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Mr. E. F. IM THURN read a paper on the "Anthropological Uses of the Camera."

A paper by Mr. H. LING ROTH on "Couvade," and a paper by Mr. S. E. PEAL on "The Morong," were read.

#### ANTHROPOLOGICAL USES of the CAMERA.<sup>1</sup>

By E. F. IM THURN, C.M.G.

[WITH PLATES X, XI.]

AMONG the innumerable uses now made of the photographic camera, that which might be made of it by the anthropologist, and especially by the travelling anthropologist, seems to be insufficiently appreciated and utilised. Allusion is not here made so much to the use of the camera, in connection with anthropometry, for the study of anthropology in its strictly physiological aspects—to its use in taking physiological photographs, on a fixed scale, of the human figure, in certain definite positions, and of simultaneously accurately measuring the same figure; for that, though a very useful function of the camera, is, though somewhat more difficult of practice among primitive folk than those who have not tried it imagine, of quite sufficiently recognised importance. My special concern to-night, on the other hand, is as to the use of the camera for the accurate record, not of the mere bodies of primitive folk—which might indeed be more accurately measured and photographed for such purposes dead than alive, could they be conveniently obtained when in that state—but of these folk regarded as living beings. This latter is indeed a far more difficult proceeding, one much more seldom practised by anthropologists, and one the utility of which for anthropology, regarded, as we all wish to regard it, as an exact science, some anthropologists will, I fancy, be at first sight inclined to question.

Primitive phases of life are fast fading from the world in this age of restless travel and exploration, and it should be recognised as almost the duty of educated travellers in the less known parts of the world to put on permanent record, before it is too late, such of these phases as they may observe; but it is certainly not a sufficiently recognised fact that such records, usually made in writing, might be infinitely helped out by the camera.

<sup>1</sup> [The author has kindly presented copies of the photographs referred to, to the Library.]

As illustrating the small use of the camera for this special purpose, attention need only be called to the almost universal badness of illustrations of living primitive folk in books of anthropology and travel, when these illustrations are not merely what may be called physiological pictures. It is true, that considerable change, though certainly not any advance, at all proportionate with the possibilities, has been made since the old days in which this power of photography, marvellous even to the thoughtful man of to-day, of reflecting on the white screen, here at home in such a room as this, in minutest detail, the actual scenes which were seen by the traveller months or years before, and it may be some thousands of miles away, would have seemed, could it have been foreseen, the blackest magic. Of old, the book illustrator, if, as was usual, he was not himself the traveller, drew as pictures of primitive folk, merely the men and women that surrounded him, drew figures of men and women of his own stage of civilisation, and merely added to these such salient features as he was able, from the traveller's tales, to fancy that his supposed primitive subjects had. So in 1599 the imaginative artist of Nuremberg who drew the pictures for the rare Latin abbreviation of Sir Walter Raleigh's "Discoverie of Guiana" gave to the world his impressions of the "Amazons," the "Headless Men," and the "Men who dwelt on trees" which are typical of the pictures of "savages" which adorn the travellers' books up to nearly the present century.<sup>1</sup>

Analogous pictures of a somewhat later time, as late indeed as the end of the last century, may be instanced in the beautifully executed illustrations by Bartolozzi in Stedman's "Dutch Guiana," in which, in place of natives, are shown, with the necessary change of dress, simply Europeans of more than average beauty of form. There were doubtless exceptions to the misrepresentation of primitive folk, and the greatest of these exceptions known to me is the beautiful series of drawings by Catlin of North American Redmen. But Catlin enjoyed the unusual advantage not only of considerable technical skill as an artist, but of living among the folk whom he drew and about whom he wrote. But even his drawings, valuable as they are, and artistically superior as they are, are far from having the value of the accuracy of photographs.

The modern anthropological illustrator does indeed generally draw from photographs; but almost always from photographs taken

<sup>1</sup> "Brevis et admiranda descriptio regni Guianæ . . . . . quod nuper admodum . . . . . per generosum D. D. Gualtherum Raleigh equitem Anglum, detectum est. Impensis Levini Hulsiil. 4to. Noribergæ, 1599.

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photographic anthropologia miscellanea

under non-natural conditions. An example would not be hard to find, and might indeed be found in one of the most valuable and accurate of recent anthropological books, in which is given a picture of the Caribs of my own country of Guiana, which, I am assured by the very distinguished author, was the best attainable. This picture gives no hint of what Caribs are like in their natural state; but it is evidently taken from a photograph, the history of which I have been unable to trace. The explanation is, however, easy to me. During my many years acquaintance with these Caribs, both in their native wilds and during their brief visits to the town, I have often been struck by the marvellous difference in their appearance when seen under these two differing conditions. It is true that in his natural surroundings the Carib is but very lightly clad, whereas, on the rare occasions when he enters the town he sometimes, but by no means always, puts on a fragmentary and incongruous piece or two of the cast-off clothing of white men, intending, by no means successfully, to adorn his person; but such separable accidents of rags by no means explain the full change in his appearance. I have seen the same men, in their distant homes on the mountainous savannahs between Guiana and the Brazils, though clothed with but a single strip of cloth, two or three inches wide and perhaps a yard in length, and either unadorned or adorned with but a scrap of red or white paint, look like what the novelists describe as well-groomed gentlemen. Yet the same individuals in Georgetown, without any added clothing or adornment, look the meanest and wretchedest folk imaginable. The sense of shyness and mean cringing fear which in the town doubtless drives out from them their innate sense of freedom and happy audacity, seems to find outward expression and completely to alter their bodily form. And it was quite evidently under some such depressing circumstances as these that the Redmen—who, by the way, were probably Ackawois and not "True Caribs"—who are shown in the illustration which is in my mind, were photographed.

