclaiming, 'There it is' (the unruly member). The affair was brought before the magistrates, and the contumacious wife was fined for 'insult with violence' and bound over to keep the peace, and especially to keep pieces of burning stick out of her husband's mouth for the future.

The Betsileo are addicted to the drinking of rum, and sometimes spend all they have and even sell the clothes off their backs to get it. And then
they are unbearably quarrelsome, ill-treating wife and children, and destroying every vestige of home.

Some are shrewd and artful enough. A certain youth, who had got into difficulties through gambling and bad companions, played this manœuvre to raise funds. He engaged a Hova (one of the then ruling tribe) to take him in chains before his parents and represent that he was arrested for a debt of 25 dollars. This sum was at once paid by the frightened parents, the son was released and pocketed 23 dollars, the remaining two being given to the Hova for his trouble. Another common ruse formerly was for a youth to allow himself to be sold as a slave by his companions, the money realized was divided, the pseudo-slave being taken to Imerina and made to serve his Hova master, but after a few weeks of change and sight-seeing, he found opportunity to escape and return home.

And now at the conclusion of this paper, having freely delineated the shady sides of Betsileo character, I am bound to honour them for some conspicuous virtues. In dealing with this subject, it should be remembered that the Betsileo have been overrun by the Hova for nearly a century. This experience without doubt has developed many of the bad traits in their character. But their proverbs and folk-lore show the presence of virtues in their character which one still sees occasionally exemplified. They are enjoined not to cherish animosity against family foes, nor to do anything to their detriment, but rather to do them good by any means in their power, and always to show a friendly and forgiving spirit. If, however, they continue to wrong them, they are to commit their cause to Him Who eventually will set things right, and reward them according to their works. And parents, when dying, charge their children not to dispute and fight, but to live in peace, and so to fulfil the duties of life as to be without reproach or regret. Moreover, to make these injunctions impressive and binding, they invoke maledictions on them and their offspring, should they depart from these family traditions.

If what is reported be true, there was a singular simplicity of manners in the past. Even in the open-air markets and in lonely paths, no one was in danger of robbery, and things picked up were taken to the proper quarter to discover the owner. These arcadian conditions have, however, long since disappeared through contact with the outside world, but there are still suggestions of them.

The older people are decidedly conservative in their ideas and superstitions, but there are many cases even among these where the Light of the Gospel and Divine assistance have been received long ago, and have produced devout and beneficent characters, which are quite anomalous in heathendom. But especially among the young, who have come more thoroughly under Christian influence and education, do we find highly commendable qualities, enlightened sympathy with European civilization, deep interest in the Christian religion, loveableness of disposition, moral earnestness, and steadfast endurance in persecution and trial, which are the joy and hope of the missionary.

John H. Haile.
I have received from M. Gautier, with permission to translate and reproduce in the Annual, a copy of a paper written by him bearing the above title. It is an exhaustive, important, and interesting account, not only of the province of Ambôngo in the north-west of Madagascar, but also of that of Mahilaka and other smaller, but neighbouring, provinces. In addition to the text, the pamphlet contains several excellent maps (hence the title "Atlas"), most of which are coloured. There is a Carte Géologique, a Carte Hypsométrique, a Carte de la Végétation, a Carte des Races, and a Carte Politique, besides a lithographic sketch of some silicified trees found at Ambalarana, and another of some curiously weathered limestone rocks at Namoroka. The paper is a very valuable and interesting contribution to our knowledge of this hitherto almost unknown part of the island. A list of fossils collected by M. Gautier will be found on another page.—R. B. (Ed.)

INTRODUCTION.

It may appear strange that, of a country which was perfectly unknown last year, one already publishes an Atlas. It is true that the maps which compose it are still very incomplete, and must be regarded rather as outlines than as possessing a topographical character. Such as they are, however, they have for their object to render clear to the eye a certain number of facts positively proved, of which long written explanations would not give so distinct an idea. The hypsometrical map, for example, is evidently insufficient of itself to serve as a base for the study of a line of route; but it is to be hoped that it represents pretty faithfully the distribution and altitude respectively of the principal mountain masses and valleys. It ought to give the general physiognomy of the country; no more must be expected of it. Probably a hypsometrical map with hatching would not have had the same distinctness as the present one gives. The south-east corner of the map, representing a country of very uneven and disturbed structure, was particularly difficult to do, and nothing more has therefore been attempted than to indicate the great mountain masses. In the remainder of the map, in consequence of the geological constitution of the ground, the variations in the altitude of the land were much easier to grasp and delineate, and so the hypsometric lines had a better chance of approaching more nearly to the reality.

The heights have been taken by means of an aneroid barometer, verified at the Meteorological Office in Paris, and the observations taken with it have, during the last three years, been frequently compared with those given by other barometers at various altitudes.

The geological map ought to be accompanied by a list of the numerous fossils collected and diagrams of geological sections, but the publication of these has had to be delayed until the fossils have been examined in the palæontological laboratory of the museum.

Although the presence of Ammonites in the beds permits of affirming positively that they belong to the Secondary era, one cannot conceal from oneself the fact that the limits between the Cretaceous and the Jurassic rocks will perhaps require ulterior rectification.

Finally, it has been thought that, as the country is new and on the way of rapid progress, it would be advantageous to publish at once the results obtained, all incomplete as they are. In a new country, to aim at geographical perfection is to renounce all publication.
THE GEOLOGICAL MAP.

The whole south-east corner of the map represents rocks belonging to the metamorphic series (almost certainly Archean. R.B.). They consist of gneisses, mica-schists, etc., the same as in Imerina.

1. Shore of the Jurassic Sea; Promontory of Makarainga.—All the other territory represented in the map (i.e. all but that in the south-east corner) was covered by the sea in Jurassic times. The shore of the Jurassic sea, as is indicated by its deposits, passes near Mêvatanâna and Ambôdirôko, follows the River Mênavava for a great part of its course, passes near Ankilahila, Ampiaikàrandrafito, Mândakâboka, anp Ambârravâramâhatâko. Exactly from this point it runs straight to the south in the direction of Ankavandà (outside the map), thus forming a promontory, the ancient ancestor of Cape St. André, and which may be called the Promontory of Makarainga.

2. Jurassic Volcanic Archipelago.—To the west of this promontory the Secondary sea was strewn with volcanic islets, whose skeletons, still upright, rise as peaks above the surrounding plains. These ancient islets, which the retreat of the sea has changed into mountains, are to-day Ambôhimirâhavâvî, Ambôhîtsirândrây, Tsimitàratra, Fonjây (Fonjia ?), and finally Ambôhîtsoy os Ambôhibîngy (i.e. goat mountain). Their altitude varies between 600 and 800 metres, and their distinct relief is further enhanced by their isolation.

Traces of Jurassic volcanicity abound, moreover, everywhere in the province of Mahilaka*; numerous small dykes exist which could not be indicated on the map on account of their size; and on the road from Ambaravaramahatâko to Môrafênobê a certain number of them is also met with. The peaks of Ambôhîtsâîlîka and Mandakâboka are ancient volcanoes, but quite small. The road from Anjîla to Andémba, on the one hand, and to Tambiohiranô, on the other, passes entirely over volcanic rocks. The little lake of Bërijâ is manifestly an ancient crater. Antsâhalôhâ, to the south of the River Rânobê, is doubtless an ancient volcano, still recognisable as such; but with these exceptions, every trace of volcanic relief has disappeared from the territory lying between Tambohoranô and Andémba. Time and sea appear to have demolished them.

3. Total Thickness of the Deposits.—The deposits of the Jurassic sea have in general a thickness of 400 or 500 metres. It is easy to measure it on the steep flanks of Kahavô.

4. Arenaceous Deposits.—In the neighbourhood of the coast and of the archipelago these deposits are arenaceous. They are in general of very feeble consistence, being scarcely solidified. However, the River Ranobe, to the north of Fonjây, runs in a bed of very hard slaty rocks. The small plateau of Kipâtso, to the south of the mountain of Ambôhîtsoy, is of fine compact sandstone, the more resisting parts of which have formed prominences by erosion of a very curious kind. The Rivers Mânambâhô and Bëmarivo near Ambalarâno run between two sandstone walls. These are exceptions, for the sandstones, etc., are almost everywhere in a state of decomposition and ruin. The soil consists of débris and of quartz pebbles rolling under the feet.

Among these débris one often meets with remnants of silicified wood and sometimes of entire trees, which attain to twenty metres in length and a metre and a half in thickness.

It is from these sandy deposits that the springs of bitumen ooze out (at Bêmôkârâha to the east, and at Anâlamalâza to the south, of

* Occasionally spelled Maliaka, which is the more correct spelling appears to be uncertain.—R.B. (Ed.)
Tsimitaratra.* They probably exist also in the neighbourhood of the mountain of Kipatso, to the south of the mountain of Ambohitsosy.† This bitumen, which the natives call sâkôpânja, has been for long the object of a small trade. It is carried to the coast in bamboos, and is employed in the caulking of canoes with outriggers. The regions where it is found have only just been opened up, and it would be interesting to explore and to study all these springs, which are still far from being well known.

4. The Jurassic Limestones. — At some distance from the ancient Jurassic coast-line the arenaceous deposits disappear under limestones, which at first have no more than a maximum thickness of 100 metres (north of Ankilahila), but which appear to increase in proportion to their distance from it (they are, for instance, at least 200 metres thick at Bê-kodia). The coral reefs, of which these limestones are the remains, naturally follow the shores of the Jurassic sea, but they have not been able to penetrate into the volcanic archipelago. They turn round it, thus showing that the archipelago existed at the time the coral banks were forming. Near Anjia are to be seen, at certain points, limestones overlying volcanic rocks, whilst at one other point at least the volcanic rock pierces the limestone. There are then two great calcareous masses, in other words, two systems of level desert plateaus (cazsses) separated by an extent of 150 kilometres in a straight line.

To the south the Bemarâha mountain range (specially developed in the province of Mênabê) terminates at the sources of the River Manghômba,§ but in its prolongation, and for 80 kilometres beyond, some flat patches of limestone, more or less continuous, attest that the polypes struggled painfully against conditions unfavourable to their existence (for example, at Ampikétâra and Tôngotsosy, the latter being known only from information and specimens). To the north, the level desert plateaus (cazsses) of the mountains Kahavo and Ankâra cover, without interruption, an enormous extent of territory.

5. Reappearance of Gneiss and Mica-schist in the Basin of the River Sambao.—The limestones are much more compact than the arenaceous deposits. The natives, who are great pedestrians, and who, moreover, go barefoot, know very well the difference between the soft stones (vâto malîmy) and the hard stones (vâto marâha). It is this word marâha (i.e. hard, sharp-edged, pointed) which appears in the name Bemarâha. Accordingly, not only have the limestones themselves been well preserved, but they have also kept from erosion, more or less completely, the sandy deposits which they cover and those which they separate from the sea. But in the whole basin of the River Sambao, there being no barrier to protect the moveable Jurassic deposits from being carried to the sea, these deposits have disappeared, exposing to view the subjacent metamorphic rocks, gneiss, and, above all, mica-schist. Only here and there does one meet with fossilized trees and blocks of hard sandstone, the last witnesses of the vanished beds. In the neighbourhood of Mahiagldro the metamorphic rocks are rich in quartz veins, and here, not improbably, the natives have worked for gold to sell at Sôalâla.

6. The Cretaceous Gulf of Boïna.—During the Cretaceous period the whole province of Mahilaka and the greater part of Ambongo were above the sea. But in the north a gulf of the Cretaceous sea covered a small part of Ambongo and a great part of the present Boïna (or Iboina). The Cretaceous deposits appear not to have a great thickness, 100 metres or so at the most. Therefore at the village of Ambôhitrômby, near Mojangâ, on

* More precisely at Manjakabêhôbo, at the head of the River Ambôhidrânomôra.
† It is necessary to take guides at Bêsulâmpy, as the Sakalâva near Kipatso refuse to give information.
§ ngh represents the sound as heard in the word singer, not as in single.—R.B. (Ed.)
the flanks of the hills which scarcely exceed 100 metres in height, are found an abundance of Cretaceous *Alectryonia* and *Ostrea*, whilst at their base appear the compact Jurassic limestones with characteristic species of *Astarte* and *Nerites*.

The small island of Mâkambâhy is covered with thin Cretaceous beds, and Jurassic limestone is found at the base of its cliffs.

The Cretaceous rocks are sometimes decomposed sandstones, sometimes marls separated by thin calcareous beds.

7. *Post-Cretaceous* Volcanic Rocks.—The north of Ambongo and Boina have been the theatre of numerous volcanic eruptions. Above Ankirihitra the volcanic peak of Tsitondrôina raises itself, above Andrânomâvo that of Ambônîbêtrâtra. The plateau of Ankârântsika and the *causse* of Ankara are in part covered with lavas. To the south of Lake Kinkôny veins rich in copper appear. The River Mâhavâvy cuts across a lava bed a little to the north of Stamplîky (*sic*). All these volcanic beds have been erupted through Jurassic and Cretaceous strata, and belong therefore to Post-Cretaceous time.

8. Modern Beds.—From the neighbourhood of Cape St. André southward old maps show a band of Tertiary rocks, but on whose authority no one knows. What is certain is that this part of the coast has a special aspect: it is flat, sandy, or muddy, to a considerable distance inland. Here one meets pretty frequently with expanses from which the sea has withdrawn, but which, to the present day, are sprinkled over with salt, and which terrestrial vegetation only slowly invades. It is evident that here is land quite recently emerged, and still in the process of emerging, from the sea. But, on the contrary, from the Bay of Bâly towards the east and north, it is, at least in appearance, the sea which is gaining on the land. The coast is lined by cliffs undermined at the base, and is cut into bays and gulfs which advance far inland. The winds, currents, and tides, moreover, bear down on the west, and what the sea removes from the cliffs of Boina, it restores to the shores of the Milânya province. It is for this reason that it has there heaped up the pumice stones which were found in the extreme north of Madagascar after the eruption of Krakatoa.

9. Direction of the Strata.—The stratification of all the above sedimentary rocks is extremely simple. In spite of the presence of innumerable volcanic vents piercing through the fissures of the rocks, and although, at certain points, the land has been raised as much as 700 metres, the strata are nowhere twisted and folded. They have everywhere remained perceptibly horizontal, with only a slight but constant inclination seawards. The Cretaceous strata repose on the Jurassic without any striking discordance. It is quite otherwise with the metamorphic rocks. They have manifestly been submitted to formidable lateral pressures; their strata are inclined at from 45° to 90°, and are folded and bent on themselves; the secondary rocks therefore rest on them with an absolute discordance.

10. Addenda.—It is possible that one might find traces of Cretaceous rocks in the extreme west of the Mahilaka province. The manner in which the limestones at Anjia are cut into cliffs, and in which the volcanic rocks which lie over them are eroded horizontally, appears indeed to indicate a Post-Jurassic irruption of the sea. This sea has not, however, left much in the way of deposits. However, Anjia is built on a long non-fossiliferous bank of sand. To the south of Bélâlîtsa also the limestone rocks are covered with sandstones, which are also destitute of fossils. What is certain is that another Cretaceous gulf, forming a counterpart to that of Boina, existed in Menabe.

THE HYPSOMETRICAL MAP.

The great central plateau of Madagascar terminates, in the provinces of Ambongo and Mahilaka, in very steep declivities. Bêzâvona and Ankîtsi-
kitsika (in the neighbourhood of Makarainga), which attain to an elevation of 1000 to 1200 metres, rise immediately above plains or valleys only 200 to 350 metres above the sea. The promontory of Makarainga and the parts adjoining the great plateau, as seen from Ambongo and Mahilaka, appear like bastions to the perpendicular walls. The River Makambahy, which takes its rise in the mountain of Bezavona, reaches the plain of Ankilahila by falling down a deep gorge of 500 to 600 metres in a single descent. The strata are plainly directed north and south. Therefore the aspect of the terminal wall of the great plateau is very different, according as one looks at it from the north or from the south of Ambarravaramahatako. Looked at from the south, it runs north and south, in the sense that the folds of the strata and the surface undulations run in a direction north and south, thus following the grain, so to speak. Viewed from the north, it runs east and west, that is against the grain. It is the same difference as that between a piece of wood split lengthwise and broken across. Moreover, the terminal edge of the plateau to the south of Makarainga is distinctly rectilinear, and it continues thus far beyond the limits of the map, even as far south as Bétsiriry. It is this wall, so high and so continuous, that the Sakalava call Bôngolava (i.e. long mountain). In the north, on the contrary, it is jagged. An attempt is made in the map to show these differences of aspect.

This angle of the great plateau, lying between the River Iképa and the sources of the Manambaho, is almost wholly above 600 metres high. Tamponkatsa has a height of 1600 metres. The plateau is then, taken in its entirety, much more elevated than the provinces of Ambongo and Mahilaka, where only a few points scarcely exceed 700 metres. Nevertheless, the provinces of Ambongo and Mahilaka are more elevated than their immediate neighbours Boina and Menabe. This is true more especially of Ambongo, which name, however, given by the Sakalava, signifies mountain (i.e. bongo).

It has already been stated that a considerable number of ancient volcanoes rise singly to respectable altitudes. The causse of Kahavo, of Ankara, and of Bemaraha have, over wide stretches, an altitude constantly greater than 400 or 500 metres. The highest is that of Kahavo, which attains, in its southern extremity, to 700 metres. At 170 kilometres from its mouth, the bed of the River Mahavavy is still more than 200 metres above the sea, whilst Suberieville, at a distance hardly less from the mouth of the River Ikopa, is under 100 metres.

