

Maurice Vital Portman

Photography for Anthropologists

In: The Journal of the Anthropological Institute of Great Britain and Ireland, Vol. 25

1896

S. 75–87

## ANTHROPOLOGICAL MISCELLANEA AND NEW BOOKS.

---

### PHOTOGRAPHY FOR ANTHROPOLOGISTS.

My only excuse for troubling the Anthropological Institute with this paper is, that I am a practical anthropological photographer of some experience, who has worked in, for that art, most trying climates; and, having experimented with nearly all the first class cameras, plates, and apparatus in the market, has found out what articles are necessary, and what makers can be relied on.

I work for the Ethnographic Department of the British Museum, and ventured in a communication with Mr. C. H. Read, who besides being one of my scientific chiefs, is also on the Council of the Anthropological Institute, and joint editor of "Notes and Queries on Anthropology," to point out that Chapter LXVII in that book did not seem to me to answer all the questions which an explorer who intended to photograph for anthropological purposes would be likely to ask. It appeared to me to be written from the point of view of a past master, who, knowing the subject himself, cannot understand how anyone else can be ignorant of it. The ignorant people, however, are on the whole in the majority, and it is for then that I write.

I do not propose to teach the explorer how to take photographs. He can easily learn that in any town, and certainly in London, where, not to mention other firms, lessons are given by the London Stereoscopic Company, and also, I believe, at the Polytechnic Institution. The mere taking of a negative, and the printing of the same on cold bath platinotype paper, are easily learnt, and this knowledge is assumed by me. The ordinary information in photographic handbooks is of very little use to the class of photographer for whom I am writing. These handbooks are written, either in the interests of some firm whose materials may be utterly unsuited to the climate in which our work has to be done, or they give a long list of apparatus, plates, developers, and printing processes, from which the anthropologist can choose, but no advice as to what will or will not do in extreme climates.

Also, I do not believe that the explorer will get much good by consulting trade journals, or leading firms. Special goods are chanted, and bewildering and contradictory statements made, by rival firms, whose first business it is to sell their own goods, nor have many photographers or tradesmen in England the

experience in extreme climates or in the class of work required by anthropologists, which would alone entitle them to advise.

Now, as regards the importance of photography to the anthropologist, particularly when the work is carefully done, there cannot be two opinions. Mr. Read in the publication above referred to says, "The best plan seems to be to devote as much time as possible to the photographic camera, or to making careful drawings. By these means the traveller is dealing with facts about which there can be no question, and the record thus obtained may be elucidated by subsequent inquirers on the same spot, while the timid answers of natives to questions propounded through the medium of a native interpreter can be but rarely relied upon, and are more apt to produce confusion than to be of benefit to comparative anthropology."

I write for the information of would-be explorers, or recorders of ethnographic facts, and not for already skilled workers, though I propose relating details of my own procedure which may even be of use to the latter.

Properly taken photographs, with the additional explanatory letter-press, will be found the most satisfactory answers to most of the questions in "Notes and Queries on Anthropology." In Part I of that work, external characters could be illustrated, and large photographs of the face, in full face and profile, should be taken.

In posing the subject for these, the body must be upright, and the face so held that the eyes looking straight before the subject are fixed on an object on a level with them. (Exactly as fixed for measurement in Plate II.)

Chapter No. VII in this part can be illustrated by photographs, as also No. XVIII, the attitudes and movements being taken to the best advantage with a hand camera.

Chapter XXI, physiognomy, can also be illustrated by photography, and development can be shown by photographs taken of subjects at different ages. These should be stark naked, a full face and a profile view should be taken of each, and the subject should touch a background painted in black and white chequers, each exactly 2 inches square. All abnormalities, or deformations, whether natural or intentional, should be photographed; and in VII, medicine, and VIII, surgery, operations, bandages, &c., can be thus shown.

In Part II photography will be found of the greatest use in answering the questions accurately. The manufacture of different implements, weapons, &c. (each stage from the rough material to the finished article being shown), indeed almost every act of the life of a primitive people may be photographed.

With regard to the photographing of savage races the following hints may be of use.

It is absolutely necessary to have patience with the sitters, and to be in no hurry. If a subject is a bad sitter, and you are not using a hand camera, send him away and get another, but never

lose your temper, and never show a savage that you think he is stupid, or, on the other hand, allow him to think that, by playing the fool, he can annoy you, put off your work, or that to stop him you will be willing to bribe him into silence.

Before you pose a group of savages, have the camera (except of course in hand camera work) fixed up, and focussed for the spot where they are to stand. This can easily be done by marking a space on the ground within which they will be placed, and focussing sharply on some pieces of wood or stone placed in it. The dark slide should be in its place and all ready, so that as soon as the subjects are posed satisfactorily, the cap can be taken off the lens and the exposure made.