Just as the purely physiological photographs of the anthropometrists are merely pictures of lifeless bodies, so the ordinary photographs of uncharacteristically miserable natives, such as that which I have just described, seem comparable to the photographs which one occasionally sees of badly stuffed and distorted birds and animals.

But, it will be said, good and characteristic photographs of primitive folk in their natural condition are seldom to be obtained. Even in these days, when so many travellers carry cameras, and when a considerable number of these have skill in using their cameras, the photographs of natives thus obtained

are neither as many nor as good as might have been expected. Not long ago in an able review of some published book of illustrations of native life—I think in the Pacific—the reviewer expressed it as his opinion that the attempt was a failure, as must be all attempts photographically to portray uncivilised folk. My task to-night will be to show that the record, by the camera, of phases of primitive life, though certainly not without difficulty, yet is not impossible; and that, this being possible, it is for anthropological purposes well worth doing. I am only sorry that my own attempts in this direction, partly doubtless owing to deficiency of skill, partly to the fact that my life is a busy one, and that other demands on my time effectually prevent me from giving as much care as I should like to anthropological photography, are not as excellent as I could wish. They are shown not as in any way perfectly realising, but as tending in the direction which should be taken.

Risking a charge of egotism, I must give a few words of explanation of the circumstances under which the illustrations I shall put before you were taken.

Fifteen years ago I went out to Guiana as curator of the public museum, and in that capacity travelled much in the interior of that colony, only the seaboard of which was, and very little more now is, inhabited. Ten years ago I entered the service of the Government, and, as magistrate, took charge of a large district inhabited almost solely by Redmen. And I remained under those circumstances until, about two years ago, I was transferred to a neighbouring and still larger district of which it may be said that up to the time of my going there the white men who had visited it might be counted on the fingers of one hand. Throughout this time I have lived really among these pleasant red-skinned folk, now and again, for periods of greater or less duration, living not only among, but as they do; and throughout that period I have had none but Redmen as my servant friends. They have got used to me, and I have got used to them, and doubtless in this respect I have enjoyed greater advantages in the matter of gaining their confidence than the ordinary traveller, who merely passes through a country, could hope to enjoy. Some ten years ago, in a book on the "Indians of Guiana" I told all that I then knew about them. Though of course further experience has now taught me a good deal more about them, I must not here linger on anything that does not touch my special subject of to-night—my experiences as a photographer among them.

That to gain the confidence of uncivilised folk whom you wish to photograph, is one of quite the most essential matters

you will easily understand. The first time I tried to photograph a red man was among the mangrove trees at the mouth of the Barima river. My red-skinned subject was carefully posed high up on a mangrove root. He sat quite still while I focussed and drew the shutter. Then, as I took off the cap, with a moan he fell backward off his perch on to the soft sand below him. Nor could he by any means be persuaded to prepare himself once more to face the unknown terrors of the camera. A very common thing to happen, and to foil the efforts of the photographer at the very moment when he has but to withdraw and to replace the cap, is for the timid subject suddenly to put up his hand to conceal his face, a proceeding most annoying to the photographer, but interesting to the anthropologist, as illustrating the very widespread dread of primitive folk of having their features put on paper, and being thus submitted spiritually to the power of anyone possessing the picture.

In passing, a curious instance may be mentioned of the discovery, thanks to the camera, of that rather rare thing—a personal idiosyncrasy among Redmen. Some time last year in photographing a number of Carib lads I noticed that one of them, at the moment of the taking of the picture, suddenly put up his hands and put them, not over his face, but one on each shoulder. The attitude struck me at once as an unusual one, but yet it seemed to me in some way familiar. Some time after, in looking through my old stock of negatives I found one which showed a much younger Carib lad in the same unusual attitude, and it was only after some inquiry that I realised that this last-named negative was one which I had taken some years before of the same boy.

After what has already been said on the subject it is only necessary here just to refer to the sufficiently obvious fact that one of the great uses of the camera to the anthropologist is for the making of what have here been called physiological photographs. An accumulation of a large number of these, taken in accordance with a fixed scale, would undoubtedly have a very considerable value if, it must be added, these were accompanied by a series of exact measurements of the persons photographed; but, it must also be added, such an undertaking presents very considerable difficulties, dependent on the difficulty of inducing uncivilised folk, even after long familiarity with them, to stand in exactly the artificial positions requisite for the purpose, and on the number of photographs, putting it at three each of a large number of individuals, which are required to afford sufficient data for the deduction from them of any inferences. Only a person provided with almost unlimited time, patience, influence over his subjects, and means of trans-

port of the necessary bulky and weighty material in uncivilised countries, should attempt such a task.

On the other hand if the task attempted is to help out, with the great and wonderful powers of the camera, the traveller's description of the folk among whom he has passed, to picture them to home-staying anthropologists better and far more vividly than any words or even any drawing can do, the task, if yet not light, is comparatively easy. This I hope to illustrate by a series of pictures taken during the last six years in British Guiana.