Apart from the hills of volcanic origin, the relief of Ambongo and Mahilaka is entirely due to the action of water. Nowhere is there any trace of foldings of strata, nor of other terrestrial movement than that which has slowly lifted the country en bloc above the sea. The rains and water-courses have profoundly modelled the surface thus laid bare by following the lines of least resistance. There is hardly a river which has not dug for itself, at some point or other of its course, magnificent gorges, which, however, render it impracticable for navigation. The Mahavavy has opened for itself through the limestone plateaux a narrow ravine, where the waters in the rainy season are so turbulent as to defy the passage of all canoes. The Sambao, running across the lavas of Ambohitsosy, and the Manambaho, running across those of Fonjay, have dug out for themselves gorges encumbered with rocky débris.

The arenaceous deposits have been carved by erosion in an extraordinary manner. The amount of erosion is, in some places, very great, some dozens of metres (rarely a hundred) of strata having been removed. The gaps eroded are numerous and capricious, leaving a chaos of pyramids, sharp ridges, gaping holes, etc. In this respect, the valley of Ankilahila, especially in the neighbourhood of Kahavo, is extraordinary.

Hundreds of metres of these deposits have disappeared in the course of
centuries. The examination of the slopes of Kahavo proves that the bottom of the valley of Ankilahila was 600 metres high after it had emerged from the sea, whereas to-day, owing to denudation, it is only 250. The relative relief of the limestone plateaux has therefore gradually increased by the scooping out of the adjacent valleys. It is thus that Bemaraha has become separated from Bongolava by the valley of Ambaliky, and that the causses of Ambongo have become separated from the plateau where the River Mahavavy takes its rise by a steep-sided narrow valley, where the Rivers Makambahy and Menavava continue their destructive work. The limestone plateaux, which a traveller coming from the coast climbs in general by an insensible gradation, show themselves, on the contrary, to one coming from the interior, as high cliffs with horizontal summits. These are, as a rule, immense level expanses, where great flaggy slabs of limestone pierce a yellow soil almost devoid of vegetation. In some points, however, especially near Anjia and Namoroka, the limestones have been cut into needles and into tables with overhanging edges. One seems to recognise the mechanical effects of the sea waves on some of the limestone cliffs. Considering the situations of Anjia and Namoroka, it is probable that the Cretaceous sea advanced as far as them, although it has left no deposits.

The parts of the limestone plateaux which are thus dug out and cut down are called by the Sakalava tsingy, and in times of war they serve as refuges to the conquered party. The majority of the Sakalava kings establish their habitual residence near a tsingy, which eventually serves as a natural fortress.

The limestone plateaux are very dry, and subterranean water circulation plays a great rôle in them. The River Bokarâno disappears under a buttress of Bemaraha before reappearing further on under the name of Mangly. At Namoroka, a rapid stream, one of the sources of the Kapilôza, gushes out, already formed, from an anfractuosity in the rock.

Even the parts of the basin of the River Sambao, occupied chiefly by micaschists, are scarcely undulated; the direction of their much disturbed strata shows that they must, in olden times, have been as much cut up as the crystalline schists of Imerina, but the sea has shaved and planed them down, the granitic parts only, being harder, rising above the general level (e.g. the hills Ambâniândro, Mâvo, and Pisaka).

**MAP OF VEGETATION.**

There exist no continuous series of meteorological observations for Ambongo and Mahilaka; it is, however, certain that the temperature of these two provinces is cooler than that of Boina; this one might expect when one considers their altitude. At an elevation of 600 or 700 metres the nights are relatively cold, and the cooling influence of the mountains extends even to the neighbouring low plains. Little is known of the character of the rains, and none at all of their quantity. It is merely known that the year is divided into a dry and a wet season, nearly the same as in Imerina. It is the vegetation which gives us the most precise information on the climate. It permits us to say that the climate is rather dry. The presence of Tamarind trees, fan-palms, baobabs, and the absence of great continuous forests, are characteristic. The island of Madagascar is often represented as surrounded by a girdle of forest. On some quite recent maps the greater part of Ambongo is shown as covered with a forest named Manêrinêrâna. In reality, from the time the traveller, who follows the route from Fênoarîvo (in W. Imerina) to Makarainga, arrives in the neighbourhood of the River Mahavavy, he enters a region in which the low grounds and the borders of the streams are wooded. Ambongo and Mahilaka themselves are far from having the desolate
aspect of Imerina. They are covered with clumps of trees, but the continuous forest exists nowhere. It can be said, as a general rule, that woods occur everywhere where the soil, for accidental reasons, remains damp throughout the year, thus counterbalancing the influence of the dry season. The slopes of the highest mountains (e.g. Fonjay, Ambobitsosy, etc.), where springs abound, are wooded. It is the same all round the great limestone plateaux. All the rain which falls on these plateaux is absorbed by the very permeable soil, and slowly restored at the base of the causses. The tsingy are covered with slender and tufted bush, the roots of which run on the white rocks like live things, penetrating into the interstices, and seeking in the depths below the invisible store of soil and humidity. The valleys and plains, more or less marshy, and the seashore, where the fresh and brackish waters contend for the low and level land, are almost always wooded, and the alluvial soil in these places is richer than elsewhere. The woods of Mânasâha, for example, in the circular valley of Makambahy, opposite to Ampikarandravo, and those which cover a great part of the province of Milanja, grow on soil of this nature. Everywhere else a persistent dryness, lasting more than half the year, prevents the development of all arborescent vegetation.

Though the country is thus, on the whole, more or less bare of vegetation, the small woods that do exist contain a fair number of exploitable shrubs and trees of commercial value. Two plants at least yield caoutchouc, one, a climbing plant, which is found in the majority of the Malagasy forests; the other, a shrub, belonging to the Order Asclepiadaceae, to which the natives give the name of giàtria. Ebony has always formed an object of a fairly active commerce. Sandal-wood* has not been much employed hitherto, except for the coffins of Sakalava chiefs. The roja (Raphia Rupha, Mart.) is very abundant, and the natives make from it rahanàs (a kind of native cloth) of a more elegant design than those made in Imerina. Tall bamboos are pretty frequent, and without speaking of the well-known uses to which they are put in building operations, etc., the fine aspect of their foliage and branches contributes an elegant feature to the landscape.

It is impossible to represent on a map the condition of agriculture in this part of the island. On this immense and thinly-peopled territory the extent of cultivated land is not even proportionate to the number of inhabitants. Only a small part of the ground, namely, the baisô (baibo?), which are quite excellent for agricultural purposes, is cultivated. The baisô are alluvial plains inundated during a part of the year, and are generally wooded or covered with tall reeds (bâvarota=Phragmites communis, Trin.), which are cleared by burning. On this well-watered soil, naturally rich, and thus manured with ashes, the crops grow almost without labour. Clearing ground and planting, easy though they be, are, however, so little practised, that the people, of deliberate purpose, even in the best years, live partly on roots, wild fruits, and drink made from palms ("les sucs sauvages"). The heart of the roja yields both something to eat and something to drink. A gigantic climbing plant, viakaràbo, belonging to the Order Leguminosae, furnishes a seed which is pounded into flour. There exists, above all, a great quantity of tubers and roots, which are edible after the chief poisonous properties have, by the aid of very simple preparations, been removed, e.g. the kabìja or tavibo (Tacca pinamatû, Forst.),

* This is probably a wood similar in appearance to sandal-wood. It may be Santalina Madagascanensis, Baill, which is a Rubiad found in W. Madagascar; or Aleurites flavonina, L., a Leguminous tree, which yields "Red Sandal" or "Red Saunders" wood (used as a dye), sometimes called "Bois noir de Bourbon," which is doubtfully native; or possibly Pterocarpus ceylonensis, Baill.; but true sandal-wood is not found in the island. See ANNUAL, No. XX., p. 491.—B.B. (Ed.)
which is the most widely spread of all the wild edible tubers; the *sôsa*, a kind of yam, belonging to the Order *Dioscoreaceae*, and possessing a very watery tuber; and the *antâly*, which grows by preference on calcareous soil.

**Ethnological Map.**

Although politically the provinces of Ambongo and Mahilaka, etc., are Sakalava territory, three races at least inhabit it. These are

1. *The Hova or Bemihimpa.*—Under the reign of Ranavalona I, that is to say, about 1840, the Hova built fortresses and played a political rôle in the basin of the River Sambao. The remembrance of their occupation is distinctly preserved in the country. They were established at Manerinerina and Ambôhitsambâniândro (i.e. mountain of the Hova). The mountain Tsiafakambôalâmbo (i.e. impregnable to the Hova), on the River Ranobe, preserves doubtless the memory of some battle. It was after a journey of M. Laborde to Manerinerina, in company with Ranavalona I., that this name was introduced into the maps of Madagascar; it is true that it signified on the maps a forest instead of a village. Of the Hova occupation there has long remained no trace; but it is probable that in familiarizing the people of Imerina with the road to Mahilaka, the occupation has not remained without influence.

In 1863, when Radama II was assassinated, an insurrection arose in Mandridrano and the neighbouring territory. After this insurrection, which was suppressed, the conquered, in great numbers, fled towards the west and established themselves in the Sakalava country. There they took the name of *Bemihimpa* (i.e. the scattered). Since then, this primitive nucleus has increased by the addition of people who have become weary of the *corvée*, and by slaves raided from Imerina. These Bemihimpa are to be found from Betsiriry to the River Mahavavy, that is to say, in the provinces of Menabe, Mahilaka, and Ambongo. The remembrance of the emigration is still very distinct, the names of the leaders of the exodus, whose sons are to-day their successors, are known. The points where each tribe successively settled are still remembered. Their names have preserved their Hova form (e.g. the Chief of Bokarano is called Rainimângahâzo), and the Hova dialect has been preserved nearly pure. They are settled at the sources of all the rivers, the presence of the Sakalava on the lower reaches not permitting them to advance further. They are specially numerous on the banks of the River Manambaho and in its neighbourhood. The Bokarano people are found even as far as about 60 kilometres from Maintirano; and Tsisatray, the former Chief of Anjia, was a half-breed of Sakalava and Bemihimpa parentage. The Ankilahila-Ambaliha people (near the confluence of the Makambahy and the Mahavavy) are of growing importance; and the people of Ambaravaramahatoko and of Mâhâtâkonômby appear to have a tendency to take refuge among them, drawn perhaps by the neighbourhood of the commercial centre of Mevatanana, and cut off, moreover, by the new order of things, from their habitual source of supplies. For indeed the Bemihimpa, in contact with the Sakalava, have adopted some of their worst habits, especially that of brigandage. The small community at Makarainga had only one *raison d'être*: it served as an advance post for the bands who used to pillage the Hova region of Fenoarivo (Andîvakasakay, Mandridrano, etc.). The Bemihimpa were all the more apt in this brigandage in consequence of having preserved relations and accomplices in their former native land. The traders of Fenoarivo, strong on account of these friendships, could, without danger, travel freely in Mahilaka and there sell cotton stuffs; and the brigands from Mahilaka could enter Fenoarivo, sure of finding there informers and guides. An incalculable number of women, children, and
oxen were, in this way, stolen from Imerina and taken to Mahilaka. Certain geographical names curiously testify to this. A chain of mountains, for instance, beyond which the last Hova villages are no longer to be seen, is named Famoizankôva, i.e. "adieu to Imerina;" the name Mahatakonômby also signifies "the place of hiding cattle;" that of Ambaravaramahâtako means "the way to the hiding-place."

The French occupation has put an end to this state of things, the road is closed to the brigands, Makarainga has become more or less vacated, and the distribution of the Bemihimpa has been all the more easily changed from what it was by the fact that these naturalized Sakalava have borrowed from their new compatriots something of their nomadic habits. But in spite of all, they have preserved much of the Hova character and customs: their rice-grounds and cultivated plots are well cared for; they rear pigs; in presence of someone in authority they show themselves at once more yielding than the Sakalava, their former habits of obedience (which their chiefs, who carry, as in Imerina, the name of mpirâdity, have not let them entirely lose) returning to them easily.

2. The Makoa.—From the time the Hova forbade and prevented the importation of African slaves into the regions which were effectively subject to them, those ports which were only nominally under their authority, and more especially Ambongo and Mahilaka, became all the more active centres of these importations. The African slaves, which are called on the west coast Makoa, found themselves in very favourable circumstances. The kings and chiefs made body-guards of them, forming a sort of permanent army, which they could not recruit from among the too independent Sakalava. The grouping of the Makoa into agricultural colonies has, in this way, been favoured; and as the Sakalava do not cultivate the land, their slaves have become a force at once economical and political. They have shown themselves, at the same time, very brave soldiers, and peasants much attached to the soil and to their African processes of agriculture. They have a decided preference for millet and maize.

The map only gives a very imperfect idea of the importance of the Makoa element. The colonies of Berija and Demoka are well known, where Alidy, the former Chief of Maintirano, had established his slaves; that of Anjia, where the body-guard of Tsisatray was stationed, and that of Ranobe, are also well known. But it is probable that in all the bâboe (see above, p. 344), and on all the rivers in the neighbourhood of the sea, there exist groups of Makoa still unknown.

3. The Sakalava.—The Sakalava do not live far from the sea, generally not more than 50 or 60 kilometres away. This is because they are supplied with stuffs, beads, etc., by the Arab, Comoro, and Hindoo traders. The name Sakalava is a political rather than an ethnological expression. The Sakalava, properly so called, are a small tribe which, in the 17th century, conquered the greater part of the west coast and imposed the general name of Sakalava upon a crowd of other small tribes. The provinces of Ambongo, Mahilaka, and Milanja, isolated between the two great kingdoms of Menabe and Boina, where the authority of the Sakalava kings appears to be more particularly concentrated, were perhaps less assimilated than the others. It is always the case that the memories of the time anterior to the conquest are preserved in the names of the tribes; and so all the Sakalava have a sub-title to distinguish them, for example, Sakalava-Bëhôsy.

These Behosy Sakalava keep in memory the legendary lore of an epoch in which they lived on lemurs, dwelt in caves, and were armed only with sticks. This is one proof more that the introduction of iron articles and of oxen into Madagascar is sufficiently recent for the
natives dimly to remember it. On the west coast, their introduction may probably be attributed to the Sakalava proper (certainly with Arab blood in them), who owed their victories to fire-arms. All these natives have, moreover, the political and social constitution of the Sakalava of Menabe, and consequently their pillaging and nomadic habits.

4. Uninhabited Territory.—Even the coloured part of the map is but sparsely peopled, the average-sized villages being in general sometimes distant 30 kilometres or more from each other. The immense stretches of territory which are left white on the map are entirely abandoned to wild oxen, which there swarm. All the inland territory would have been empty if the Bemihimpa had not founded colonies there which draw their supplies from Imerina.

MAP OF POLITICAL GEOGRAPHY.

In the whole country extending from the River Mahavavy to the Tondolo (a small river serving as boundary, south of Mahilaka on the sea coast) there is no political unity, no centre. With regard to the late Hova government, the independence of the people has been quite complete, even since the distant epoch when (about 1850) the ephemeral royal residences of Manerina and Ambohitsamianandro were evacuated. The Sakalava kings, like those of Menabe and Boina, belonging to the Maroserangha race, are the descendants of Lāhifotsy (i.e. “The White,” probably an Arab), who led the invasion of the 17th century. But Boina and Menabe each had a single sovereign. Ambongo and Mahilaka are covered with small kingdoms, whose exact number could only be known after careful investigation. Between the Rivers Tondolo and Ranobe seventeen, of unequal importance, it is true, have been counted, the weaker living with their stronger neighbour in a relation of vassalage. The principle appears to be that every prince of the Maroserangha family establishes himself as king, somewhere or other, from the time he becomes of age to do it. It is the country of appanages. One finds kings associated in sovereignty, for example, Tsonéra and Korōngo, to the north of the Milanja territory. It is one of the most perplexing medleys conceivable. Nevertheless, the provinces, and sometimes the subdivisions of the provinces, remain quite intact.

AMBONGO (i.e. mountain or mountains) extends in a westerly and easterly direction from the peak of Ambohitsosy to the River Mahavavy, and in a northerly and southerly direction from the sea to the plateau of Manerina. It is subdivided into three parts, of which each has its principal king. These three parts (named after kings) are:

(i) Marambitsy. This division is situated on the borders of the sea. At the village of Sakdanaître resides Queen Barèravony, who has to-day her son Tsimamétro as colleague. At the villages of Baly, Soalala, and Stampiky† reside lesser potentates. The southern boundary of Marambitso's country (or simply Marambitsy) distinctly coincides with that of the Cretaceous territory.

(ii) Mania. The territory of Mania occupies the great Jurassic limestone plateaux on the left bank of the River Mahavavy. These plateaux have, as described before, a characteristic aspect. The chief town of Mania is the village of Namoroka, the residence of Béampèla, an old woman who is mother or grandmother of King Fizo of Andrano-mavo.

* The following sovereigns are named in M. Gantin's Carte Politique from north southwards:—Kings: Marambitso, Mania, Nôdo, Tsima'ra'joary, Vazo, Jabolô, Sisatray; Queens: Fatôma, and Biblema. —R.B. (Ed.)
† Spelled on map Stampity. —R.B. (Ed.)
(iii) *Tsimiârojoâry.* This division occupies (in large part) the middle portion of the basin of the River Sambao, that is to say, the great, feebly undulating, plains of the outlying crystalline rocks (shown on the geological map). The petty queen Navêlo, of the village of Mahigidro, is under Tsitohâra, King of Tsitanândro, to whom also Bêko-dôka is subject. The villages of Ampôza and Maniovanâla change masters as fancy dictates, now attaching themselves to Mania, now to Tsimiarojoa, and now even to Mahilaka.