For ethnology, accuracy is what is required. Delicate lighting and picturesque photography are not wanted; all you have to see to is, that the general lighting is correct, and that no awkward placing of weapons or limbs hide important objects. This can easily be ascertained by the use of a small finder on the camera.

In any sitting group, where you are anxious to show the way in which the hands or feet are used in the manufacture of any articles, the camera can be made to look down on the objects, the swing back being used to focus with.

For want of the knowledge of better examples may I refer the intending photographer to my illustrated "Record of the Andamanese," executed for the British Museum, and partly finished. He will see the lines on which I work and will, no doubt, go and do better.

Before proceeding to practical details I will give one other quotation from Mr. Read, which, as sixteen years' experience with savages has taught me, contains one of the most valuable hints in the book "Savages will be found to answer more freely when the interrogator places himself on the same level as themselves, i.e., if they sit upon the ground he should do the same."

The first question the intending photographer has to ask himself, before purchasing his outfit of photographic apparatus, &c., is:

what sized negative shall I take ? and before answering this he must consider the following additional questions: —

Where is he going?

What is the nature of the climate there?

Will he be stationary, or a traveller, when in the country?

What sort of accommodation does he expect to have?

In what grade of civilisation and friendliness are the people he is going to study?

Can he, when among them, easily procure fresh supplies from a well furnished depot?

Lastly, how much money does he intend to spend?

*As Regards Climates.*

Extremes of heat and cold, by themselves, do not, seem to affect good photographic apparatus much. In the former case it will be

necessary to use methylated spirit in the developer, or to ice the solutions, to prevent frilling; and in the latter, all solutions and the washing water should be warmed to about 70° F. In both cases all metal work should be covered with Russia leather in order that the fingers may not be blistered.

What one has to look out for, are, the extremes of dryness and damp, accompanied by either heat or cold, and of these two, after a long experience of the latter, I am inclined to think that the former is the worst.

Perhaps the best outfit for a very dry, hot climate would be that detailed below as the 5-inch by 4-inch outfit, with the addition that all the woodwork is replaced by metal, and that all the metal, including the lens mount, is covered with Russia leather.

The double backs should be of the solid, or American, not of the "book" form, and should also be, if possible, of metal. Messrs. Marion and Co. have a metal camera which should do. If my instructions are carefully followed the damage caused by excessive damp can to a certain extent be guarded against.

A traveller will of course take a smaller outfit than a person who is stationary; and the accommodation the stationary person will meet with will influence him regarding the setting up of a studio and the working of anything larger than whole plate (3 1/2 inches by 6 1/2 inches.)

If fresh supplies of photographic materials can easily be procured the original stock of plates and chemicals need not be very large, and the photographer can indulge in such things as isochromatic plates and films.

In parenthesis, I would remark that, while I am not connected with any particular firm, or anxious to advertise that firm's goods, it is necessary for me, for the purpose of this article, to state the makers from whom I advise the reader to buy his outfit, my sole reasons for giving these makers names being, that I have bought goods from them, and know from practical experience that these goods will do all that I say they will. I have therefore only mentioned the following firms:—

Messrs. Ross and Co., Dallmeyer and Co., Watson, Newton and Co., The London Stereoscopic Company, Marion and Co., Wratten and Wainwright, and Mr. P. Meagher. Messrs. Newton and Co., of 3, Fleet Street, will manufacture almost any scientific apparatus which may be ordered, and their work is excellent.

I will now describe the different outfits I recommend for fixed cameras, commencing with the smallest, and leaving hand cameras till later. The additional articles required for all outfits will be mentioned hereafter, the present details being of cameras, lenses, &c., only.

#### *Outfit No. 1.*

A square, 5-inch by 5-inch, camera, of mahogany brass bound, with Russia leather bellows. Double extension. It should have

a double swing back, and rising and shifting fronts, to take a 5-inch by 4-inch plate either way. Six brass bound double backs are required, and two lenses, one Ross' 8-inch by 5-inch Rapid Symmetrical, and one Dallmeyer's No. 1A Wide Angle Rectilinear Lens. One drop shutter for rapid work. One stout tripod stand, and metal tripod head. One focussing glass. One pocket, level.

A focussing cloth, 5 feet square. The camera, double backs, lenses, &c., will be in a solid leather case, lined with baize, which should have a lock, and the whole should have a stout waterproof cover.

With the above, excellent, work can be done. By stopping the lens down to F/64, negatives can be taken which will stand enlarging to 15 inches by 12 inches, and in this way very good life-sized portrait heads can be done.

(It will be seen that I recommend throughout the employment of lenses a size or two larger than the size advertised to cover the plate used. The reasons for this are obvious.)

*Outfit No. 2.*

Stereoscopic work is well suited for anthropological studies, as in the stereoscope small details will be noticed which would be overlooked in an ordinary print. The following is therefore recommended.