With reference to my earlier remarks on the difficulty of discerning in the ordinary illustrations the real bodily appearance of uncivilised folk, photographs of the True Caribs of Guiana will be shown on the screen. And in so doing it may, without entering into elaborate detail, be once more pointed out that the red-skinned inhabitants of Guiana are distinguishable into three groups or branches<sup>1</sup> (see "Among Indians of Guiana," p. 159, and "Proceedings of Royal Geographical Society," October, 1892). Though the actual pre-European history of these three is, unfortunately, still greatly a matter of conjecture, it is convenient to use such conjectures as seem most reasonable on this subject as a means of distinguishing the branches—that is to say, it is well to bear in mind that probably of the tribes at present in Guiana the Warraus, who inhabit the swamps about the mouth of the Orinoco, were the earliest occupiers, but that there is at present no evidence at all to show whence these people reached their present homes; that another of the branches, represented only by the Arawacks, who inhabit the whole sea-coast of that country with the exception of the more swampy lands of the Warraus, probably reached their present homes from the West Indian Islands long after the Warraus were already established in those parts; and that the third branch, usually called the Carib branch, and represented by the Ackawois, Macusis, Arecunas, and by the "True Caribs," came also from the Islands, but at various times, and made their way, in somewhat various directions, into the back lands of the country. The first set of pictures I am about to show you all are of this last or "True Carib" branch.

The first is of a middle-aged man who lives in the first falls of the Barima River. A single glance at it and a comparison of it with the ordinary, even the best book illustrations of Caribs, will at once serve to make plain the advantage of the photographic method used among the people in their own

<sup>1</sup> Only a limited number of the photographs shown in illustrating the reading of this paper can be reproduced for the Journal.

homes over any other method of showing what these primitive folk are really like. Before shooting the falls in their canoes the Redmen always carefully examine the state of the river to see which rocks are exposed, which lurk as hidden dangers beneath the surface in that particular state of the water; and it was while he was engaged in this cautious survey that this photograph of this Carib was taken. The next is of the same man taken under somewhat different circumstances. The hospitality of these persons is almost unbounded, and the etiquette of its observance is rigidly fixed. The master of the house, when expecting guests, grooms himself carefully and puts on his best dress and ornaments, these often, as in this case, consisting only of a narrow waistcloth by way of dress and of a necklace and armlets of white beads by way of ornament. Thus honouring the occasion to the best of his ability, he sits, somewhat stolidly, outside his house awaiting his guests, with whom when they arrive he will without rising or in any other way testifying any interest, exchange one or two entirely conventional and monosyllabic sentences, dropping them out one by one at long intervals.

It is generally supposed that these red-skinned folk are undemonstrative in their bearing towards one another. But this really is only in the presence of strangers. - When alone, or before others with whom they are familiar, their bearing toward each other is even caressing. Such a picture as this, of three Caribs standing with their arms round each other's necks, may often be seen.

The next picture, of a young Carib man, perhaps a little above the average in physique, is intended to show that these people, though not tall, are a fine people in the point of physical and muscular development.

Again, in the matter of facial expression, the ordinary conception of these people as dull and expressionless should give place to the truer idea that, when not made shy by the presence of unaccustomed strangers, there is a great deal of life and even in some cases of beauty in their appearance. It is practically impossible for a stranger to see them in this their more pleasing and natural state, except when, as I now do in this picture of three Carib lads, they are taken under the most natural conditions, and distance and time being for the purpose annihilated, they are shown you in the most natural conditions but without their knowledge.

That it may not be said that in my anxiety to impress you with my own too favourable ideas of these red-skinned friends of mine, I have elected only to show you young fellows in their too brief prime, I next show you an old Carib. I must, how-

ever, admit that he is only old for a Redman. His age was probably about forty-five. But these happy childlike people lead but a short if a happy life, and are old at fifty, and rarely survive to sixty.

Even among the young folk disease sometimes, though I am glad to say not often, plays havoc. And I am able to show you a picture of an unfortunate lad of that race suffering from the malady which is most common among them—consumption.

And lest it should be said that I have ungallantly confined my selection to the men, I end this series of Carib pictures by one of a group of three women sitting together after a common, but surely inconvenient fashion, in one hammock.

Some interest attaches to the as yet not very numerous instances of persons whose veins are half filled with Indian, half with foreign blood. I have, personally, not the slightest doubt that the pure Indian left to himself and his own natural conditions is much the happier and morally the better man. But from the first instant that the stronger European influence meets and touches the weaker native American race, it is absolutely unavoidable that a change should begin in the latter; and it has always seemed to me that it is our duty, though I fear one that has seldom enough in the history of the world been acted on, or at least been wisely acted on, to see that this change which we are forced by circumstances to make in this naturally happy and estimable folk, should be as little to their detriment as possible. As a well known and much esteemed man, who was at the time your President, once said to me, it seems to be a fact that, sad as has been the history of the relations of civilised with uncivilised man, there has probably never been an uncivilised folk which would have met the friendly advances of civilised men in any hostile spirit. Guiana is one of the not too numerous places in which from the first the European influence, largely, it must be admitted, because the circumstances of the place did not bring it much in contact with the native element, has been comparatively, unfortunately I can only say comparatively, harmless to the latter. But now, when, owing to the spread of the gold industry into the before unknown interior of the colony, these circumstances are rapidly changing, and the European and native elements are inevitably being daily brought more and more into contact, it would become us to see that the gradual merging of the native into the European element should be accomplished with as little injury to the former as possible. And this desirable end, difficult, it must be admitted, of attainment, could best, and, it seems to me, only be reached, by a

gradual intermarriage of the two elements. It is not without interest, therefore, to note what has been the result of such intermarriage as has already taken place.