**Milanja** is the small province situated at the extreme point of the island to the west of Mojanga (also immediately west of Ambongo). It is a country of maritime alluvium, consisting of great plains of sand or clay covered with wood. The rivers are almost entirely deprived of current, and are encumbered with herbs. The whole region is wooded. The two kingdoms of Ambary (capital Soanângha) and of Korongo-Tsonera (capital Bokarano) are almost always at war; and the small Kings Vorongha and Nadâha are without importance.

**Marolahy** occupies the triangle comprised between the Rivers Mâninjôza and Sambao in the neighbourhood of their common embouchure. The country is lacustrine and marshy, and cut by narrow rivers, in which the influence of the tide causes the waters to flow back, and transforms streams, at certain hours of the day, into impassable ditches. Tânandava is the residence of Marozy and his sister.

**Maraha,** as its name indicates, is a small, but rocky, province. Its sandstone beds end in cliffs on the coast. Besalampy is the residence of Queen Kêly; Ampôza, of Queen Navelo; and Bêrêvo, of King Tsimilita. These have besides numerous colleagues.

In short, in Ambongo, Milanja, Marolahy, and Maraha, there is a curious coincidence between the political and the geological limits. When the political map is superimposed on the geological, the divisions of the one correspond pretty closely with those of the other. The fact has in it nothing extraordinary; it is the same in many of our French provinces, constituting, as they do, natural regions having their own individuality. Every man instinctively feels the changes which a variation in the constitution of the soil introduces into the landscape. This is no longer the case, however, in regard to Mahilaka. Mahilaka is the sphere of mercantile influence of Maintirano. Maintirano is, putting aside Mojanga, by far the most important port of the west coast. It has had all the more importance, as, until the last few years, it remained in the exclusive power of the Sakalava and Arabs. It was therefore the great emporium of African slaves. The most important kings, viz. Bibiasa of Anjia; Fatôma,* of Bêlalîtsa; Tsisatray,* (also ?) of Anjia; and Rêtê, who, in his lifetime, dwelt near the coast, at the mouths of the Manghomba, all have their residences round about Maintirano in a semicircle of comparatively small radius. All of these, and even Vâzo, the furthest removed northwards from Maintirano, had at this port and its neighbourhood their own undivided property. This property was first a forest on the banks of the Manghomba, where all the family tombs existed, this being the only place in the whole of Mahilaka where kings are buried. Afterwards it was Maintirano itself, which belonged to none of the kings in particular, which became the burying-place. The result of this joint-possession was disastrous. A single chief, Alidy, managed to render himself master of Maintirano, and so remained veritable sovereign of the whole country up to the time of the French occupation. King Tsisatray deserves special mention. He was the king of the majority of the Bemihimpa, and he had for

* These are given as Queens on the map. — R.B. (Ed.)
† On map spelled Sisatray.—R.B. (Ed.)
his immediate predecessor a wife of this race. The Bemihimpia maintained their cohesion in grouping themselves round about a single king. They obeyed him, moreover, only moderately, and those most distant, viz. those of Makarainga and Makambahy (i.e. outside the limits of Mahilaka properly speaking) no longer obeyed him at all.

These political divisions already belong to the past. They have created certain habits and commercial routes. Bekodoka, for instance, much nearer Nosy Vôalâvo than Soalala, obtains its supplies from Soalala, because Ambongo, of which it forms part, has always maintained hostile relations with Milanja, Marolahy, and Maraha.

This minute partition of the country must be in part attributed to the absence of any navigable river. The Mahavavy, the greatest of all, is barred by rapids below Stampiky. The Sambao and the Manambaho are encumbered with rapids from their embouchure upwards. It is always dykes of volcanic rock which form impassable barriers. From this one is led to look upon the fact that the Maninjoza is navigable at high tide for about 30 kilometres, i.e. as far as Tsavôngo, as a piece of good fortune.

Trade is in the hands of the Comoro people and the Zanzibaris. Soalala, and especially Maintirano, the two most important ports, the one in Ambongo, the other in Mahilaka, have a character distinctly mussulman. The dominant language at these places is Swahili.

The small port of Vilamâtsa, whose commercial importance is nearly nil, owes its existence to its being situated precisely on the boundary of two regions of contrary winds: to the north-east of Cape St. André, i.e. of Vilamâtsa, the prevailing winds come from the north; to the south, on the contrary, they come from the south. Therefore the boats which wish to round this cape are often obliged to wait several days for favourable weather at Vilamâtsa.

*Translated from the French of M. Gautier,*

*Directeur de l'Enseignement à Madagascar,*

*By R. Baron (Ed.)*
A TANALA VILLAGE.

[This paper describes a Tanala village situated 30 or 40 miles to the west of Fàrafangàna in South-East Madagascar, and must be understood to refer to the period before the late war.]

On a sultry afternoon in September, 1895, after travelling for some hours over uninhabited country, I came suddenly upon a group of native warriors squatting in the shade of an immense tree. At my approach they rose to their feet, and their leader, a fine-looking athletic man, came forward to meet me. After mutual salutations and explanations, the soldiers arranged themselves in Indian file, and marched on ahead, escorting me to their fortress village. I had asked leave to enter the Vatóbé kingdom, and not only had King Tsimivòny sent me a guide, but had also despatched his lieutenant with fifty or sixty soldiers to bring me to his capital.

We marched along for some time, and then reached the foot of the hill upon which the fortress village is built. Truly nature has provided all or almost all means of protection at this place. After crossing a river, a narrow and difficult path winds along the hill-side in a most provoking manner; in some places it is dug out of the ground, and passes through a tortuous defile hedged about with thick impenetrable brushwood. One can plainly see that a few determined soldiers could hold the fort against hundreds of assailants. We climbed up higher and higher, and after creeping through a narrow, strongly guarded, gateway, at last emerged on the plateau on which the village stands. The view from the platform was magnificent. Wood and vale, mountain and stream, all combined to entrance the eye, and charm the senses. Alas! the beauty without did not at all correspond with the squalor and dirt and general uncleanness of the houses and many of their inmates.

How these people crowded around me, and especially the young! How they devoured me with their eyes! Report said that only one white person had ever been to this fortress before, and as that visit had taken place twenty years or more ago, a generation had grown up who had never seen a European. I was hungry, tired, and longed for food and rest. The first I got after patiently waiting for some time; the second was not vouchsafed to me till I had left Tsimivony's country. Supper being over, my hut was crowded to overflowing with warriors, who, heavily armed, asked my reasons for visiting them, and then put a multitude of questions to me concerning foreigners and their habits and customs. Then an all-night concert was arranged in my honour. My hut being in the centre of the village courtyard, the youths and maidens assembled at the end of the village and promenaded down the path until they reached the court; then they divided into two parts, each part going along one side of my hut, the while singing and clapping their hands with all their might. Arriving at the other end of the village, they retraced their steps, and thus for hours they did honour to the foreigner! Pleasant at first, the constant singing and clapping of hands and thudding of feet became intolerable, and yet I had perforce to submit
to it until the early hours of the morning, when, thoroughly worn out, the singers betook themselves to their dwellings.

Next morning I was escorted to another village about two hours' journey away, where Tsimivony resided, and which he made his capital. This latter place is beautiful for situation. Built on the slope of a gentle eminence, at the foot of which winds a river, and surrounded by rice-fields and gently rolling meadows, whilst, in the distance, noble hills, clothed with forest, rise into the clouds, the whole forms a picture sufficient to gladden the eye of any lover of nature.

A house was given me in the centre of the village, and during my short stay I used my eyes as much as I could, in order to get a true impression of the place, its inhabitants and their ways.

The houses of the Tanala are very similar to those of the east coast tribes. Where the Traveller's Tree is abundant, the houses are almost entirely built of it. Doors, windows, floor, walls, thatch, all come from this most useful tree. The construction of such a house is as follows: A wooden frame in oblong form, with massive posts at each end, upon which rests the ridge, forms the base of operations. The walls are filled in with a kind of lattice formed of the midrib of the leaves of the Traveller's Tree. The floor is raised above the ground, and is simply the bark of the same tree beaten flat and laid on rough timbers. The leaf of the same serves for thatch. The two doors are made of lattice similar to the walls, and kept in place by long narrow poles, swung inside the house. When newly finished, the houses look very neat and pretty, but they soon decay and constantly require mending, so as to keep them anything like water-tight. The houses in some of the villages have the walls filled in with bamboos, and are simply interlaced, forming a very neat and pleasant pattern.

Generally speaking, the houses are destitute of furniture. In the village I am describing, the only item of civilized furniture was a red bent-wood cane chair, which I had sent as a present to King Tsimivony, and which he lent on great occasions to visitors whom he delighted to honour.

Enter a house by the principal door, and you find to your left a huge structure consisting of rows of shelves reaching up to the roof. The hearth is under the lowest shelf, and the various tiers are for drying and storing purposes. Clean mats cover the floor, and also conceal filth and dust, and harbour divers small tormenting insects. No bed, no chairs, no tables, nothing in the way of furniture except two or three mat stools on which to rest one's self. Some cooking pots, two or three dishes, two large wooden ladles, and a number of leaves used as spoons, constitute the greater part of the furniture. But whatever else is wanting, there is always a flint-lock gun, and some spears kept ready for use, and often carefully arranged against the wall. The gun is a curiosity. The butt end is closely studded with brass-headed nails, which, when kept clean and bright, make it look quite a handsome weapon to handle. The barrel is also often kept polished by constant friction and handling. A Tanala will not go far from his door without his gun, and he cherishes it more than he does either wife or children. He generally also carries a small knife slung over his shoulder. One veteran was very proud of his knife,
A TANALA VILLAGE.

for it was welded to a brass beer-tap handle! After much persuasion, I secured this interesting specimen for sixpence!

However poorly a Tanala may be clad, you will notice a curious looking leather or sheep-skin pouch slung round his waist. This pouch contains a piece of iron and flint and tinder for striking fire with. A native will not mind getting wet to the skin on his journeys, but he will do his best to keep his iron and flint and tinder always dry, so that he can make a fire wherever he may happen to be. And is not fire one of the first essentials even for the simple cooking of a savage?

Many houses are much smaller than others, and are better joined, and raised about five feet above ground. On closer inspection these resolve themselves into rice granaries, being thus raised from the ground to preserve the rice from that universal pest, the rat. Smooth wooden collars are closely fitted around the posts just beneath these rice-houses, in order to prevent our rodent friends from climbing up and devouring the precious grain.

Stroll into the court of the village. In the very centre is a tiny erection just like a house in miniature, but without walls. In it are two rough figures of a man and woman about two feet high, and, tell it not in Gath, clothed in rags! They are the tutelar deities of the tribe, though very little respect or worship seem to be given to them. They are supposed to give prosperity and happiness to the people, who, however, do not reward them as they ought by even decently clothing them.

Large cattle-pens are to be found up and down the village. The tribe is notorious for cattle-lifting, and could these dumb animals which crowd the pens speak, what could they not relate concerning nocturnal expeditions to other tribes, and the victorious return of the people driving numbers of these cattle as booty to their wives and children.

A cleverly constructed stockade runs round the whole village, with a closely guarded gateway at each end. Just outside these entrances one's attention is drawn to a pole stuck in the ground, with a cross-beam and a stone slung from one end. This indicates that no goods can be carried in and out of the village slung from both ends of the carrying-pole. Such must be re-arranged, or carried in and out after being unpacked. A most troublesome arrangement, as I have found to my cost when travelling. Most burdens have to be put on the ground, unpacked, and carried in or out singly by hand.

In wet weather it is difficult and disagreeable to move about the village. There are no sanitary arrangements, and cow-dung fills almost the entire extent of the roads and paths. Puddles, mire, and filth are found everywhere.

So much for the general aspect of the capital of Tsimivony's kingdom, but what about the inhabitants? The men are generally well-made, nay, even athletic in build, and their well-knit frames and bold easy movements give evidence of much force of character. They are generally taller and stronger in build than the Hova, and long years of a free and independent life (for they were never under Hova rule) have given to their features a decided
stamp of individuality and freedom. When on the march, they are clad simply in a loin-cloth, with a *lamba* thrown around them. The latter garment is dispensed with when they are at work in the ricegrounds, or are engaged in repairing their houses or attending to their cattle.

Their hair is arranged by means of evil-smelling fat into six or eight balls about the size of a small orange. These balls, when hard, are of a greyish tint and as solid as wood, indeed resounding quite as much. When their hair is freshly arranged, one may see the **beaux** of the village strutting about as proud as peacocks.

The women, also of larger frame than the ordinary Hova, do not seem to have any clothing specially characteristic, but, in most cases, a waist-cloth, a cotton or leather belt just covering the breasts, and a *lamba*, complete their attire. Those suckling infants have a small mat on their back to protect the children whilst being carried.

But is not the glory of the Malagasy women in their hair? Most of the Tanala women have their hair fearfully and wonderfully got up. The hair-dressing of a Tanala **belle** is a veritable work of art. Her hair is arranged in large knobs made to stand up and around the head. At the back of her head is a piece of wood four inches in length by two inches in breadth, completely studded with brass-headed nails, and depending from her hair, This is considered a most powerful attraction and addition to a young Tanala lady's other charms, and, judging by the attentions she receives from the stronger sex, by no means can her beauties be better displayed. Others have rings on their fingers and toes, besides a heavy display of brass or silver bracelets and anklets. One young lady spread out her fingers and toes in undisguised pride for me to admire. She had twenty brass rings on her, one on each finger, and one on each toe. Bead necklets are also worn by many girls and women. Many also of both sexes wear a round white shell ornament called *felana* in the middle of the forehead, or slung from the shoulder. As almost everywhere among savages, prowess on the part of the male, and charms on the part of the female, are the distinguishing features. Very little notice is taken of any other qualities, either moral or mental or bodily.

The Tanala rule of life is a direct reversal of the golden rule. "Do to others as you would not have them do to you" seems to be the summary of their moral code. Hence their cattle-lifting and their slave-raiding.

Their slaves are fairly well treated so long as they do not attempt to escape. The women slaves become wives or concubines or domestic servants. The men slaves work for their masters, and pine for their own country and freedom. The children slaves are kindly treated as a whole, and often refuse to leave their masters, even though an opportunity for doing so may come to them, as they grow up accustomed to their surroundings, and have no ambition for anything else. Men and women caught in their raids, and offering resistance, are put to death, and no one thinks any more of the matter.

A word as to these raids. Should the king and his officers command a raid to be made on a neighbouring tribe, the tocsin is sounded a+
night-fall, and all males able to fight assemble in the court, and, heavily armed, and provided with long ropes, they march out silently, and perhaps in the early hours of the morning arrive at a village of the enemy. They precipitate themselves upon the poor inhabitants, thus taken unawares, kill all who offer any resistance, and the rest they bind with their cords and take as captives.

The Tanala do not seem to have any very distinct religious ideas. Many avow a belief in God and a future life, but so shadowy is it, that it does not in at least affect their life and morals. "The honour of the tribe" is their great principle, and, secondly, their own happiness in killing, robbing, eating, and drinking to their hearts' content.

Polygamy is common and openly avowed by many. Some have as many as six wives, but as each wife must have a separate house for herself and her children, it is often easier for a man to have one wife and one house, and in this way he avoids the constant troubles and bickerings naturally arising from a polygamous state. Said a Tanala once to me: "My wives are always quarrelling over me; I have no peace with them; would that I were like you foreigners and possessed one wife only!"

Divorce is very common. As soon as a man gets tired of his wife, unless she has relatives powerful enough and willing to espouse her cause, he foments a quarrel, and sends her home to her own people. There are cases, however, where real affection seems to reign between husband and wife, and they and their children dwell together in comparative peace and content.

The children seem happy and satisfied, and as food is plentiful, and raiment not such a necessity as in some countries, they grow up strong and healthy lads and lasses. The boys follow the pursuits of their fathers. Armed with miniature spears or toy guns, they early learn to fight, and a contest between boys, who engage in it with all the ardour possible, is of common occurrence. At other times they plunge fearlessly into the river, splashing about so as to frighten away any crocodiles that may be lurking about. They have immense fun in performing evolutions in the water. They also keep and train birds in cages, engage in foot-races, heel-kicking, kite-flying, and the like. The girls play at pounding rice, nursing imaginary babies, cooking mud meals, and, in various ways, shadow forth their future life.

All boys and girls, men and women, are very fond of night-dancing and singing. Hour after hour, on a moonlight night, will these entertainments continue, and, accompanied by the incessant tom-tom, make night hideous and weird to a degree. Drinking and immorality generally accompany such scenes, and it is impossible for a quick-eyed foreigner to look on without being pained and shocked by the looseness of morals which abounds at such seasons.

This tribe of Tanala follow the manner of burial common among the south-east coast peoples. A large open shed is erected just within the forest, or in some other secluded place, and there the dead are laid on biers, the men on one side, and the women and children on the other. The chiefs are buried in coffins made from disused canoes. A canoe is cut in twain, the corpse is placed in one half, and the other is placed on the top as a cover, and the interstices are carefully closed up.
A TANALA VILLAGE.

with clay or cow-dung. It is tabooed to anyone not belonging to the tribe to approach these burial-places, as also is it for anyone whomsoever to collect wood or to work near, except in repairing the burial-shed. As almost everywhere in the island, funerals are the occasions of much drinking and wickedness. At times the whole country-side will give itself up for days and nights to drink and vice in honour of a departed chief or relative. As long as the rum lasts do these orgies continue, unless a raid is threatened by another tribe, when, of course, all are called upon to protect themselves and their wives and children from the marauders.

Very few can read or write. In this capital of Tsimivony's kingdom only two are able to read and write, and they have learnt these arts at Fianarantsoba and Antananarivo, where they were taken as captives in their youth by Hova expeditions. Afterwards released, and becoming Christians, they repaired home, and succeeded in raising two small buildings here and at a village near by, where they teach a few children during the week, and on Sundays hold a short simple gospel service for the few adults who care to attend. They wish for an able teacher to be sent to them, but hitherto no one capable has been found. As I could not get a teacher willing to go to them, I tried another plan. I got some of the boys and girls to come down to Farafangana for instruction. But owing to their wild and restless habits, and their inability to settle down to instruction, very little progress has been made in this direction. Two can just spell through the reading primer; one can, with difficulty, read a verse in the New Testament, and that is all.

But it is now the day of small things. With increased efforts, there is no need to suppose that, in time, these Tanala may not be amenable to the Gospel and its humanising influences. It is with regret that I have had to leave these people, having been obliged to retire from work on the south-east coast, for from the King of Vatobe down to his lowliest subject, I have received nothing but kindness and courtesy and protection. Scarce a week passed without someone or other of them calling to see me at my house at Farafangana, and chatting pleasantly with me on topics common to all. May these Tanala soon receive the Gospel, and enter into true, civilized, and godly ways.

C. COLLINS.
THE CRYSTALLINE SCHISTS AND ASSOCIATED ROCKS OF MADAGASCAR.

GENERAL REMARKS.

THOUGH several papers have been published, especially within the last few years, dealing with the sedimentary rocks of Madagascar and their fossiliferous contents, nothing, so far as I know, has ever hitherto appeared on the crystalline or metamorphic schists of the island, excepting the small contribution made by myself which formed part of a paper published, first of all, in the ANNUAL as Notes on the Geology of the Interior of Madagascar, and afterwards, in an extended and amended form, in the Quarterly Journal of the Geological Society as Notes on the Geology of Madagascar. As, in a subject of this nature, imperfections of various kinds necessarily accompany the first attempts at description, and as added experience brings with it added knowledge, I have thought that it might be worth while to reproduce the substance of these contributions as regards the crystalline schists and associated rocks of the island, making the necessary omissions and corrections, and bringing up to date the facts of our present knowledge. On some future occasion I shall probably also attempt to describe the volcanic phenomena of the island.

Of all geological phenomena, those relating to the crystalline schists are confessedly the most difficult to deal with, presenting, as they often do, problems of the most intricate and formidable character as regards their age, genesis, chronological sequence, geotectonic relations, and the metamorphism which they have undergone. Even in countries where there are many experienced and capable workers in the field, the crystalline schists and their associated rocks are still, to a large extent, a sealed book. How much more must this be the case in regard to these constituents of the earth's crust in Madagascar, where, as yet, no governmental survey has been undertaken, and where extremely few are at all interested in the subject. And yet these cold silent rocks, which occupy such a prominent feature in this large island, are profoundly interesting, for some geologists would even go so far as to maintain that they form the original foundation stones of this part of the earth's crust, being surviving relics of the first solid pavement of the globe. Though it cannot be said with absolute certainty that these rocks are Archæan, i.e. Pre-Cambrian, such evidence as is afforded points to this conclusion. Unfortunately, no traces have yet been found, and perhaps never will be found, of the existence of any Palæozoic rocks in the island, the oldest yet discovered belonging to the Jurassic, or possibly Triassic, system, which overlie the schists and their associated rocks unconformably, so that we are left without the most important clue of all to their antiquity. All that can be said is that the crystalline schists and their associates are pre-Jurassic; but the evidence to be derived from the apparently entire absence of fossils, the lithological character of the rocks, the immense and complicated disturbances and alterations to which they have been subjected, and the enormous extent of country which they cover, though not decisive, point, with a considerable amount of probability, to the conclusion that they belong to the oldest series of formations on the geological record, viz. the Archæan or Pre-Cambrian. Anyone who studies these crystalline, or, as they are not infrequently called, metamorphic schists of Madagascar, and then reads descriptions of similar rocks in Archæan areas in other parts of the world, whether in Canada, India, China, New Zealand, Scotland, or elsewhere, must be struck with the numerous resemblances presented, not only between the
THE CRYSTALLINE SCHISTS.

character of the rocks themselves, but also between the general geological features and phenomena of these distant regions and those he is acquainted with in this country. Were the climate and the vegetation the same, a geological walk over some parts of the north-west of Scotland, for instance, would be but a repetition of a similar walk in many parts of the interior of Madagascar.

The Archæan area is not entirely occupied by schists; there are many, and occasionally somewhat extensive, tracts of territory which consist of massive, i.e., non-schistose rocks; it is these to which I refer when I speak of "associated rocks." But besides these again there are of course numerous superficial alluvial formations, occasionally of considerable dimensions, filling the valleys, or forming level fringes along the river-sides, as also, in some places, volcanic outflows; but no description of these will find a place in the present paper.

The region occupied by the crystalline schists and their associated members is now better known than it was a few years ago. On the east it reaches as far as the coast, though near the sea the rocks are largely hidden by superficial accumulations of sand and, in some places, by sheets of lava, mostly dolerite, and, to the north of Mahéla, by a strip of recently discovered Cretaceous strata.* To the west, at a point about halfway between the north and south ends of the island, the region bulges out and reaches, at its furthest limit, to about 45° 25' E. Long. In the north it extends to the River Lokla (about 12° 53' S. Lat.), and in the south to at least 25° S. Lat., if not actually as far as the southern coast. That is to say, the region attains, in a northerly and southerly direction, a length of about 850 miles, and, in an easterly and westerly direction, at its widest part, a breadth of about 240. The total area of the region occupies probably not less than 150,000 square miles, thus monopolising about two-thirds of the entire island, and that the eastern part of it. Outliers, more or less extensive, of this great mass, appear in various places in the western part of the island, where they have become exposed by removal of the superincumbent sedimentary rocks, for instance, on the borders of the province of Ambôngo, where, as M. Gautier has recently shown, there is an outcrop occupying about 1400 square miles.

The great dorsal ridge which forms the chief watershed of the island runs from north to south straight through this Archæan region, and more or less parallel with the east coast, at an average distance from it of probably 70 or 80 miles. For a great part of its course this ridge has, on its eastern side, a steep declivity, mostly covered with forest, of about 1500 feet. Future investigation may not improbably show that, at the foot of this slope, there exists a gigantic fault. An extensive, level, and longitudinal plain or valley, known in its northern part as Antsihanaka, and in its southern as Ankay, lying immediately to the east of that part of the ridge which bounds Imèrina, forms the bed of a very long ancient lake, of which Lake Alaotra is the surviving relic. This ancient lake, it is evident, possessed, especially at its lower end, numerous ramifications, occasionally of a serpentine character. In one of these ramifications the village of Ampasimpotsy (fásina=fāsika, sand; fāsya, white) is situated. This accounts for the white sand at this place. The lake, especially a

* This is a very interesting discovery. A few years ago I found a few fossils, in a bad state of preservation, however, just above water-mark, under the old fort at Mahānōro; also some shelly limestone at, and also a few miles both north and south of, the village of Antsaramihànanana, twelve or fourteen miles north of Vatômândry. At the village the shelly limestone occurs on the side of a lagoon. Unfortunately the fossils I found were lost; but it is not at all unlikely that, in view of the recent discovery, they were also Cretaceous. If so, the strip will have to be extended to a length of about 130 miles along the east coast. See ANNUAL No. XX., p. 417.
its lower end, was also studded with islands, some being of considerable height, and probably at that time all wooded. The lacustrine deposits are now cut up into numerous gullies and valleys.*

On the western side of the ridge the slope is, with interruptions of course, very gradual all the way to the western edge of the Archæan plateau, where, in many places, at any rate, there is again a sudden descent, this time down into the sedimentary region of the island.

In one of my former papers I stated that the dominant strike of the foliation of the crystalline rocks was about 15° to the east of north. Behind this statement, however, I should now feel inclined to put a query, for whilst undoubtedly this is the common trend of the rocks in many parts of the island, the exceptions are so numerous that they may possibly prove the rule. For instance, a large tract of territory in the central part of the island, including the greater part of the provinces of Betsileo, Imerina, and Antsihanaka, as far at least as the north end of Lake Alaotra, is composed of rocks having the strike of their foliation running in a generally north-west and south-east direction; whilst the strike of the rocks between the cast coast and the Capital is directed, at different places, to almost all points of the compass, though generally approximately north-east and south-west, and north-west and south-east. The rocks dip of course at all angles, but very generally at an angle of from say 30° to 45°. Sometimes the dip is vertical, but very rarely indeed horizontal.

It is needless to say that the rocks have been subjected to vast and complicated disturbances. They have been dislocated, tilted on end, pushed asunder horizontally, vertically, obliquely; they have been folded, crumpled, crushed; they have been invaded and eaten through by great hot masses of molten plutonic or volcanic material; and they have been cracked and fissured in all directions, the rents being filled, now with liquid lava surging up from below, now with mineral matter brought in solution from the enclosing rock. Great chemical and mineralogical changes have also taken place in them, the augite being frequently transformed into hornblende, the felspars into mica, kaolin, or saussurite, the mica into chlorite, etc. In almost every microscopic slide, no matter from what part of the Archæan area the slice of material may have been taken, there are evidences more or less of the great mechanical stresses and deformations and the chemical changes which the rocks have undergone. These are shown in the variation in the optical orientation of the crystals, owing to internal displacement of their molecules, and even in complete crushing of the rock constituents, producing sometimes a minute mosaic, and also in the transformation of minerals into others, as alluded to above.

The greater part of the changes here alluded to have taken place in the rocks of course while still far below the surface, for there can be no possible question that this great Archæan region was, as the existence of plutonic bosses and dykes and the numerous quartz-veins now visible at the surface prove, in long by-gone ages, buried beneath a vast pile of rock masses, which, in the long process of time, have, first of all, been gradually weathered and disintegrated, as each successive portion was brought within the range of aerial agency, and then, in the same slow manner, been lifted off and transported by wind and water and deposited in other places. The great sedimentary accumulations in the western part of the island, for instance, viz. the Jurassic and Cretaceous, must have been derived from the great elevated mass to the east, which was the Madagascar of that day.

But what was the nature of these overlying rocks? Were they in their whole extent merely a continuation of the Archæan series, or did

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* For further particulars respecting this ancient lake, see ANNUAL, Nos. IX., p. 75, and XI., p. 264.
they belong, in part at least, to one or more of the Primary sedimentaries, the Cambrian, Silurian, etc. This, at present, it is impossible to say. It may be, however, that future exploration may find still surviving representatives of one or other of these systems, the discovery of which would be of very great interest.

In descriptions of the central provinces of Madagascar we occasionally see it stated that there exist extensive deposits of “red clay,” and, in one instance at least, it has been called “sedimentary clay.” It is needless to say, however, that this “clay” or soil is nothing more nor less than decayed rock, whilst its redness is due to the oxidized iron which it contains. This decay or weathering of the rock occasionally reaches to a great depth. On one occasion, in a steep ravine to the north of Andringitra mountain, I found by aneroid that the rock had rotted to a depth of 180 feet. Various stages of this weathering may very frequently be traced in exposed natural or artificial sections. It is owing to this decomposed condition of the rock that the heavy rains in the wet season scoop out those deep and unsightly gullies in the hill-sides, which, by fencing in the lower end, are, in some parts of the country, occasionally used as cattle-pens. It is this weathering, moreover, which explains the occurrence of those large “boulders” which are often to be met with on the tops of hills and other places, and also of those which may frequently be seen embedded in exposed banks and sections, the soil in which they were formerly embedded having been removed by denudation in the former case, and, in the latter, remaining still in situ; so that these “boulders” are merely the remaining kernels of rock which, either from their hardness or from local causes, have hitherto resisted decomposition. It may not be unworthy of notice that, in one locality at least (a little north of the village of Mârotandrâno, about 210 miles a little east of north of the Capital), the rock has weathered in some places into spheroidal blocks of a foot or more in diameter.

Vâvavâto, a mountain about 60 miles south-west of Antananarivo, and very striking in its rugged grandeur, may be mentioned here as presenting a very extensive series of vertical joints. It is to the existence of these joints that the remarkably jagged and serrated outline of the crest of the mountain is due, large blocks of the exposed and more or less weathered rock falling out from between the joints, thus leaving irregular and frequent gaps in their place.

A question, easy to ask, but difficult to answer, in regard to these Archaean rocks is this: at what period were they raised above the sea, or rather, since when have they been dry land, for it is not absolutely certain that they have ever been beneath the sea, though it is extremely probable that they have been. If they have never been, the question is easily answered, for, in that case, they undoubtedly form part of the original crust of the globe. But supposing they were once beneath the sea, when did they rise above it and become dry land? The remarkable differentiation which has taken place between the fauna and flora of the eastern and those of the western lowlands of the island is in itself a sufficient proof of the extreme antiquity of the Archaean plateau, but there is probably ample time within the Tertiary era to account for this differentiation, whereas the Archaean plateau must have come into existence prior to the time when the Jurassic strata were laid down on its western foot. More than this it is impossible at present to say.

But it is time now to say something in regard to the rocks themselves, their different kinds, their mutual relations, and their mineralogical composition. First of all I shall speak of the schists, and afterwards of the massive rocks, leaving the consideration of the volcanic rocks to a future occasion.
I. THE GNEISSES.—Gneiss comes first in order because it is first in importance, forming, as it does, by far the most prominent member of the Archaean region. Great and often monotonous stretches of territory are occupied almost exclusively by this gneiss. It presents, as might be expected, great variety in colour, texture, and mineral composition. By far the greater portion of it is of a greyish or greyish blue colour, but in the mountains of Antaramanana (40 miles west-north-west of the Capital) and Vavavato (see p. 359), and indeed many other places, it is reddish or pinkish, in consequence of the abundant flesh-coloured orthoclase felspar contained in it. As a general rule, it is of medium grain, but coarse and fine-grained varieties are by no means uncommon. Occasionally the gneiss is distinctly porphyritic, as, for instance, in the neighbourhood of the village of Ambatolampy (25 miles south of Antananarivo). All degrees of foliation occur in the rock, from that of the most distinctly banded varieties to those in which the foliation is scarcely discernible. The banded gneisses vary from those with coarse to those with fine folia, and the faintly foliated kinds not infrequently pass by insensible gradations into massive rocks, i.e. granite, thus possessing no foliation whatsoever; hence it is often quite impossible to say where the granite begins and the gneiss ends. The rock on which the Capital is built, it may be mentioned, presents only slight traces of foliation, and may therefore be called granitic gneiss. This rock, with slight variations in character, is abundantly developed in the central parts of the island.

Speaking of the gneisses of the Archaean area generally, a few facts which I have observed may be mentioned before descending into detail in regard to their mineralogical composition. The first is that they are, almost without exception, hornblendic; and the second is that, almost without exception also, they are entirely devoid of white mica. Biotite, or black mica, is nearly always present, but of white mica, as an original constituent, the rocks, except extremely rarely, never present a trace. Minute flecks of white mica may occasionally be discovered, it is true, but these are merely secondary products developed from the felspar. The hornblende is, under the microscope, so far as I have observed, always green; in the rock mass it is black or very dark green. It is difficult to say whether, taking the gneisses in general, the hornblende or the mica is the more abundant mineral, for in some specimens the former prevails over the latter, while in others the latter prevails over the former, though, roughly speaking, they are fairly equally developed; but both, or even both together, are generally subordinate to the quartz, and the quartz, in its turn, to the felspar; for the third fact to be mentioned is that, almost always, the felspar forms the chief bulk of the rock, in fact speaking generally and roughly, about two-thirds of it. To use numbers, 6, 3, 1, may be taken as fairly representing the proportion by volume of felspar, quartz, and hornblende+mica, in the rock. A fourth peculiarity is that, far more frequently than not, the orthoclase felspar occurs in the form of microperthite. Besides the monoclinic orthoclase, however, there are almost always present oligoclase and microcline, the latter mineral being often very abundant, being in fact, in some localities, the chief mineral constituent of the rock. This mineral is generally regarded as rare in the biotite and hornblende gneisses, but in Madagascar, at any rate, it is very common.

Of the accessory minerals in the gneisses, iron-ore, chiefly in the form of minute grains of magnetite, is perhaps the most widely spread; it is, as before said, owing to the oxidation of this iron-ore that the rock, on weathering into soil, becomes red. Minute crystals of apatite and zircon are also almost universal. Sphene, often changed into leucoxene, and iron-pyrites
are also frequently met with; and garnet, in certain localities, forms an important accessory constituent. A small quantity of green augite, or hypersthene, or a few isolated crystals of rutile, are also occasionally present. Small specks of molybdenite may also now and then be detected, and sometimes needles of sillimanite. Of secondary ingredients, epidote, chlorite, hematite, calcite, zoisite, and minute flakes of white mica are to be found.

The gneisses of the Archaean region, so far as I have examined them, may be divided into the following varieties, arranged, as far as possible, in order of the abundance in which they occur: —

1. Hornblende-granitite-gneiss. Of this the rock on which Antananarivo is built may be taken as a typical specimen. It consists of felspar, quartz, hornblende, and black mica; the accessory minerals being magnetite, iron-pyrites, apatite, sphene, augite, and zircon. The felspar constitutes fully two-thirds, if not three-fourths, of the rock. It is mostly orthoclase in the form of microperthite, though microcline is sometimes abundant, oligoclase being also present, but sparse. Quartz is the next most abundant mineral, the hornblende and mica coming last.†

This variety of gneiss is of very wide occurrence. Near the village of Ambohinaorina (about 20 miles to the south-east of the Capital), and also a little to the north of the conical hill of Votovorona (55 miles south of the capital), it contains a little hypersthene.