The matter should be considered in two aspects, the moral and the physical; and in so doing it must be remembered that the European element introduced into the problem is diverse, for it is brought in by English, Spanish, Portuguese, and—for these too are European in the sense that they have been introduced by Europeans—Negro, Chinese, and East Indian.

Taking these in the order of their strength, the Negro has intermarried with the Redmen more than have any of the others. The resulting half-breeds are known in the colony as "cobungrus" or as "cobs," and are, as far as I know, invariably the result of the intermarriage of a black man with a red woman. Morally the good or evil result of the cross depends on whether the offspring are brought up entirely by the mother and entirely among her folk, or among and as the father's folk. In the former case the child acquires chiefly the qualities, which are generally the good if simple qualities, of an almost entirely nature folk; while in the latter case it acquires rather the qualities of the father, which, in no spirit of reprobation, but of pity, must be described as those most woefully and sadly unfortunate qualities which the European, as a Frankenstein, compounded and supplied to that most artificial creature which, by his original enslavement of the Africans and then by the too rapid and entirely badly planned enfranchisement of these same, he created. On the other hand, if we turn from the moral to the physical aspect of such an intermarriage as we are contemplating, the result may much more unreservedly be pronounced excellent. In a very striking recent book written by a black man on black men, the unexpectedly frank truism is, with quite admirable courage, stated that the greatest drawback of the black man, when he struggles for civilised existence, lies in his physical ugliness. Now this ugliness chiefly, of course, finds expression in his face; but it is yet exhibited in his whole body, which, however, is generally of most amazing and admirable strength. The red man, on the other hand, generally has a face which, if not beautiful according to the European standard, is yet, in delicacy and beauty of line far more admirable than is that of our black man; and his body, wanting the brute strength of the black man, yet far surpasses the latter in its beauty of line and in its marvellous suppleness. Now, if in the blended offspring of a black man and a red woman the moral characters of the two parents, as originally implanted in equal proportions, are liable to be educationally altered in the direction of those of either the

father or the mother, in accordance as he lives either among his father's or his mother's folk, yet the physical qualities originally imparted by the two parents are liable to no such modification. Probably in accordance with some phase of the law of beneficial variation, it happens that it is the better physical qualities of each of the parents respectively which find place in the offspring, to the exclusion of the less worthy. So that the body of the child, with the strength of the black father is combined the beauty of line and consequent suppleness of his maternal red-skinned folk.

It must be confessed that the various favourable results which have here been attributed to the union of the black man and the red woman are too seldom attained, at least in full perfection; but it is of course equally seldom that the requisite most favouring circumstances all co-exist. But that an approximation to these good results is occasionally attained—and is, therefore, worth striving for—I can bear personal witness. For about ten years past my life has been made comparatively smooth for me by the services of one such half-breed, whose picture I now show you. Gabriel is the child of a red-skinned mother—a Warrau—and a black father. It must be admitted that the moral qualities of the father were not quite what they should have been, for he was brought into contact with the mother in consequence of having to take refuge among her folk when in hiding from the police who were in search of him on a charge of murder. History does not say what became of him after (having lived with the Warrau woman but a few months) he deserted her. The child was brought up by the mother, and entered my service when he was probably about seventeen, ten years ago. Physically the picture of him which I show you speaks for itself. It can, of course, not be claimed that his face is beautiful, but it is at least far more refined than that of the ordinary black man, and his expression, of which the photograph gives no idea, has the gentle intelligence of the red man, with a certain proportion of the animal good humour which is the most favourable character to be looked for in the black man's face. That his strength is not only apparent but real will be understood from the fact that I have seen him walk a short distance, when portaging the baggage past a fall, with a rice bag, weighing 120 lbs., on each shoulder. As regards more obscure qualities, you must take it on trust from me that he has in quite remarkable degree the great knowledge, of a certain kind, and the intelligence to apply this knowledge which enable the red man to hunt with success in the difficult and obscure forests of Guiana, where game abounds, but under conditions so difficult that hardly any European, however

skilled or trained a huntsman, can hope for any success; that his versatility is considerable is, I think, sufficiently proved by the fact that he has readily adapted himself to help me in all the many European hobbies which go to make up my life, and has even acquired sufficient of the delicacy of skill requisite to assist me in the manipulation of the camera in the field. In short, he is as versatile and faithful a servant as anyone ever had; and such few defects as he has are, I fear, acquired, despite all care, by his contact with an influence so foreign to him as is the European.

After the Negro-Redskin cross, the one next most commonly represented in Guiana, is the Spanish Arawack. The history of these people is as follows:—For some time before and after the war of independence of the neighbouring country of Venezuela, certain Venezuelians, already probably of mixed Spanish and red blood, worried by the constant demands on their services as soldiers in a war in which they took no interest, fled across the Orinoco and settled on the Moruka River, in British territory. Here they married wives of the Arawacks of the district, and, partly doubtless because they were Roman Catholics, kept themselves distinct from the other people of the district, and have ever since maintained this isolation. Physically they are a fine people, and they have always been a fairly industrious people; but now that the gold industry has invaded the very river on which they had settled, their quiet and industrious habits are, it is to be feared, in danger of transmutation.