2. Granitite-gneiss. This variety resembles the last, except that hornblende is absent, or present only in negligible quantity.

3. Hornblende-granitite. In addition to the felspar and quartz, this rock possesses hornblende, but no mica. The mountain of Vavavato is built up of a pinkish hornblende-gneiss, sphene appearing in the rock in twinned crystals. The rock at Betôrana and a few other places on the road from Antananarivo to Andôvorânto* also hornblende-gneiss. A variety with a little green augite is found about 20 miles west-north-west of Vatômändry (E. Coast).

4. Hornblende-gneiss (with two micas). In the neighbourhood of the village of Malatsy (100 miles north-west of the Capital) this form of hornblende-gneiss occurs. The rock is distinctly foliated, and contains, in addition to the biotite (black mica) and muscovite (white mica), good-sized crystals of apatite.

5. Augite-granitite-gneiss. In this rock, which is by no means common, the augite replaces the hornblende. The best example I know of exists in the neighbourhood of the villages of Kianja and Bêtsizaraina, three or four miles east of Antananarivo. It also occurs about the village of Anksitra in Vâkin' Ankârâatra.

6. Tonalite-gneiss. This form of gneiss is abundant at the west foot of Vavavato mountain, referred to before.

7. Augite-scapolite-gneiss. This variety of gneiss occurs a few miles to the north-west of Ivohilêna in N. Îmerina. Its mineral constituents are felspar and green augite (about equally abundant), and scapolite (in considerable amount). Among accessory ingredients there is zoisite. The rock is very distinctly banded in various coloured layers (black, white, green, and yellow).

* The term granitite is here used of rocks possessing only one mica, viz. black.
† For further details see ANNUAL, No. XIV, p. 245.
‡ It is a mistake to spell this name Andevoranto, as is now generally done. The word Andevorânto could not signify 'trade in slaves' at all, as it is sometimes supposed to do; the form of the word would be different if this were its meaning. Appearances are quite deceptive here. It is a Betsimisaraka, not a Hova, word. Part of it means 'sea-coast,' another part is merely the An (sometimes Am) before names of villages, but the meaning of the other part I unfortunately just now forget.
THE CRYS\TALLINE SCHISTS

(8) *Syenite-gneiss.* Found about 20 miles west-north-west of Vatomandry (E. Coast). Its constituents are orthoclase and hornblende, with a little plagioclase and black mica, but no quartz.

It need hardly be said that it is impossible to draw a hard and fast line between the above varieties of gneiss, nature knowing no such lines. Very often one kind of gneiss runs insensibly into another kind, and even in different parts of the same mass there is frequently a considerable amount of variation in mineralogical composition.

Besides the gneiss, there are of course various other schists to be found in the Archæan area, but these play a very subordinate rôle. They are the following:

II. MICA-SCHIST.—Personally I have never come across any very great development of this rock, nor have I found it in more than a very few localities. There is a large exposure of it, I am told, somewhere to the south of Antsirabê, but as to its character, I know nothing. Another large exposure, probably fifteen or more miles in diameter, exists a few miles to the west of Fort Dauphin. The largest display that I have met with is on the east coast in the province of Vôngo, to the north and south of the village of Soanierâna, and also about three miles to the north of the village of Fitadrâno. Its mica is black (biotite). The most noticeable feature of the rock is the long crystals of light-blue kyanite, with which it is often literally crowded. Sometimes also chlorite and possibly talc are very abundant; crystals of rutile are also present, occasionally showing genicular twins; and minute crystals of zircon are often included in the quartz.

Mica-schist also appears adjoining an immense granitic boss (the mountain range of Famoizankóa) in the western part of the district of Valâlafôtsy. It occurs also, though evidently in small quantity, in the hill of Ambôhijânâhây, at the western foot of the Capital, for I have gathered small specimens of it in the ravine at the north foot of the hill, though I have not seen it in situ. The specimens contain numerous bright red garnets (almandine), abundant sillimanite, and possibly also spinel (pleonaste?).

III. HORNBLende-SCHIST.—Though the exposures of hornblende-schist are not so extensive as those of mica-schist generally are, they apparently appear in more numerous localities, of which the following are a few: about five miles west of Vatomandry (E. Coast); also about 20 miles west of it, near the village of Antânandâvà; about two miles south of the village of Sahâka, on the coast opposite the Island of St. Marie, etc. Occasionally, it is found as segregation veins or patches in the gneiss.

*Actinolite-schist,* a variety of hornblende-schist, occurs near the town of Ankâvândra (W. Madagascar); four or five miles south of the village of Soanierâna in the north of Antongil Bay; about two miles west of the village of Mârozôvo, on the road from the Capital to Andôvorânto, etc. An interesting type with golden-looking ferruginous actinolite embedded in much quartz occurs near the town of Ambôhimandrôso at the north-east end of L. Alaotra.

*Tremolite-schist,* another variety of hornblende-schist, also occurs, but where I do not know. The specimen I have consists of layers of quartz and tremolite, the average thickness of the quartz layers being about 1/12 of an inch, those of the tremolite still less. The layers of tremolite are composed of whitish silky bundles of needles of the mineral, often broken, which also anastomose in all directions through the quartz. The rock is of rather striking appearance.

IV. QUARTZ-SCHIST.—Quartz-schists occur, like the above, intercalated in the gneiss in numerous places, as, for example, one or two miles south of the mountain of Ambôhimanôa (eighteen or twenty miles north-west of the Capital); at the village of Antânifôtsy (in Vâkin’ Ankaratra); Ambôngâbê (in Antsihanaka); on a hill top near the River Ikôpa (ten or twelve miles
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south-east of the Capital), etc. It is known in Imerina it by the name of vato-vary, and is used as whetstones.

V. NORTIE-SCHIST.—By far the greatest exposure of norite-schist that I have met with is in the Antsihanaka province. The width of its outcrop, i.e. in a direction perpendicular to its strike, is at least ten miles, it may be much more. Lake Alaotra rests on it. Sometimes the rock contains olivine, when it becomes olivine-norite-schist, sometimes two pyroxenes, and sometimes quartz and mica, thus giving rise to various varieties. Very frequently the rock possesses a considerable amount of secondary hornblende derived from the pyroxene. The olivine often occurs within the hypersthene, this again being fringed by an outer zone of actinolite. Green spinel is occasionally found as an accessory constituent. The rock is not always foliated, the greater part of it probably being massive; but when it is foliated, the strike of the foliation is the same as that of the gneiss in which it is intercalated, that is, north-west and south-east.

Norite-schist also occurs about half a mile east of the village of Anjanañahary, at the north-east foot of the Capital. It is composed merely of plagioclase felspar and hypersthene in about equal proportions. A rock similar in mineralogical composition is also found at the north-west foot of Ambohimanoa mountain (see p. 362), but in this case the hypersthene is in part changed into brown hornblende. Another occurrence is in the valley immediately north of the hospital at Isoâvinandriana, on the east side of the Capital. In addition to the felspar and hypersthene, the rock contains quartz and mica, and is therefore a quartz-mica-norite-schist. It possesses short thick crystals of apatite, minute zircons, and a little iron-one, as accessories. A quartz-norite-schist, with secondary hornblende, occurs on the ascent just north of the village of Mandrârahôdy, about eighteen miles north-west of the Capital. An olivine-norite-schist exists at the village of Marotandranô (see p. 359). Other localities where norite-schist appears, more or less varying in mineral character, are: about two miles west of the village of Ambôhitrandriamânitra (fifteen or sixteen miles south-east of the Capital); about a quarter of a mile east of Ambatondranikibûry (three or four miles east of the Capital); at Ankitsïka, near Mâhamânina, on the south-east coast; near the mountain of Vombôhîtra in N. Imerina; and near the village of Ambôromânitra (eight or ten miles north-north-west of Vatomandry (E. Coast), and doubtless in many other places. In a few of the instances mentioned the rock is probably without foliation, in which case it would have to be relegated to the norites.

VI. PYROXENE-GRANULITE.—Under this head are comprised a number of species of rocks varying considerably in mineral composition. The following table will show the great variation which exists, the marks representing the minerals present in the different species:

1. Plagioclase, monoclinic pyroxene, rhombic pyroxene, garnet, hornblende, quartz, scapolite, sphene
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. 

The following are the localities where the above have been found, all being villages except otherwise stated: number 1, close by Ambôhibao, about six miles north-west of the Capital; 2, Mâhatsejio, six or seven miles north of the Capital; 3, one or two miles east of Tsinjoarivo, near the edge of the forest in S.E. Imerina; 4, eight or ten miles east of Ankaitômboka in the forest of E. Antsihanaka; 5, from same locality as number 4, and probably merely another facies of it; 6, in a hollow near a stream about half a mile east of Ankèramadînîka, on the road from Antananarivo to E. Coast; 7, about 200 yards west of Ampàsimbè, between the Capital and Andovoranto; 8, between Nosibè and Andâkanà, on the road from the Capital to Mâhanoro, it is a very anomalous form of pyroxene-granulite; 9, north end of L. Alaotra; 10, Antsâhanomôby, about twenty miles north-west of Mahanoro; 11, below the precipice of Ampàamarinana in the Capital, it also contains a little black mica; 12, half-way between Anévoka and Anàlamazaotra in Alamazaotra forest, it contains, besides the other minerals, iron-pyrites.

It is difficult sometimes to separate these pyroxene-granulites from the norites, the texture of the rocks coming intermediate between the two. As a rule, they possess, as may be seen from p. 363, besides their essential minerals, quartz, scapolite, or sphene. In the trap-granulites proper there is a rhombic, and nearly always a monoclinic, pyroxene present. The felspar seems to be mostly plagioclase, though orthoclase appears to be also present sometimes.

It is a matter of indifference whether these granulites be placed among the schistose or the massive rocks, for sometimes they are schistose, sometimes they are massive.

VII. GARNET-ROCK.—As it is difficult to separate satisfactorily the granulites from the norites, so also is it difficult to divide the various garnet-rocks from the granulites. These rocks are very various in mineral composition. One variety, found at the village of Imâsinandriana, about three miles to the north-east of the Capital, consists of garnet (melanite) and plagioclase; another variety, occurring between the villages of Tsisimiso and Sâlangina (nearer the latter), on the road from Ambôhimandrâso in Antsihanaka to Fenoarivo on the east coast, consists of garnet and hornblende; another, found immediately west of the village of Isâhâtavy, about 25 miles west of Fenoarivo, is composed of garnet, magnetite, and quartz, with possibly a little hornblende; a fourth, occurring about fifteen miles south-south-east of Andrânosamônta village (N.W. Coast), is composed of garnet, green augite, and quartz; as is also another, from the south-west of Ankàratra mountain in Imerina.

VIII. EPIDOTE-SCHIST.—Found in the neighbourhood of the mica-schist near the village of Isoanierana (E. Coast) in the Vongo province. It is distinctly foliated in more or less continuous bands of quartz and epidote, and contains as accessories hornblende and leucoxene.

IX. MAGNETITE-SCHIST.—This rock appears in various places, and where it occurs, observations taken with the prismatic compass become totally unreliable. It is composed of alternate thin layers of quartz and magnetite. The largest outcrop I have met with forms a long hill immediately north of Lake Alaotra. It also forms a round hill a mile or so north (?) of the village of Fihaonana in Vonizongo. It occurs also at Anjămânga, to the west of Ambôhibëbëma (about 35 miles west of the Capital). It exists also to some extent at Ampâribë in the Capital. A variety with sillimanite occurs to the west of Ambôhimanoa mountain (see p. 362). The magnetic iron obtained by the natives in Amôronkay and East Betsileo is obtained from gneiss rich in magnetite.

X. TALC-SCHIST.—What is probably a talc-schist is said to occur somewhere near Vatomandry, but this requires confirmation.
XI. SILLIMANITE-SCHIST. This rock, which the Germans call faserkiesel, and the Hova Malagasy vátotidy, and which consists of abundant sillimanite needles embedded in quartz, occurs apparently in thin or thicker bands in quartz veins. Together with quartz and quartzite, it forms the greater part of the mountains of Ambohimantara, north of Lake Itásy (forty-five miles west of Antananarivo), and also of the hill Karaoaka, a little north of the latter mountain. It is found also about the village of Marotandrano (see p. 359). The rock also occurs in an apparently non-schistose form, which will be noticed afterwards. It generally contains accessory minerals, of which red garnet (almandine) is much the most common; sometimes the garnet seems to be more abundant than the other minerals. Often it contains minute crystals of rutile, and a blue mineral (not improbably kyanite, but difficult to determine, with specks of graphite. It is this rock which is often used by the natives for lamp-stands and for ornamental purposes.

XII. SLATE.—A considerable exposure of slate occurs to the west of Ambositra in the Betsileo province. One of the specimens from this neighbourhood shows under the microscope, among its other ingredients, minute crystals of tourmaline. Another slate, or possibly only a hardened shale, is found about five miles north of the village of Manakambahiny, north of Antongil Bay; and yet another, this time a Chiastolite-slate, occurs about two-thirds way from Måhalévona to Andrànovélona in the Anònìbè province. As this was not found in situ, but in the bed of a river, it probably comes from somewhere to the east.

MASSIVE ROCKS.

I. THE GRANITES.—Though not by any means so widely spread in the Archæan area as the schistose rocks, the massive or non-schistose rocks are by no means uncommon, and many varieties of them exist. Of these granite, in its various forms, is the most abundant.

(1) Granite (i.e. normal granite). True or normal granite, i.e. granite with two micas, does not appear to be frequent, and wherever it occurs, it is distinctly intrusive; all the other granites are what are sometimes called metamorphic, and are really part and parcel of the gneiss masses, but unfoliated, there being a gradual transition from one to the other.

The only true granites I have hitherto met with in the Archæan region are in the fez-shaped mountain of Vombohitra in N. Imerina (about 80 miles a little west of north of the Capital), the whole mountain apparently being a granitic boss; in the range of hills known as Famoizankova, which bounds Imerina to the west and runs a long distance southwards; and at Midongy (160 miles south-west of Antananarivo); as also in the hills between Itremo and Midongy. Not improbably the future will reveal the fact that normal granite occupies the whole or the greater part of the hill-range stretching from Famoizankova to Itremo or Midongy. The rock in all these places is practically the same, being reddish, and of similar mineral composition. There can be no question that a great continuous mass of this granite extends at least from Vombohitra mountain in N. Imerina to Midongy in the Sakalavà country, sometimes exposed at the surface, sometimes hidden below. Whilst white mica is present, it is less abundant than the black, both of which, however, play a subordinate rôle. Green hornblende, in larger or smaller quantity, is also present. In some portions of the mass the felspar is nearly all microcline.

The granitic boss of Vombohitra, it may be mentioned, sends out veins of graphic-granite into the surrounding rocks. The granitic boss of Famoizankova has intensely affected the rock-masses through which the molten
material has been erupted. At the eastern edge of the granite very abundant, and often large, crystals of black tourmaline have been produced. At a distance of some miles also from the edge of the granite, very numerous pebbles of schorl-rock (quartz and tourmaline) are scattered over the country, making walking, in some places, quite difficult for the bare-footed natives. These pebbles of schorl-rock, so far from the granite, may point to the existence of granite at a small depth below, which has produced a zone of schorl-rock, etc., above it. Besides the tourmaline, sillimanite is another mineral which has been abundantly produced near the granitic boss. One rock, apparently a sandstone, has been changed into quartz-sillimanite-rock. Mica-schist is also abundant near the junction; and epidote is also found.

(2) **Graphitic-granite.** I have found this variety of granite in three localities: proceeding from the mountain of Vombohitra, as just stated; at the village of Mangalaza, a few miles to the east of Ambatondrazaka (Antsianaka), in veins in very coarsely foliated gneiss, and associated with ordinary pegmatite; and at the north-west end of the mountain of Vavavato in Vakin’ Ankaratra. In only one locality have I found a true granophyre, viz., ten or twelve miles north-west of Mahanoro (E. Coast).

(3) **Granitite.** This rock possesses only one mica (black). As is the case with all the following granitites, it never seems to occur as eruptive bosses, but as part and parcel of the gneiss masses, with which it is similar in colour and mineral composition. The only difference between the two is, that the one is foliated, and the other unfoliated, though the two run into each other, so that no hard and fast division line can be drawn between them. A very large exposure of granitite (occasionally foliated, and thus passing into gneiss; also occasionally porphyritic) occurs to the north of Antongil Bay, and stretches as far as 13° S. Lat. Frequently, however, it is covered up by lava. All the microscopical slides that I have examined, whether of the granitite or the gneiss (twenty-three in number), taken from all parts of this area, show, without exception, cataclastic structure, i.e. great crushing of the constituent minerals, proving that this part of the island has been subjected to very intense mechanical pressure. Generally speaking, the rocks contain a small amount of hornblende, and very often large crystals of sphene.

Another large exposure of granitite occurs to the west of Andrànpmamàna, on the road from the Capital to Andovoranto. It is porphyritic, the felspar phenocrysts being occasionally a couple of inches in length.

Granitite corresponds in mineral composition with granitite-gneiss.

(4) **Hornblende-granitite.** This is the same as the last, but with the addition of a fair amount of hornblende. It corresponds with hornblende-granitite-gneiss, and, like it, is very widely spread.

A large outcrop of hornblende-granitite occurs in the east of Imerina. It extends from about ten miles east of the Capital to within a few miles of the forest, being about fifteen or sixteen miles in diameter (in one direction reaching from Isoâvina to near Mântasoa), and rising into numerous rounded bosses, of which Ambàtovoyry and the hill close by Ambatomanga are examples. It is distinctly porphyritic.

Some portions of the granitite mentioned above might be placed under this head.

(5) **Augite-granitite.** This form of granitite, like its counterpart augite-granitite-gneiss, is rare.

(6) **Aplitite.** This rock, a mixture of felspar and quartz merely, occurs fifteen or twenty miles to the south of Vohimârina (N.E. Coast), and, like the granitites of that region, shows cataclastic structure. It occurs also a few miles north of Vohimarina, and in various other localities.

II. QUARTZ-PORPHYRY.—The only locality where I have found quartz-porphyry is in a hill two or three miles from the sea to the north of
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Vohimarina (about half-way between the villages of Ambødimagdo and Mānambâto, or about S. Lat. 13° 17').

III. FELSpar-Porphyry.—There is a considerable amount of this rock in the Iharana province (N. E. Coast) not far from the sea. It appears in various places from 13° to say 13° 40' S. Lat. How far inland it reaches I cannot say. It is probably a devitrified lava. In one hill it accompanies quartz-porphyry. Sometimes the rock is spherulitic, at other times it contains garnets.

The rock often occurs in the form of breccia, which occupies the upper part of the hills in this neighbourhood. It shows bedding and flow-structure. Occasionally pseudomorphs of chalcedony after the felspar crystals are to be seen. A hill immediately to the south of the town of Ambðanâio (or perhaps Amboaniho) consists of felspar-porphyry-breccia in the upper part, followed below by ordinary felspar-porphyry, both of which are underlain by basalt. Both the felspar-porphyry and the felspar-porphyry-breccia are generally of a purplish colour.

Another locality where felspar-porphyry occurs is six to eight miles north-north-west of Vatomandry (E. Coast), where it crops out from below the sand and pebbles of an old sea-terrace.*

IV. FelsITE.—Felsite occurs in association with the quartz-porphyries and the felspar-porphries near the sea between the 13th and 14th degrees of S. Lat. It has the same purplish tinge as they. It is common about six miles north of Isoavinandriana (in Lat. 14° 5'), where it is frequently covered up by lava (basalt or dolerite). A spherulitic felsite appears about eleven miles to the north-west of Mahanoro (E. Coast). I know of no other localities where felsite is found.

V. THE SYENITES.—The syenites, i.e. rocks of granitic texture consisting essentially of orthoclase felspar and a ferro-magnesian mineral, do not appear, so far as our present knowledge extends, to be at all common in the island. There exist, however, the following representatives of the family:—

(1) Hornblende-syenite (or syenite proper). The only hitherto known occurrence of this rock is in the neighbourhood of Andongoza in the province of Māroantsêtra. It contains, in addition to its essential minerals, sphene, rutile, zircon, iron-ore, an occasional flake of brown mica, and what is probably epidote, as accessories.

(2) Augite-syenite. Here augite replaces the hornblende. Augite-syenite exists in the neighbourhood of the village of Antsâhanîmby, about 20 miles north-west of Mahanoro (E. Coast). It is garnetiferous. An interesting form of augite-syenite is to be found near the village of Mângantâny in Antsihanaka. It contains as accessories scapolite, sphene, and carbonates. Another interesting form, but from what locality I cannot tell, consists of felspar chiefly in the form of microcline (with a little plagioclase), and augite in the form of omphacite passing into hornblende. The microcline is schillerized by the enclosure of extremely minute specks of specular iron. As accessories there are sphene and apatite.

(3) Mica-augite-syenite. This rock, composed of orthoclase felspar, augite, and mica, occurs to the north of the village of Ràntabb (Antongil Bay). It is largely covered up by dolerite.

(4) Foyaitë. The mountain of Bèžavona, about half-way between the towns of Ankaramy and Anôrontsânga on the north-west coast, and thus outside the Archæan region, consists of this interesting and exceptional form of syenite. The chief constituents are orthoclase, elæolite, hornblende and augite.

* This ancient sea-terrace lies to the west of the first low range of hills a few miles from the sea, and extends for a very long distance north and south. What appears from the cast to be a low range of hills, however, is only the eastern edge of the platform forming the terrace.
VI. AUGITE-SCAPOLITE-ROCK. — As there is an augite-scapolite-gneiss, so there is a massive augite-scapolite-rock, showing no trace whatever of foliation. The locality it comes from I do not know, but it is probably from another neighbourhood than that from which the augite-scapolite-gneiss is derived. The rock is composed of scapolite and brown augite, the latter being in well-shaped crystals. It contains also as accessories stout crystals of apatite and zeolites filling cavities. It differs from the corresponding gneiss chiefly by the absence of felspar and hornblende, and by the nature of the augite.

VII. THE DIORITES. — Like the syenites, the diorites, a mixture of plagioclase felspar and a ferro-magnesian mineral having a granitic texture, do not appear to have a wide development, though of course the future may reveal numerous occurrences. There are at present known the following varieties:—

1. Hornblende-diorite (or diorite proper). An exposure of hornblende-diorite, sometimes running into mica-diorite or mica-augite diorite, crops out in patches about nine or ten miles north-west of Vatomandry (E. Coast). It is generally abundantly garnetiferous.

Somewhere below the precipice of Ampamarinana in the Capital there is another occurrence, this time possessing also green augite.

2. Mica-diorite. A mica-diorite occurs about 300 yards to the south of Ilafy, six or seven miles north of the Capital. Mica and hornblende are about equally abundant in the rock. An occasional grain of green augite is also present.

3. Mica-augite-diorite. This occurs, as above-mentioned, to the north-west of Vatomandry. Hornblende, more or less, accompanies the other minerals.

4. Quartz-augite-diorite. This type of rock is exposed at the village of Sahaka, opposite the Island of St. Marie. The hornblende it contains is derived from the augite. A very similar rock occurs six or eight miles north of Vatomandry near the sea. Another variety is found near the village of Andrànomafa, on the road from the Capital to Andovoranto. It contains mica in addition to the other minerals.

5. Epidiorite. The home of epidiorite in Madagascar is to the north of Antongil Bay, i.e. in the region, as we have seen before, where the rocks have so intensely suffered from pressure. Straggling members occur also on the east coast as far south as 17° and as far north as 13° 15'. S. Lat. They have originally been pyroxenic eruptive masses, and subsequently altered. They are intrusive in the granitites. There are quartzless and quartziferous varieties. Proterobases also occur, though not frequently, in the same region. The epidiorites and proterobases generally show ophitic or sub-ophitic structure, and have doubtless been originally dolerite, a rock existing abundantly as dykes and lava-sheets, not only in the region where the epidiorites and proterobases occur, but in many other places on the east coast. This dolerite, in some cases, has been completely changed both in microstructure and mineral composition: the ophitic structure has been replaced by a granular one, the original felspar has undergone molecular reconstruction, the augite has been changed to uralitic hornblende, and the ilmenite to leucoxene. The only other locality where I have found a proterobase is near the village of Ambôhimásina, north of Bétâfo in Vakin’ Ankaratra.

VIII. THE GABBROS. — The gabbro family, with the exception of the norites and pyroxene-granulites, has apparently very few representatives.

1. Hornblende-gabbro. The only true gabbro which I have ever found in the island occurs about two miles west of Ampàsimpétsikélé, some twenty miles west north-west of Vatomandry. Its pyroxene is diabase, which is in the process of changing into brown hornblende. A little hypersthene is also present.
(2) Norite. The norites are found both foliated and unfoliated. The foliated norites have been noticed under the schists. To separate the unfoliated forms and their occurrences from the foliated is difficult; suffice it to say that they are most extensively developed in the neighbourhood of L. Alaotra in Antsihanaka, and that they occur as normal norite, hornblende-norite, mica-norite, quartz-norite, and olivine-norite.

(3) Pyroxene-granulite. As with the norites, so with the pyroxene-granulites, it is difficult to separate the foliated from the unfoliated forms, and all the occurrences that I know of I have placed under the schists, though some of them are apparently devoid of foliation.

IX. PYROXENITE.—Pyroxenites are composed of one or more varieties of pyroxene. They occur but sparsely. One such rock is found in the valley east of the mountain of Ambiniviny, about 200 miles a little east of north of the Capital. It consists of diallage and hypersthene, with a little (probably secondary) hornblende. Another of similar character, but without hornblende, occurs outside of the Archean area, about twenty miles east of the village of Andranosamônta on the north-west coast. Another, which forms the mountain of Anktisika, to the north-west of L. Alaotra, is composed almost exclusively of hypersthene, and may be called hypersthene-rock. A fourth occurs near the village of Ampafararavôla in W. Antsihanaka, and consists almost entirely of diallage, which contains numerous small inclusions of garnet, etc. Still another occurs to the north of the mountain of Ambohimanoa (see p. 362), and consists of malacolite with a little plagioclase felspar.

X. HORNBLENDE-ROCK. — I have only met with one occurrence of this type of rock; it appears near the village of Ankazobê in Vonizongo. In addition to the hornblende, there is a slight amount of green augite. Actinolite-rock occurs occasionally. It appears, for instance, four or five miles south of Soanierana in the north of Antongil Bay; on the west side of Vavavato mountain in Vakin'Ankaratra; and at Bélavênona, about half-way between Antongodrahôja and Amparihibê, on the road from the Capital to Mojangâ.

XI. EPIDOSITE (or PISTACITE-ROCK).—This occurs near the edge of the granite forming the range of Famoizankova in W. Imerina.

XII. SERPENTINE.—Serpentine appears not far from Mandritsara; near Tsârahonênana, and about fifteen miles south of Ambatondrazaka, in Antsihanaka; and also near Mojanga on the north-west coast.

XIII. QUARTZ-SILLIMANITE-ROCK.—This occurs, in some places, along with the corresponding schist.

XIV. SCHORL-ROCK.—Schorl-rock appears near the village of Fiherë-nana, about fifteen miles north-east of the Capital; and also in the western part of Valâlafotsy in Imerina (see p. 366).

XV. QUARTZITE.—The localities where quartzite exists are too numerous to mention. Sometimes the quartzites contain abundant garnets, either isolated or in aggregates, sometimes sillimanite, or specks of graphite, etc.

XVI. CRYSTALLINE-LIMESTONE.—Crystalline limestone occurs at Ambohimiarikitra, about fifteen or sixteen miles south of the Capital; in the mountain of Ambohimanoa (see p. 362), where it contains malacolite, sphene, and quartz; at Antânîmiêtry on the Bôngolâva range of mountains, where it encloses layers of carbonaceous matter; near Ambatondrazaka in Antsihanaka, where it includes a little chlorite (?); somewhat to the north-west of Mandritsara, where it contains black mica and a green mineral often occurring in these limestones, but which as yet I have not identified. One specimen, of which I do not know the locality, encloses quite large crystals of actinolite. A much altered crystalline limestone from the hill of Karaka, near Vombohitra mountain in N. Imerina, is of a very interesting character petrologically. It contains abundant omphacite, scapolite, garnet, and epidote. Another interesting example occurs to the north-west of Mandritsara. It contains very abundant green augite.
THE CRYSTALLINE SCHISTS

ECONOMIC PRODUCTS.

A few words as to some of the economic products or noteworthy minerals of the Archæan region may bring this article to a close. Gold, as is well known, has been found, in greater or smaller quantity, in various parts of the island. * Silver has not yet been definitely discovered. † Galena is found in Vakin' Ankaratra, but I am told that it is not argentiferous. Tin exists in the form of Cassiterite, for a rather large specimen was given me some years ago, but from what locality it is derived I cannot say. This is unfortunate, for Cassiterite is a very valuable ore. I suspect, however, that it is from some part of Vakin' Ankaratra. Zinc-blende I have myself found in fair-sized crystals in a black limestone in the neighbourhood of Ankarâmy on the north-west coast (and thus outside the Archæan area). This too is of course a valuable ore. Copper is abundant in various parts of the island, among other places in Vakin' Ankaratra. Iron occurs widely spread as magnetite (see Magnetite-schist); but hematite, sometimes micaceous, and bog-iron ore also occur, much of the latter being found in the old lake bed in the Ankay and Antsihanaka plain. Sulphur may be obtained on the plain a little north of Antsiarahâ in the neighbourhood of extinct volcanoes. It occurs in the form of nodules of marcasite and might be employed in the manufacture of green vitriol and sulphuric acid. The sulphur is extracted by heating in clay retorts. Nitre or saltpetre is obtained by the natives by lixiviating the soil (decayed gneiss) and allowing the solution to crystallize. Black lead or graphite is found in various places, as Ambohimirakitra (see p. 369); near the mountain of Ambohimana, often mentioned before; near Anjânahâry, immediately north-east of the Capital; near the village of Anjamânga, west of Ambôhibelôma (about 35 miles west of the Capital), etc. Asbestus, but in what quantity I cannot say, exists on the west side of Vavavato mountain along with actinolite-rock. Lime is obtained from crystalline-limestone, and also from the travertine of Antsirabe. Aragonite is found somewhere in the neighbourhood of Antsirabe. Selenite exists in Jurassic beds north of Andranosamonta (N. W. Coast, outside the Archæan region). Plaster-of-Paris might be manufactured from this. Satin-spar occurs along with the crystalline limestone at Ambohimirakitra, south of the Capital. Kaolin, more or less pure, is common in many of the valleys. Red garnets, tourmaline (black, red, and yellow varieties), corundum, sapphire, amethyst, spinel, rutile, etc., are also found. Ordinary Jasper occurs on Vavavato mountain, and Egyptian Jasper, a beautiful rock striped in various colours, is found about half-way along the east side of the long promontory running from Andranosamonta northwards (N. W. Coast, outside the Archæan area). Agate exists abundantly in the basalt on the left bank of the River Bësiboka near Mahaibo. Rock crystal (i.e. pure crystals of quartz, affording the 'Brazilian pebbles' of opticians) occurs, as has been known for the last 200 years, in Madagascar, but the locality where it is found was, for some mysterious reason, hidden by the native government from the public, and it was forbidden to carry off any specimens when found. The crystals have long been famed for their large size. One in the British Museum (I speak from memory) is about a yard long and a foot wide. The locality where they occur is somewhere to the east of Amboanio or Vohimarina in the Iharana province. Most probably these crystals are formed in cavities in the lava thereabouts. Rock crystal is also found in smaller crystals in many other places. Lazulite with quartz is found somewhere in Vakin' Ankaratra. Green and brown Chaledony is found in nests in the basalt in the small islands near Anorontsanga (N. W. Coast, and thus outside the Archæan area). Amazonite, or green microcline, a beautiful green mineral, occurs in large

* See ANNUAL No. IX., p. 76. † Just now there is a report of its discovery in the north-west part of the island, which, however, still requires confirmation.
AND ASSOCIATED ROCKS OF MADAGASCAR.

I have in my possession such a slab, nine inches long, over four wide, and rather more than an inch in thickness. It possesses anomalous optic properties. It comes from a hill in the western portion of the territory known as Bemahazemby on the borders of the Sakalava country (south-west of Betsileo), in the district of Vakin' Ankaratra.

Now that the country has become a French colony, our knowledge of matters such as those contained in the preceding paper is rapidly increasing, and doubtless in a few years' time the present paper will be capable of great expansion.

R. BARON, ED.

THE FOSSILIFEROUS BEDS OF MADAGASCAR.

It is now known that fully a third part of Madagascar, and that the western, is covered with marine deposits, viz. sandstones, limestones, and shales; and that in these deposits have been found a certain number of fossiliferous beds, in other words, little natural cemeteries, where the petrified remains of extinct animals have awaited patiently for millions of years the doctors of science. Numerous meetings between the two have been brought about since the conquest, by officers, functionaries, and colonists, who are amateurs in conchology, inasmuch as within the last two or three years cases of fossils have been sent to Europe, sometimes to the School of Mines, but more frequently to the beautiful new building consecrated to Palæontology in the corner of the Jardin des Plantes, adjacent to the Gare d’Orléans. Their contents have been scientifically determined, but the result of these investigations has hitherto only been given in periodicals like the Bulletin du Muséum d'histoire naturelle* and the Compte rendu† of the sittings of the Geological Society of France, these being very specialized publications which deal with Malagasy matters in a quite exceptional way.

For those who take an interest in Malagasy fossils, not so much because they are fossils, as because they are Malagasy fossils, I shall try to give a résumé of the results obtained. One cannot disguise the fact, however, that the majority of people will not be interested at all in the matter, and it is necessary loyally to forewarn them beforehand; for it is incontestable that precise information regarding the distribution of Jurassic, Cretaceous, and Tertiary areas cannot be considered as offering reliable indications as to where, for example, cacao should be grown.

The most ancient of these little cemeteries has only been known a few months. It exists a few kilometres to the north of Ankilahila. Ankilahila is a military post south of the Ambôngo province on the

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* Bulletin du Muséum d'histoire naturelle, 1895, No. V.; 1896, No. VII.; and 1899, No. III., p. 130.
† Compte rendu sommaire des séances de la Société géologique de France, 1899, Nos. XI., XII., and XIII.
bank of the river Makambâhy, a left affluent of the Mahavâvy. The post is about 200 mètres above the sea, and is dominated on the north by a great plateau 700 mètres high, there being an almost perpendicular wall of 500 feet above the town, forming, at the same time, a grand spectacle, and a very fine geological section. Of the 500 mètres of difference, 350 consist of worthless, almost incoherent, reddish sandstone, which becomes disintegrated, large pieces rolling down the slopes, or which is carved into pyramids, slabs, and large irregular blocks. The last 150 mètres consist of good hard limestone, of a dazzling whiteness, the edges being quite bare, and the surface covered by a growth of grass scarcely sufficient to keep it decent. The top forms a beautiful floor, neat and sonorous, where troops of wild oxen besport themselves.