As a picture of a Spanish Arawack may be shown one of a young man nicknamed El Gato, or "the cat," on account of the wonderful suppleness and agility of his limbs.

Considerations of time forbid that I should do more than merely show you pictures of the cross resulting from the mixture of Portuguese and Arawack blood, and the still more curious mixture of Scotch and Arawack blood. In the latter case it will be noticed that, as in all the other rare instances I have seen of the mixture of British with Red blood, the resulting cross takes much more exclusively after the European parent than is common when the foreign element is of non-British origin.

Another obvious, but insufficiently used, use of the camera for anthropological purposes would be for the better illustration of collections of objects of ethnological interest. Those who have tried know best the difficulty of showing these in an effective and interesting manner. Comparatively elaborate and correspondingly artistic objects made and used by a people who have made considerable progress without attaining what we

are pleased to call civilisation, are easily shown in an attractive manner; but the simpler objects, illustrating the daily life of people in a much more primitive state of civilisation, are not so easily placed. The articles which constitute the dress and ornaments of a people which makes but little use of ornament and less of dress, are generally of so simple a nature that when stored in rows or, as I am afraid is sometimes the case, in heaps or even in bundles, in museum cases, they too often seem deficient in interest to the very curators of the museum, and are naturally much more so to the outside public. Yet these same things, very likely, to one who has seen them in actual use, seem, just because of their simplicity, more interesting than the elaborate dancing masks and such like. It has been suggested—possibly the suggestion has been carried into effect—to display these on lay figures; but when it is remembered how very few of these simple articles of dress or ornament are worn at any one time, it is obvious that for their proper display in the suggested manner the number of lay figures which would be required would, for reasons both of economy and of space, make the plan ineffective. A much more feasible plan would be to place by the side of each object, or group of objects displayed, a photograph of the object—preferably of the identical object. A few examples will better explain what I mean:—

The first is a photograph of a Partamona (Ackawoi) red man in a curious dress made and worn for a special festival celebrated by those people and called Parasheera. The dress consists of three parts, which may be described as skirt, cloak, and mask, all made of the bright greenish-yellow, immature leaves of the Æta palm (*Mauritia flexuosa*). Probably there is not an example of this dress in any existing museum; for it is probable that no white man except myself has ever seen it, and I frankly confess that I was deterred, as has often been the case under similar circumstances, from bringing away an example of the dress by the consideration that when seen off the body of the wearer it would look like nothing in the world but a small bundle of withered palm leaves, and would to the uninitiated seem supremely uninteresting (Plate X).

The next example I show you is a picture of a Macusi lad in full dancing dress. Those who are acquainted with the ordinary heaped curiosities of the average ethnological collection will perhaps recognise the typical head-dress of bright parrot and macaw feathers, the loose hanging ruff of alternate black curassow and white egret feathers, and the strip of waist-cloth upheld by a cotton belt, which constitutes the whole of this dress; and such persons will probably recognise that these articles seen, as in this photograph, *in situ*, acquire a new interest.

Again, one of the commonest articles from Guiana seen in museums is the necklace of peccary teeth, much affected by all the Carib tribes. But in now showing you one of the finest specimens of this ornament I have ever seen, it will probably gain very much in interest from the fact that I am able at the same time to throw on to the screen a picture of the actual necklace on the Macusi, named Lonk, from whose shoulders I acquired it. And it may, in passing, be of interest to add that these necklaces, in the manufacture of which only the tusk teeth of the peccary are used so, that, in proportion to its size, each represents a very large number of animals, are most highly valued as heirlooms, and as representing the accumulated prowess not only of the wearer for the time being, but also of his ancestors, for this property is handed down in the male line of descent, and is added to by each holder.

A small necklace of the same kind but only just begun, is shown in the next picture. And in this may be noted too the cotton armlets, fastened with a sort of brooch or disc of turtle bone or shell, which are also among the most characteristic ornaments of the Carib. And in yet another picture not only is the mass of cotton tassels and other such ornaments which characteristically hangs down the back from these same necklaces shown, but further illustrations of the feather head-dress and shoulder ruff seen in a previous picture are seen.

Some little time ago the authorities at Kew asked for some information about an object of seeds from Guiana, supposed to be a necklace, which is in their museum. It was necessary to explain that the thing is not a necklace at all, but is worn across the body from one shoulder to the opposite hip; and it is much easier to explain this when it is possible to show, as I now show you, a picture of the actual thing as worn. For the sake of accuracy, it is as well to add that as a rule two of these ornaments are worn, one from each shoulder, and crossing each other in front and on the back.

Similarly Professor Giglioli had long asked me to procure for him a specimen of the flutes made of bone which are among these Redmen's few instruments of music; and I was very glad, in complying with his wish, and sending him a flute made of a jaguar bone, to be able to send at the same time a photograph of the identical flute in the hands of the True Carib lad who made and used it. Attention may be called, in passing, to the characteristic and elaborately made cotton tassel which adorns this flute as it does so many of the personal adornments of these people.