At the base of the limestone, where it comes into contact with the sandstone, is to be found, all along the mountain, a bed of ancient small petrified shells, to which science gives names having no signification for ordinary folks, as Spiriferina and Harpoceras, and to which it applies without hesitation the epithet Liassic.*

This limestone-capped plateau has been more especially examined in the neighbourhood of Ankilahila, but the cause, to use a term well known in the south of France, is immense, occupying all the southern part of Ambongo without change of aspect. It is then legitimate to conclude that the whole of it belongs to the Lias. It is all the more legitimate, as, at three other points where it has been possible to examine the exposed edges of the limestone, the inevitable Spiriferina has reappeared. These three places are near Bèkodila, Bèkoratsaka, and finally at a place without any precise name on the road which goes from the post of Mahlagldro to that of Mâmôroka.

The Lias is the oldest of the Jurassic rocks. There are many Malagasy fossiliferous beds belonging to the upper and middle Jurassic series, and also to the lower ones known in geology as Inferior Oolite, Great Oolite, Oxfordian, and Callovian. We shall enumerate these various beds, beginning in the south-west of the island.

On the banks of the river Isakondry, a small right affluent of the Onilâhy, in the neighbourhood of the military post of Bêrakêta, M. Bastard has found and M. Boule has identified some Oxfordian fossils.†

A little further north, at the village of Ankâzoâbo, Mr. Richardson found in 1877, some Jurassic Ammonites identified in London as belonging to the Inferior Oolite.‡

Last year M. Vuillaume reported from Bêjabôra, to the west of the town of Malaimbândy, some fossils which M. Douvillé declares to belong to the Inferior Oolite and Great Oolite.§ From a bed near by, a very little to the west, some fossils collected in 1893 have been classed as Callovian by M. Boule.|| Now Bejabora, which is a limestone plateau, presents the greatest analogies with the mountain range of Bêmarâha, of which it seems to be merely a continuation.

* Compte rendu sommaire S. G., Nos. XI. and XII. A more detailed communication by M. Boule will appear afterwards. † Bulletin du Muséum, 1899, No. III., p. 120. ‡ANTA-NANARIVO ANNUAL, different articles by Baron published some years ago. § Compte rendu sommaire S. G., No. XIII. || Bulletin du Muséum, 1895, No. V.
And besides, as some fossils, in very small number, it is true, collected in crossing Bemaraha to the south of Māsambolo, have been classed *loco citato* as Oxfordian and Great Oolite, it may be fully admitted that the whole of the range of Bemaraha belongs to the middle and upper Jurassic.

M. Dorr has collected in the region of the Mārolōlo, a confluent of the Bētsibōka and Ikōpa, some Oxfordian *Ammonites*; and Captain de Bouvié has found in the region of Ambalía, on the left bank of the Māhajamba, to the east of Marololo, other *Ammonites* belonging to the upper Jurassic, which have been identified by M. Douville.

From a point situated twelve kilomètres east of the post of Bēlālitra, on the road to Lehānja, about half the length of the River Sofía, and also from some limestone cliffs which border, to the west, the little lake of Andrānomēna, to the south of Antsohlhy, near the Gulf of Lōza, some fossils have been brought which appear to belong to the Oolite.

In this latter region (i.e. the neighbourhood of the Gulf of Loza) the Englishman Last, about four or five years ago, and M. Bastard still more recently, found some vertebrae and other bones of great Jurassic dinosaurs, a discovery which has caused among the initiated flights of language terrifying to the ordinary mind, for example, *Bathriospodus madagascariensis*.

Finally, a long time ago, Mr. Baron found some Jurassic fossils (i) in the neighbourhood of Iraony (west of the Montagne de la Selle), and (ii) to the north of the River Lokla. (From several other localities as well; but Andrānosamōnta needs perhaps special mention, as being the locality where I found the only hitherto known Malagasy Jurassic crocodile. See ANNUAL, No. xVII., p. 26.—R.B.)

Now all these form a fine series. If the Malagasy Jurassic beds afford so great a number of fossils, it is because they are rich in limestone rocks, that is, rocks whose petrifying power is well known. Under the Jurassic is everywhere found thick beds of generally reddish sandstones, which may be supposed to be Triassic, but until fossils have been discovered in them, the statement will of course be only hypothetical.

A goodly number of Cretaceous beds are also known. The great limestone plateau, whose eastern base is undermined by the Isakondry, covers the banks of this river with detritus containing Cenomanian fossils.

An ammonite of the Gault was found in 1893 at Sōromaraina, to the north of Ambiky, in Mēnabē.

Other Cretaceous fossils occur on the banks of the river Māhamāvo in the Iboina province; at Bēkōdia and Tōmohēvitra in the Ambongö province; and at Ambohitrōmby in Iboina.

In this same province of Iboina, on the road from Mojangà to Suberbieville, numerous beds were long ago discovered by Mr. Baron.

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** Bulletin du Muséum, 1899, No. III., and Compte rendu sommaire S. G., No. XIII. 
*** Bulletin du Muséum, 1895, No. V. ‡‡ Bulletin du Muséum, 1895, No. V. 
† † Not yet published. †† ANANTANARIVO ANNUAL, No. XIV., p. 242.
At Mèvaràno, also in Iboina, on the right bank of the river Betsiboka, M. Bastard has found the remains of some Cretaceous dinosaurs.*

But it is perhaps la Montagne des Français near Diego-Suarez which has furnished the greatest number of fossils. A number of colonists, functionaries, officers, and travellers, living in Diego-Suarez, or passing to this place, have made collections in this mountain. The gathering of the ancient shells appears to have been, for the population of Diego, a favourite holiday pastime; there can be none more honourable. These fossils, examined by different experts,—MM. de Grossouvre, Hang, Boule, Newton—belong to the following successive Cretaceous zones: Senonian, Turonian, and Cenomanian (upper and lower).† (If the Montagne des Français is that on which the village of Ambôhimârina stands, to the south-east of Diego-Suarez, it is worth noting that a great part, or perhaps the whole, of the mountain is composed of globigerina limestone. The first fossil found, I believe, was an echinoid, discovered by myself in 1891. This echinoid is named Lampadaster Grandidieri.—R.B.)

Finally, and it is one of the most curious among recent discoveries, Lieutenant Grillo has found some Senonian fossils at Fânivelôna on the east coast, 30 kilometres north of Mahèla, on the left bank of the river Sâkâleôna.‡ I shall return immediately to the consequences of this find. (Under the old fort at Mâhanôro, and also at the village of Antsâramihânana, twelve or fourteen miles north of Vâtomândry, as well as a few miles north and south of the village, I found some fossils a few years ago. Those at the village itself are to be seen low down on the banks of a lagoon in a shelly limestone. Unfortunately the fossils were lost, but not improbably they were also Cretaceous. If so, the strip of Cretaceous strata not unlikely stretches for 120 miles at least on the East Coast.

(See Annual, No. x., p. 417.—R.B.)

Of Tertiary fossils there are only four places known where they have been found, all in proximity to the sea, or on small islands. These are: la Montagne de la Table, near Tulear;§ the island of Mâkambâhy, off Mojanga; the western promontory of the Bay of Narendra (or Narendry);‖ and a little island at the entrance of the Bay of Radama.**

In order to alleviate the unpleasant impression which this long enumeration must have produced, let us try to generalize the results obtained.

The discovery by Lieutenant Grillo at Fânivelôna is a new and interesting fact for those at least who occupy themselves with the palæontological history of Madagascar, and although the general public may be excused if they do not find themselves enamoured of this subject, almost everybody has heard speak of the hypothetical continent which has disappeared, to which has been given the name of Lemuria. A glance at the accompanying map (given only in the original paper) shows that, on the western side of the island, that is to say, the side

facing Africa, the savants who are partisans of a former extension of Madagascar to the dimensions of a continent are definitely arrested by an undoubted fact, viz. the existence of ancient marine deposits of an enormous thickness. We are absolutely sure that, from (nearly) the beginning of the secondary era, Madagascar was already separated from Africa by a remote ancestor of the Mozambique Channel. In the east, on the contrary, where no one had hitherto found any trace of marine deposits, nothing arrested the palæontological imagination, which had given itself free play. It has been supposed then that Madagascar was formerly joined to India by a great continent, of which to-day only a few of the highest peaks emerge above the sea, viz.: Bourbon, Mauritius, the Seychelles, and the Chagos Islands. This hypothesis adds to the merit of being grand that also of explaining certain facts, for example, to mention the best known, the use by the Malagasy of a language related to the Malayan and Polynesian tongues. The hypothesis remains still defensible, but the discovery at Fanivelona limits its field, inasmuch as we are henceforth certain that a Cretaceous sea already bounded Madagascar to the south-east. The Geological Society has expressed its decided opinion on the matter, treating the hypothesis as a joke.

It remains to point out the considerable increase which has taken place in our palæontological knowledge of the west side of Madagascar. Four or five years ago, scarcely more than four or six localities of fossiliferous rocks were known; and it was known only in a general way that the fossils belonged to the secondary and tertiary eras. To-day the number of these localities is fourfold what it then was; and not only has the existence of systems, but of sub-stages, e.g.: Lias, Inferior Oolite, Great Oolite, etc., become known, matters in Madagascar being now gone into in detail. (M. Gautier has apparently forgotten that, as far back as 1890, the discovery of fossils in at least a dozen localities had been recorded [see ANNUAL, No. xiv, p. 242]; and that, moreover, several sub-stages, including all that he has given here and more, were at that time already recognised. The total number of Tertiary and Secondary fossils known in 1890 was 91. Has this number really been quadrupled?—R. B.) In consequence of this, Madagascar owes its thanks to M. Boule, assistant in Palæontology at the Museum. Before he took the matter up, Malagasy fossils and specimens, in quitting their native country for the Quai de Bercy, simply changed their place of repose. They accumulated in the cellars of the Museum, the most fortunate finding a place in the galleries, but they were left undetermined.

In Madagascar, on the spot, much has been done. This is one result of the French conquest, which has opened up hitherto inaccessible parts of the country, and an effect of the stimulus given by Monsieur le général Gallieni. Before the war, Malagasy geology owed much to English missionaries and savants. It is to Frenchmen alone that it owes its recent advances. Here then is an unexpected bridge thrown by palæontology between nationalism and intellectualism.

Translated from a paper of M. Gautier, in ‘Revue de Madagascar’ by R. Baron. Ed.
EVERY nation has its own customs, and all the dwellers on the earth follow, each one of them, what they have been accustomed to do, so that those who have made advances in knowledge have good and wholesome habits, while those who are still ignorant weary themselves in following strange notions, and pervert what they think proper to do. In the accounts to be here given and described, a great many Malagasy customs will be noticed, for they are among the people who have imagined many things which they think necessary to be done in all kinds of circumstances.

But the root-idea which has impelled them to follow many of the practices which are current among them is none other than suspicion and distrust, which produce fear and foolish dread, lest some calamity should befall them; and it is this which has driven them to devise all sorts of things which they imagine will preserve them from calamity. They are always imagining and doing and contriving something which will protect them from these imagined evils. Should anything menacing happen in accordance with their notions, they consider this as a strong confirmation of their beliefs; but if something else happens, then they alter their custom, although there may be no good ground for it, and so their superstitions are always changing.

The principal thing the Malagasy think about, and which is always in their thoughts, is to do what will benefit themselves in this changeable mortal life, and by which also they may obtain praise and honour, especially at the time when death comes; but as to what is beyond that, they think little of it. And when they experience disappointment and are overtaken by affliction, they think they are truly unfortunate, and give up in despair all that they desire in life and that makes life worth living, as if nothing further was worth thinking of. For these reasons therefore they are constantly troubling themselves as to what is best to be done as a defence from all kinds of calamity.

In the following description of Malagasy superstitions and customs it may happen that those of the Hova may be mingled with those of the Betsileo and other outlying tribes, for there are many which are common to all the Malagasy; but in the case of these being different, it will be pointed out in the description of each. The following are the principal divisions of the subject, showing what is chiefly resorted to as protection against various kinds of evil:

1. Working the divination or sikidy; (2) giving a variety of medicine; (3) giving protecting charms (famizana, fanefitra); (4) foretelling lucky and unlucky days; (5) changing destiny (when born on unlucky days); (6) abstaining from certain things at certain times; (7) abstaining from some kinds of food; (8) fetching the spirit or ghost (amba'roa); (9) practising the salamanga (a custom hereafter to be described); (10) making offerings to the Vazimba; (11) giving compensation for forbidden things done unintentionally; (12) worship of spirits of ancestors; (13) making offerings on commencing a house or other building; (14) various prohibitions; (15) desiring children (when childless); (16) killing hens; (17) the use of various kinds of charms.

These various practices and customs will be described in order as above noted.

1. The Practice of Divination or Sikidy. This is a deeply-rooted belief
followed by all Malagasy tribes, whether Hova or others, all over the island. This sikidy is also called by the Hova hatatarana, literally, 'a means of benefitting.' But among the Betsileo and other tribes it is called manitolo, that is, 'to enlighten' (tsilo, a torch), because they acknowledge that their minds are dark and need enlightenment.

In the practice of the sikidy the minds of the Malagasy cannot be satisfied when they are ill or have anything befalling them, unless their relatives or dearest friends consult a skilled diviner. And in case this one is at a loss, they cannot rest, and will go about to consult other noted diviners; and they think nothing of going even to ten such persons for consultation with them on one day, should they hear of anyone being specially famed for his skill in this direction, so that their anxiety may be set at rest.

With regard to the working of the sikidy, the seeds of the Fano tree, a species of Acacia, were usually chosen for the purpose, the dry seeds being collected by the diviner and kept by him in a basket to be ready for use, should anyone come to consult him. Sometimes, however, the seeds of indian-corn or beans are employed, especially if he should be consulted by anyone in great haste; in such cases, when the Fano seeds are not to be obtained, the others are almost always to be had in people's houses when required by those who are pressed for time. And even when these latter are not to be had, pieces of the rush used for mats, or the stiff grass used for making brooms, are employed. These are broken in small pieces by the finger nails; and such fragments of rush and grass are used for gaining advice. So that the fictions made up by these diviners is believed as true by those who consult them.

In some cases again, another course is followed, for the diviner does nothing but simply sit and pretend to foresee what will happen, although he does not speak a word until he has determined what to say to the relatives of the sick person, or to the one overtaken by calamity. The persons thus speaking are spoken of as tsindran-favatra (lit. 'pressed by something'), or mararin-dolo (lit. 'made ill by ghosts'), or, as the Betsileo term it, they are olon-doloina (a word of the same meaning as the second of these terms, lit. 'ghosted people').

The craftiness of the diviners is easily seen, when it is remembered that they always know minutely beforehand all the circumstances of the people who live together with them and around them. To ascertain all this is, in fact, their chief employment, so that as soon as anyone comes to consult them, they are already prepared to give their opinion about their relatives who may be sick, or have any misfortune happen to them. And should it so be that they do not know the circumstances beforehand, they inquire and cross-question minutely as to the condition of the sick person, and what caused the illness, before they will work the divination, so as to give their opinion. The diviners do not really know anything about the matter; whatever they reply is simply the result of their questioning and examining the relatives of the sick person, or their previous knowledge of his condition; and so those who do not remember all this say: "What a clever person So-and-so is when he divines! He makes no mistakes; there is nothing he does not know!"

Sometimes the diviner declares that the divination cannot err, and gives an unfavourable answer to the enquiries made, although he should even work the oracle three or four times. His reason for doing so is to cause the relatives of the sick person to give him a little more, or to promise a larger amount of money. Should they not perceive his object in all this, they go home in sorrow, and bending down as they enter the house, report with tears to their relative for whom the divination has been worked the unfavourable answer, "because the sikidy," so they say, "cannot err." Those at home reply and try to lessen the grief of those who are depressed by the sad report,
Every nation has its own customs, and all the dwellers on the earth follow, each one of them, what they have been accustomed to do, so that those who have made advances in knowledge have good and wholesome habits, while those who are still ignorant weary themselves in following strange notions, and pervert what they think proper to do. In the accounts to be here given and described, a great many Malagasy customs will be noticed, for they are among the people who have imagined many things which they think necessary to be done in all kinds of circumstances.

But the root-idea which has impelled them to follow many of the practices which are current among them is none other than suspicion and distrust, which produce fear and foolish dread, lest some calamity should befall them; and it is this which has driven them to devise all sorts of things which they imagine will preserve them from calamity. They are always imagining and doing and contriving something which will protect them from these imagined evils. Should anything menacing happen in accordance with their notions, they consider this as a strong confirmation of their beliefs; but if something else happens, then they alter their custom, although there may be no good ground for it, and so their superstitions are always changing.

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In some cases again, another course is followed, for the diviner does nothing but simply sit and pretend to foresee what will happen, although he does not speak a word until he has determined what to say to the relatives of the sick person, or to the one overtaken by calamity. The persons thus speaking are spoken of as tsindrian-favatra (lit. 'pressed by something'), or mararin-dolo (lit. 'made ill by ghosts'), or, as the Betsileo term it, they are olon-dolozna (a word of the same meaning as the second of these terms, lit. 'ghosted people').