Probably one of the least interesting objects to the ordinary passer through an ethnological museum is a bow. But it would

acquire a fresh interest if it were shown side by side with a picture of its original possessor and user. In the example here shown the size of the bow as compared with its True Carib owner may be noted.

In short, a good series of photographs showing each of the possessions of a primitive folk, and its use, would be far more instructive and far more interesting than any collection of the articles themselves. Or, if it is desired to illustrate not the possessions but the habits of such folk, the thing can be done in the same way. A few examples from a large series showing the games of these people will illustrate this.

Many of their games are dramatic representations of ordinary incidents in their work-a-day life. One represents their rare and eventful visits to the distant town. Of the many figures in this game one represents the fully manned canoe in which they go on their journey down the big rivers of the country. All but two of the players, seated on the ground, the one behind the other, and each clasping the player in front of him, form a long line, which, by the action of the feet and thighs of its constituent members, drags itself slowly forward, the whole swaying from side to side. In this way—which must certainly involve a considerable amount of somewhat painful friction, considering the hardness of the stony ground traversed and the unprotectedness of the skins of the players—a very realistic representation of the forward rolling motion of a large and well-manned canoe, such as would be used on a real journey, is attained. And the illusion is assisted by the players' noisy imitation of the regular and most characteristic rhythmic beat of the paddles against the sides of the canoe, and of the shouts of the paddlers.

After several other figures, another comes, in which the players, all standing in line, each falls forward on his hands and feet, his thighs the highest part of him, so that the whole line of players, with their closely pressed bodies, forms a long tunnel, through which each player in turn has, as in a well known figure in the old-fashioned dance of Sir Roger de Coverly, to pass, but by creeping. The journey, that is, is nearly over; and the home-comers, leaving the broad river up which they have come so far, have turned into the narrow creek or side stream densely roofed with low hanging trees, which leads directly to their homes; and under this natural tunnel the canoe has to force its way.

Other games to be seen among the Redmen of the borders of Guiana and Brazil are simple representations of the doings of animals. For instance, one represents an aguti in a pen and the attempts of a jaguar to get him out. The players form a

ring, their arms round each other's necks. Inside this circle one of the players crouches, and represents an aguti—a small animal often kept in captivity by the Redmen—inside the pen. Outside the pen another player watches; it is the jaguar looking with hungry eyes on the aguti. He tries to get the aguti out between the bars of the pen, that is between the legs of the ring of players. But the living pen whirls round and round, and it is no easy task for the jaguar to seize the aguti and drag it out.

Yet more curious is the whipping game of the Arawacks. It is played by any number of persons, but generally only by men and boys, for one, two, or three days and nights—as long, that is, as the supply of *pairwari*, the native beer, holds out. The players, with but brief intervals, range themselves in two lines opposite each other. Every now and then a pair of players, one from each line, separate from the rest. One of these puts forward his leg and stands firm; the other carefully measures the most effective distance with a powerful and special whip with which each player is provided, and then lashes with all his force the calf of the other. The crack is like a pistol shot, and the result is a gash across the skin of the patient's calf. Sometimes a second similar blow is given and borne. Then the position of the pair of players is reversed, and the flogged man flogs the other. Then the pair retire, drink good-temperedly together, and rejoin the line, to let another pair take their turn of activity, but presently, and again and again at intervals, to repeat their own activity.

It has been said that the most active players of this extraordinary game are the men and boys. But occasionally the women take a part also. And it is noteworthy that when this is the case a wooden figure of a bird, a heron, is substituted for each of the whips, and a gentle peck with this bird is substituted for the far more serious lash of the whip. I do not know that any equivalent example of the fact that the germ of the idea of courtesy to the weaker sex exists among people even in this stage of civilisation is on record.

Another noteworthy game is played by the Warraus. Each player—and in this game the males only take part—is provided with a large shield made of the leaf-stalks of the *Æta* palm (*Mauritia flexuosa*). Each pair of players, the one pressing his shield against that of the other, strives each to overthrow the other.

The last set of pictures I propose to show you is a series illustrating the manner of life of the curious and comparatively little known Redmen called Warraus, who inhabit the very wide-spreading swamps which block the mouth of the Orinoco river.

It was of these people that the tale was told, by no less a person among others than Humboldt, that they lived in houses suspended from the tops of the palm trees. Their habits are not quite as strange as that tale would make out, but yet the manner of life is strange enough. It is a people which may in truth be said to depend for their very existence on a palm tree, even though they do not hang their dwellings on these. The palm in question is the *Æta*, the *Mauritia flexuosa* of botanists, which occurs in vast abundance in the swamps of the Orinoco. The soft pith from the inside of the stem of this palm, the maggots which are bred in the decaying trunks of such of these palms as have been cut down for the sake of the pith, the sap which accumulates and ferments in the hollows of these fallen trunks, together with the soft pulp which envelops the seeds of this palm, form, with the exception of the few crabs and fish which they catch, the sole food of this people, which, unlike the other Redmen of those parts, does not cultivate the soil and hardly ever hunts. A few felled trunks of this palm ranged side by side on the swampy ground affords to these people at once their only foothold and the floors of their houses; and four corner posts having been erected on this platform, a roof of the leaves of the same palm completes the simple dwelling. Practically the only furniture within the house thus formed is the hammock, which is made of the fibre from the young leaves of this same palm.

These strange dwellings are situated, probably for the sake of the safety of seclusion, not near the river banks, but at long distances within the depths of the swamp. Visiting a settlement of these people not many months ago, we had to walk for more than three miles not on the ground, indeed more often than not from five or ten feet above it, but on an artificially formed track of fallen trees. Near the river the path passes over the tops of the wild tangle of mangrove roots, trees having been felled in such a way that their trunks, supported on the arched roots, form a continuous but narrow and slippery path. Yet further in, where the mangrove roots no longer offer their convenient support, the felled trunks are carried over the watery swamp sometimes by being rested in notches cut in the still standing trunks, sometimes on posts run into the soft ground especially for their support.

It probably seems that these must indeed be a wretched people; but indeed it is not so. They are happy and contented. And for their physical appearance let the following pictures answer. The first is of a father and his two sons whom we found in one of the houses visited on the occasion above referred to; the second is of the wife and female relatives of



the same householder; and the last is of a neighbouring householder and his son. In this last picture the cake of *Æta* bread, that is, the compressed pulp scraped off the palm fruits, may be noted.

Even if the time at my disposal were not exhausted, enough has, I hope, already been said, and enough pictures have been shown to illustrate the contention that the camera, to say nothing of its uses for anthropometric photography, may be utilised by the traveller with anthropological tastes to very great advantage in securing, for exhibition to those of similar tastes who are not lucky enough to be able to travel and see for themselves, accurate records of the appearance, life, and habits of the primitive folk visited. All that remains to be done is to add a few remarks as to the requisite apparatus which may be useful to those going for the first time into untravellered countries.

Nor need these remarks be lengthy, for there is an admirable chapter on the subject, by the late W. F. Donkin, in the latest edition of that useful little book, "Hints to Travellers," published by the Royal Geographical Society. All that it is here proposed to do is to add a very few brief notes on the same subject by one who has had actual and considerable experience in meeting photographic difficulties in a little explored and uncivilised country. Mr. Donkin's notes, apt as they are, seem not fully to meet the case of one travelling quite beyond the confines of civilisation.

Chiefly to be considered in providing apparatus are the circumstances of the country in which these are to be used. It need hardly be said that for a country in which all the requirements of the traveller of every kind have to be taken with him, either in boats, necessarily of limited size, or on men's backs, the portability of the apparatus is an essential consideration; but for a country like Guiana there are other considerations more often overlooked but quite as essential—such as the heat and extraordinary dampness. Another thing which should be taken into consideration, but is still more often overlooked, is that in such a country as Guiana the traveller lives both by day and night in the open air, and under a sky from which very rarely—only indeed during the few night hours when there is no moon and when the stars are obscured by clouds—is no light reflected to his hindrance in changing plates or in any other of the proceedings of the photographer which must be carried on in none but red light. The brief remarks which I shall make on apparatus will be regulated by these considerations.

Any make of camera, provided that it is substantial and as light as may be, will answer. Here the only matter for deliberation is as to the size. At first sight it may seem right to

recommend the use of quite a small camera, say a quarter plate, or even one of the still smaller hand cameras; but I am practically convinced that the most satisfactory size—as indeed Mr. Donkin also recommends—is  $7\frac{1}{2} \times 5$ , the only disadvantage of this being that, for some mysterious reason, dealers in photographic materials in colonial towns, from which it is often convenient to derive one's material, do not keep plates and other material for this size in stock. As to hand cameras, be they large or small, they are an abomination, and are really much more difficult to work with satisfactory results than are fixed cameras.

As regards choice of lens for our special purpose, where only one is taken, either a Ross's Rapid Symmetrical or one of the new concentric lenses of the same maker seems best. If the cost does not deter, the addition of one of Dallmeyer's new tele-photographic lens will be advantageous.

A more difficult question to decide is as to whether it is better to use glass plates or some of the numerous film substitutes. Taking into consideration the enormous weight of a stock of glass plates adequate for a journey of any length such as we are contemplating, it would at first sight seem quite certain that the preference should be given to the far lighter films; but films, as at present manufactured, have the great disadvantage of not keeping their condition for any length of time in a very hot and very damp climate. Moreover the present films seem in a hot climate to be very difficult to dry after development, which, if the plates are developed *en route*—as should be the case—is a decided disadvantage; nor, in the case of what seem to me otherwise the best of the existing films, *i.e.*, those of xylonite, can this difficulty be overcome by the use of methylated spirit, which is not only bulky to carry but also unfortunately dissolves the substance of which these films are made. On the whole it seems best at present to take a certain number of good glass plates for the more special work, and to take xylonite films for more ordinary occasions, and then to live in hope that the defects in films which I have indicated may speedily be remedied, so that it may soon become possible to use only films.