The craftiness of the diviners is easily seen, when it is remembered that they always know minutely beforehand all the circumstances of the people who live together with them and around them. To ascertain all this is, in fact, their chief employment, so that as soon as anyone comes to consult them, they are already prepared to give their opinion about their relatives who may be sick, or have any misfortune happen to them. And should it so be that they do not know the circumstances beforehand, they inquire and cross-question minutely as to the condition of the sick person, and what caused the illness, before they will work the divination, so as to give their opinion. The diviners do not really know anything about the matter; whatever they reply is simply the result of their questioning and examining the relatives of the sick person, or their previous knowledge of his condition; and so those who do not remember all this say: 'What a clever person So-and-so is when he divines! He makes no mistakes; there is nothing he does not know!'

Sometimes the diviner declares that the divination cannot err, and gives an unfavourable answer to the enquiries made, although he should even work the oracle three or four times. His reason for doing so is to cause the relatives of the sick person to give him a little more, or to promise a larger amount of money. Should they not perceive his object in all this, they go home in sorrow, and bending down as they enter the house, report with tears to their relative for whom the divination has been worked the unfavourable answer, "because the sikidy," so they say, "cannot err." Those at home reply and try to lessen the grief of those who are depressed by the sad report,
saying: "Why, how foolish you are to weep over that; don't you remember the proverb: 'A favourable divination is not to be danced about: an unfavourable one is not to be wept over'?" And yet from their knowing no other means of obtaining comfort, the people go on consulting the diviner, although hardly retaining any faith in him.

The divination is not only employed in cases of sickness, but also in the various circumstances of daily life. For instance, if anyone is going on a journey, or on a war expedition, or going on a trading venture, or to visit friends at a distance, they have the divination worked first, lest evil should happen to them on the way. If they have a law-suit, they resort to the mitisikidy first to find out who will gain the cause. If any dear relative dies, and the survivors desire that no more calamity may happen to them, then they have the sikidy worked, and follow carefully what the diviner directs to be done. Supposing they are hated, and the number of people who dislike them increases, they have the oracle worked to know how they may get again into favour with all their acquaintances. In case a present of food is made to them, and they do not trust the donor, they receive the gift first, and are profuse in thanks; but as soon as the giver is out of sight, they will throw away the present, or give it to someone else without touching it themselves. And if they are only suspicious, they have the divination worked first to know about the giver, lest they should be bewitched and injured. If any one is desiring riches, they have the sikidy consulted as to the best means of obtaining their wish. Should any one long for honours and higher rank, again the diviner is approached, and the instructions he gives are carefully followed to this end. Women who do not bear children employ the sikidy, and implicitly follow all the diviner's instructions as to the course to be pursued. In short, it is impossible to describe one by one all the various circumstances in daily life in which the divination is employed.

Alas, that ignorant people should thus vainly weary themselves in their desire to avoid calamity, and in all sorts of contrivances to effect this, while God, Who can really give peace and confidence in His leadings of mankind, they do not know or trust in, and thus they try all unprofitable means to find rest and comfort.

II. The Use of Medicine. The Malagasy make use of various simple remedies in case of sickness; but these are not the result of instruction or experiment at all, but whoever administers them just gives according to his own notions of what may be beneficial. Everyone of the purely native doctors has not been taught, nor are there any teachers to instruct them; everyone is a law to himself, and he considers his own cogitations to be a sufficient guide.

The most common medicines given to the sick are derived from various pieces of wood, which have been selected and prepared by cutting them all into pieces about three or four inches long. These are of different kinds, some being sweet, others bitter, and others astringent. Each sort is kept separate in a bag, and in a little leather bag the divination appliances are also kept, for very often the diviner is a doctor as well. Each time the sick person is attended to, water is given him to drink in which the powder of these various woods, grated on a stone, is put, according to the nature of the disease; and this powdered wood mixed with water is directed to be licked by the sick person, or drunk, if much water is to be added, or sometimes it is smeared over his body, according to the kind of disease to be treated. A very usual kind of medicine is made from green leaves brought from the forest; these are boiled with a good deal of water, which is then drunk. These are not only used in this way, but are also employed for vapour baths. Such baths are made in the following way: when the boiled leaves are scalding hot in the earthen pot, the patient is placed upright, and
covered all over with a mat, over which again a lambo or cloth is thrown. The earthen pot is then brought with its cover still on, and put close to the patient thus carefully covered with the mat and lambo; the attendants then remove the cover, but carefully close the mat and the cloth, so that no steam from the boiled leaves may escape, but all of it reach the body of the sick person. The patient meanwhile is not much to be envied, for although he may beg hard just to put his head outside, on account of the great heat which is like to make him faint, his friends will not allow him to do so, but keep him carefully covered up, thinking that that is the only thing to do him good. While he is thus being steamed inside, the doctor comes and makes various expiations. He takes a sweeping broom and sprinkles water all around the cloth, all the while making incantations as benedictions upon the medicine employed, invoking first the name of God (Andrianamianitra) before proceeding with the following invocation:—

"Sacred, sacred, sacred art Thou, O God! For Thou did'st give the life and the spirit; And you, all ye ancestors, companions of God! Give blessing, for you have gone to be gods, Therefore make cool, make well, Such-an-one, for he is ill; And thou, O sacred medicine here! Which God has given to benefit and to heal, Listen, O listen, and give good heed; For thou art not a thing unknown or unremembered, But bidden by God to be done, a precious bequest of our fathers. O bless! O preserve! O give healing! For if he has been bewitched or overlooked, And so this has befallen our friend, then remove and take it away; For you are our confidence and protection, and you are the water which removes choking; Therefore confound whoever attacks him; And whoever injures, do ye injure; and whoever harms, do ye harm; Gone now is the evil, O God, O Creator!"

Then the doctor sprinkles with the broom once more around the covering of the vapour bath before removing the patient; and then he throws away the broom to the south of the house (he has driven out the evil, he says, and towards the south is the place of casting away evil). As soon as the sick person comes from the vapour bath, he is made to drink the water from which the steam was obtained, although there may have been nothing more in it than those dry pieces of wood taken from the bag just mentioned.

(To be continued.)

VARIETIES.

The Rev. W. E. Cousins, M.A., and his Work in Madagascar.—The recent retirement from the Madagascar Mission of the Rev. W. E. Cousins makes it fitting that a few words should be said on the subject in the pages of the ANNUAL, especially as Mr. Cousins took the greatest interest in the magazine, and contributed many valuable papers to it from its very commencement. Mr. Cousins's connection with the L.M.S. Mission in this country dates from the year 1862, when he formed one of the first party of six missionaries who were appointed to commence the work which had been interrupted by 25 years of persecution. Of this party of six, two died some time ago, and three have for long been disconnected with the Mission, so that Mr. Cousins, up to the middle of this year, had for some years been the doyen, not only of the L.M.S., but of all the Protestant missionaries in the island. He was consequently often called upon to represent European missionaries here, and always did this in a way thoroughly befitting such a position. For many years Mr. Cousins had charge of the very important city church of Amparibe and its large country district, and, as a preacher and pastor, has taken a prominent part in all religious work, particularly among the young. Mr. Cousins was, however, especially known as an authority, indeed the authority, on all questions relating to the Malagasy language, which he had studied very minutely, and understood both as a scholar and as a practised speaker and writer. His publications on Malagasy Proverbs, Malagasy History, and Malagasy Customs, as well as numerous papers contributed to the ANNUAL and the Journal of the English Philological Society show how great an interest he took in these subjects.

Mr. Cousins's chief work, however, and that which will remain as the most enduring evidence of his labours in this country, is that done by him in connection with the Revision of the Malagasy Scriptures. In the year when it was decided by the different Protestant Societies at work in Madagascar that a revised version of the Bible should be undertaken, Mr. Cousins was unanimously chosen as the chief reviser, and, accordingly for eleven years, the greater part of his time and energies were devoted to this important work. He, in consultation with native helpers, prepared the reviser's proofs which were the ground-work of the present revised version; and it is not too much to say that the scholarly and exact translation of the original texts, the idiomatic clearness, and the literary finish of that version, are owing, in a very large degree, to Mr. Cousins's patient and painstaking toil, and to his familiarity both with Malagasy and with the Hebrew and Greek Scriptures. The Malagasy Church owes a debt of gratitude to Mr. Cousins not less than that which it owes to Messrs. Jones and Griffiths, the first translators of the Bible into the Malagasy tongue.

Mr. Cousins also took great interest in hymnology, and some twelve or fourteen of the most popular and favourite hymns in the L. M. S. Malagasy hymn-book are from his pen. To him was also committed the task of editing and arranging the new hymn-book, which is already printed, and to this book again he has contributed several new hymns.

Lastly, Mr. Cousins took special delight in work for the children and young people; he was never more happy than when addressing them. He made great efforts, some years ago, to organize a Sunday School Union for the churches of the Capital, and although it was not successful,—probably it was premature—the present position of the little societies
of Christian Endeavour for young people is largely due to Mr. Cousins's work in this direction.

All Mr. Cousins's friends, both European and Malagasy, regret that he has found it necessary to retire from work in Madagascar; but we may be quite sure that he will still continue to work for the Mission although away from it, and we wish for him many years of health for Christian work in England.—J.S. (Ed.)

The Recent Hailstorm.—On Saturday afternoon, November 4th, the Capital was visited by a very severe hurricane or cyclone, which, coming from the south-west, passed away to the north, leaving almost a perfect desert behind it. The wind was terrible, and it was accompanied by a very large amount of hail. The hailstones were of great size, many of them being two centimetres in diameter. After the storm passed away to the north, the ground was left covered with hailstones reminding one of winter scenes in the home-land. Some interesting photos have been published which were taken immediately after the storm was over. The hail remained on the ground for some days, and, in places where it had drifted, was many inches deep. It is scarcely an exaggeration to say that all the trees were stripped of their leaves and some of their bark, and worse still, almost the entire crop of peaches, plums, grapes, and mangoes was destroyed. In one large compound, where usually there are many thousands of mangoes, it is thought that this year there will not be a dozen. Of course this only refers to the belt of country traversed by the storm.

Besides, a very large amount of damage was done to house property, tiles were broken or blown off the roofs, the hail and rain poured into the houses, bringing down ceilings, and, as will be readily understood, causing a large amount of inconvenience and loss to the inmates. There was also a great breakage of glass in the windows. At the Printing Office of the F. F. M. A. more than 100 panes were broken.

The storm was, however, far from being general. As has been stated, it went through the country from the south-east to the north-west leaving a clear and well defined track behind it. On Sunday, November 5th, the writer was at two churches an hour's ride to the west of the Capital, one of these churches is on the east of the river Ikôpa, the other on the west. The first building was very much damaged, nearly all the glass windows being broken; but on crossing the river, there were hardly any traces of the storm to be seen; the church was not injured, and everything was green and bright as usual, the fruit being on the trees, and the people all rejoicing in having escaped the great loss their near neighbours had experienced.

The Observatory of Antananarivo.—It will be remembered by all who followed the history of the war of 1895, that the very completely equipped Observatory built during the administration of M. le Myre de Vilers in 1889, and under the auspices of the Jesuit Mission, was destroyed, and the greater part of the instruments were broken, damaged, or stolen, during that year. The directors of the observatory, however, the Revs. P. Roblet and E. Colin, S. J., have generously devoted to its reconstruction the Herbet-Fournet prize, which was awarded them by the Geographical Society of Paris. Aided in this task also by the Government of the colony and by private subscriptions, the work of reconstruction was commenced in the month of June last year. The old Observatory, it may be well to remind our readers, was erected on a prominent hill called Ambôhidêmona, about a mile east of the centre of the Capital, and was built in the form of a T, with towers at the point of junction of the two limbs and at each of their extremities. A large pillar supported an equatorial telescope, which was covered by a cupola, whose summit held a metal ball a metre in diameter. This object, visible from many important points, served as the geodesic centre for the construction of the map of
Imèrina, and of that from Antananarivo to Andovorânto, by Pères Roblet and Colin, as well as for the determination of altitudes above the sea-level. Besides astronomical instruments, a very complete collection of meteorological apparatus and of self-registering appliances was arranged in and outside the building; while the instruments for observing magnetic phenomena were placed in a separate pavilion, so as to be free from disturbing influences from the masses of iron in the main building. Valuable scientific work was done by the directors of the old Observatory during the six years of its existence, and its results were freely made known to all the great observatories of the world, as well as to the government departments specially interested in such studies. The new building follows the lines of the former structure, with some slight modifications. We sincerely hope that this second Observatory will do much to promote scientific research in Madagascar.—J.S. (ED.)

NATURAL HISTORY NOTES.

The 'Urania' Butterfly.—It is well known to entomologists that the most beautiful butterfly (more accurately, a diurnal moth, although hardly differing from a true butterfly) in Madagascar is the Urania rhhoa, a large and lovely insect, with golden, green, crimson, and black markings, and edged all round its wings and tails with delicate creamy white. It is an interesting and curious fact that there are only two species known of this genus of butterfly, and that of these two species, one is a native of Madagascar, and the other, U. sloana, of the islands of Hayti and Cuba and parts of Central America, being thus separated from one another by half the circumference of the globe, being a remarkable instance of discontinuity in habitat. This fact has, however, a parallel in the family of small insectivorous animals called Centetidae, which are also confined to Madagascar and to some of the West India Islands. During 1899 the Urania butterfly seems to have been unusually abundant, while in some seasons it is very seldom seen. I have observed it flying over one of the chief thoroughfares of the Capital; and at the Mission House, Soâvina, I once noticed a great many flying around the two tall blue-gum trees at the back of the house in the dusk of the evening. Mr. Peill informs me that great numbers of the Urania appeared in the Mission House grounds at Ambôhimanga, and that they seemed intoxicated with the strong odour from the nectar of the bibaxy (loquat) trees, when in flower, so that almost any quantity of the insects could have been captured in the early morning, while still under the influence of the flowers.—J.S. (ED.)

New Lizards from Madagascar.—(1) Diplodactylus robustus; total length 104 millim., tail 34 m.; hab. S. W. Madagascar; a single female specimen collected by Mr. Last.—(2) D. gracilis; total length 118 m., tail 56 m.; a single female specimen.—(3) D. porogaster; total length 60 m., tail 28 m.; S.W. Madag.; a single male specimen collected by Mr. Last.—(4) Homopholis heterolepis; a Gecko; total length 227 m., tail 139 m.; S.W. Madag.; a single male specimen collected by Mr. Last.—(5) Zonosaurus maximus; total length 550., tail 320 m.; a slightly larger specimen, with injured tail, measures 240 m. from snout to vent; three specimens from Imèrina, collected by Rev. R. Baron. (6) Sebësina ornaticeps; total length (tail injured) 110 m., five specimens from S. W.
NATURAL HISTORY NOTES.

Madag., collected by Mr. Last.—(7) Pygomeles trivittatus; total length 200 m., tail 90 m.; four specimens from Imerina, collected by Rev. R. Baron.—Ann and Mag. Nat. Hist. ser. 6., vol. xvii., June, 1896; G. A. BOULENGER, F.R.S.

New Plants from Madagascar.—Within the last two or three years, a number of new plants from Madagascar have been described by M. Emm. Drake del Castillo in the Bulletin Mensuel de la Société linnéenne de Paris, the Bulletin du Muséum d'histoire naturelle, and the Bulletin de la Société botanique de France. The following is an enumeration of these new additions to the Malagasy flora:

NAT. ORDER HYPERICACEAE:—

Psorospermum Humboldtii. Shrub. Locality?
Eliea brevisistyla. Shrub. Loc.?
Hypericum stenocarpum. Herb. Loc.?
Calophyllum Pervillei. Tree. Loc.?
" laxiflorum. Tree. Loc.?
Oxyruncus Humboldtii. Tree. Doubtful whether found in Madagascar or the Comoros; but as Humbolt's Nos. 396 and 397 are Malagasy plants, it is probable that this (No. 391) also is.

NAT. ORDER MYRTACEAE:—

Eugenia Bernieri. Tree. Island of St. Marie.
" Chapeliieri. Tree. Loc.?
" athroopoda. Shrub. ? Loc.?
Pomphis punctata. Small shrub. Loc.?
Ardoina Campanoni. Shrub. Loc.?

NAT. ORDER LEGUMINOSÆ:—

" Levensis. Climbing plant. ? Port Leven.
" Campanoni. Shrub. Loc.?
Desmanthus Campanoni. Shrub. Loc.?
" Grevenans. Shrub. S.W. Madag.?
Xyilia Perieri. Shrub. Ambôdirôka.
Acacia nossibiensis. Straggling plant. Island of Nôsibé.
" bellula. Shrub. S.W. Madag.?
" minutifolia. Shrub. S.W. Madag.?
" aurisparsa. Shrub. S.W. Madag.?

NAT. ORDER RUBIACEÆ:—

Paderia Granddéri. Climbing plant. S.E. and S.W. Coast. Native name t'ahaka. It exhales a strong odour. The natives use the bruised leaves for tooth-ache.

" Grevei. Climbing plant. S.W. Madag.
Ixora Humboldtii. Shrub. E. Madag.
" microphylla. Shrub. Flowers December. West side of the mountain of Ankâratra (Imerina) and Nosibé.
" linearifolia. Shrub. S.W. Madag.
" rotundifolia. Shrub. S. E. Coast (Fort Dauphin).
" Grevei. Shrub. S.W. Madag.
" Hildebrandtii. Shrub. Loc.?