The next consideration is as to the best means of providing oneself with a safe photographic light for use on such occasions. If it is decided to keep the plates after exposure for development at home it is still an absolute necessity to have some sort of bag or tent of dark material in which to remove from the dark slides such plates as have already been exposed, safely to pack these, and to substitute unexposed plates in the slides. It is often said that this can be done at night by the simple

means of a candle shaded with a piece of some red material; but for reasons which I have already indicated, this is so seldom as to be practically never possible when travelling under a tropical sky in parts where no houses are. Any of the ordinary forms of changing bag, provided they are sufficiently large and sufficiently ventilated to allow the head and arms to be inserted, will answer for this purpose; but this presupposes that the only thing wanted is means of changing the plates, whereas, both for the sake of knowing what one is about and because developed plates may be much more easily and safely carried than those which are undeveloped, it is far better to develop one's plates as one goes along, and for this some more convenient arrangement than a simple changing bag is needed. What is wanted is some form of dark tent provided at least with a sink, some sort of shelf on which to put the apparatus with which one is working, say a couple of dishes, a rack for holding the plates from time to time, the vessel in which the necessary supply of water is contained, and the three or four requisite bottles of chemicals, and this must be sufficiently ventilated to allow the user to stay in it for some considerable time. Many portable dark-rooms purporting to meet these requirements are in the market. The best is probably one known as the "Army" dark room, manufactured by Messrs. Davenport and Co., but the weight of this (70 lbs.) practically prohibits its use on such journeys as I am contemplating. One called the "Conical," by the same makers, seems on a more suitable principle, but this has no conveniences in the shape of sink and shelf. It is practically simply a bell tent of suitable dark material; and if to it were added some form of portable sink and shelf it would probably meet the requirements.

In short, the suitable dark tent for such journeys as we are contemplating has still to be invented. Should anyone be inclined to try his hand at supplying this need, one essential feature to be remembered is that it must be lighted from the outside, being provided with a window of some suitable and unbreakable translucent material outside which an ordinary lamp can be hung.

Two other hints as to material may be given; one is to use trays of xylonite, with, if spirit is to be used, one tray of ebonite specially for that chemical; the other is to use for a developer the new one known as amidol, which may best be carried dry.

But quite as important as the choice of material is the means of packing this from time to time. Heat, damp, and insects are the great things to be guarded against, and, once more, portability must be taken into consideration. The camera, dark slides, and all necessary for the actual exposure,

should be carried not in a leather but in a tin case, which should be as air-tight as possible, and in which a few small muslin bags of naphthaline should be kept. And inside this case the lens or lenses should be in a smaller tin case. Many of the ordinary forms of quarter pound tobacco tins are readily convertible for this purpose. Each dark slide should be in its own black velvet bag; indeed the best packing material for the whole apparatus is provided by putting each article in its own separate velvet bag; this, with the "dark cloth," and perhaps a chamois leather and an old silk handkerchief for wiping purposes, providing all that is necessary in the way of packing. The bellows of the camera and all such leather work should be lightly smeared from time to time with carbolated vaseline.

The store of glass plates and films which is taken must also be very carefully packed; in the case of the glass each dozen being put in its own separate tin case of a form supplied probably by many dealers, certainly by Messrs. Wratten and Wainwright, and the lid of which should not be soldered on but protected at the place where it joins the main part of the box by a piece of waxed paper, or better still by a broad indiarubber band, such as is used for similar purpose on the chloride of calcium tubes in which platinotype paper is usually kept. The packets of films should be packed in the same way, except that several dozen may be packed together in one case. The whole store, whether glass or film, should then be wrapped each in a sheet of non-actinic paper, which may often come in useful in the course of the journey, and should be placed, again with a little naphthaline, in an air-tight lockable case.

All air-tight cases which may be used should be provided with outside metal rings and with leather straps running through these for the purpose of easy carriage.

And not the least essential is the provision of a waterproof cover to go over the whole apparatus when it has to be stored at night in the open air camp, under which circumstances it is, by the way, as well to take care that the cases are not put on the ground, but are either hung from the trees or are at least raised from the ground on a platform of branches.

In conclusion I would suggest that this Institute should make it its business to collect and arrange in some suitable manner all photographs of the kind here alluded to, which the travelling anthropologist may secure.



*To face p. 195.*

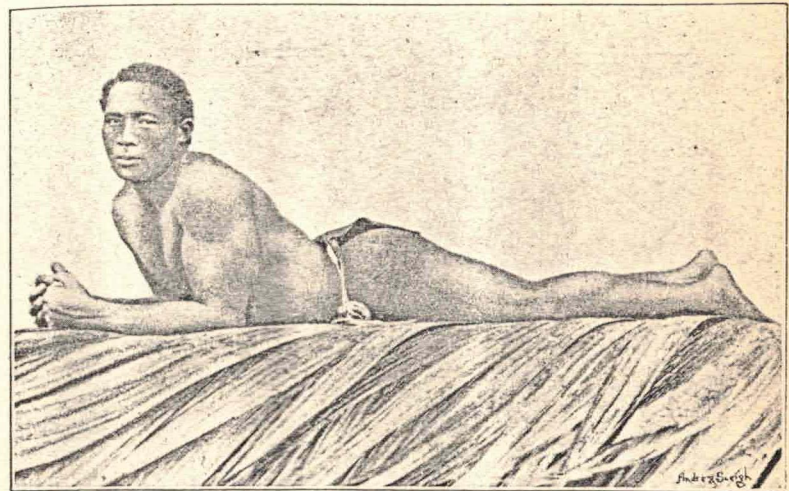


FIG. 1.—GABRIEL, THE CHILD OF A RED-SKINNED MOTHER, A WARRAU, AND A BLACK FATHER.



FIG. 2.—A MACUSI LAD IN FULL DANCING DRESS.

*To face p. 196.*