1. 8-inch by 5-inch camera with double extension, &c., having three movable fronts, and a movable partition down the centre which will be inserted when stereoscopic work is undertaken. On one front should be two of Ross' 8-inch by 5-inch Rapid Symmetrical lenses, accurately paired. On another front should be a Ross' 10-inch by 8-inch Rapid Symmetrical Lens, and on the third a Dallmeyer's Wide Angle Rectilinear Lens No 1. The six double backs, tripod stand, case, &c., will be needed as in the previous outfit.

An advantage in this camera is, that either half of a stereoscopic view can be used as an ordinary 5-inch by 4-inch plate, for printing magic lantern slides direct, or for enlarging.

*Note.* – Always stop your lens down when taking stereoscopic slides, and give the plate a very full exposure. The camera must be accurately levelled.

For persons who are likely to move about much the following is perhaps the largest size which can be taken with comfort.

*Outfit No. 3.*

A square, whole plate camera, double Extension, fitted with Ross' 10-inch by 8-inch Rapid Symmetrical Lens, and with Dallmeyer's No. 1 Wide Angle Rectilinear Lens; also with six double backs, and all the additional articles mentioned in Outfit No. 1, which should be accepted as the guide for the sort of camera to be bought.

With this a smaller camera will be found more useful and practical than having loose carriers

for smaller plates in the double

backs of the large camera, and I should advise the addition of the camera, &c., in No. 1 Outfit.

*Note.* – With such an outfit much very useful work can be done.

*Outfit No. 4.*

This would only be purchased by those who were likely to be stationary for a long time in one place, with easy access to the savages, and with a studio, &c.

15-inch by 12-inch square, double extension camera, fitted with Ross' 18-inch by 16-inch Rapid Symmetrical Leens, and with Dallmeyer's 18-inch by 16-inch Wide Angle Rectilinear Lens. Also, with six double backs in a separate case, a large tripod stand, and a studio stand.

With this, Outfit No. 2 should also be bought, and a hand camera would certainly be used.

For the guidance of purchasers I would state that I have all the cameras mentioned, besides others, and find a use for each. My cameras are square, double extension, by P. Meagher, and my lenses are, as mentioned above. Goerz's Double Anastigmatic Lens, Series III, will also be found most useful in scientific work.

*Note.* – Either Iris diaphragm should be used with the lenses, or the Waterhouse diaphragm should be pinned together.

The stereoscopic negatives, after one print in platinotype has been taken from them for record, should be sent to England to some firm of specialists, such as Mr. Chadwick, or the London Stereoscopic Co., in order that the transparencies can be prepared from them.

Lantern slides, perhaps the best form for examining small photographs, are also best made by some such firm, as the explorer will doubtless wish to spend his time in recording anthropological facts, and not in the operations of photography.

Square cameras with double swing backs, and rising and shifting fronts are the best; large tripod heads, and stout, long, tripod legs, are advisable. These legs are best made in one piece, and sliding legs should never be used.

With each of the above outfits, the following articles must be procured :—

*Plates.* – For ordinary work the best plates I know of are Messrs. Wratten and Wainwright's "Instantaneous" brand, and for very rapid work, the same firm's "Drop Shutter Special." Each dozen of plates should be separately sealed up in tin, and they will thus keep good for years, if stored in a dry place. A gross is a good number to take, if further supplies can be sent for.

If within easy communication of England, Edwards' Isochromatic plates are first class, and give special results which can be got with no other plate, but they will not keep well.

Films will not do.

(For lantern slides, or transparencies, if they are to be made in the field, which I do not advise, Marion's Chloro-Bromide plates are the best, and should be developed with the old Iron-Oxalate Developer.)

*Varnish for Negatives.*—Wratten and Wainwright's Crystal Varnish is good, as it can be applied cold. It is merely used as a protective, and can be removed, and a stronger varnish permanently applied, in England. A pneumatic plate holder will be wanted.

*Printing Paper.*—The Platinotype Company's Cold Bath Paper is the best, being simple in its working, and permanent. It keeps, as sent out by the Company, for a year, if the tins are unopened. A tin should not contain more than twenty-four pieces, and the operator should so arrange his work as to print off the entire contents of a tin in one day.

*Focussing Cloths.*—These should be, for the small cameras, 5 feet square, and for the large, 6 feet square; they should be of velvet, lined with yellow or red material, and in addition to a box of safety pins which should always be carried, half a dozen safety pins should be kept stuck in the cloth in order to fasten it round the lens, the legs of the stand, &c. The camera must always be entirely covered by the cloth, and it is not a bad plan to have two cloths for each camera.

A good *focussing glass*, as kept by any good firm, is required, and should always be used as our object is to get great and accurate detail, not to make pictures. "Fuzzygraphs" are quite out of place in anthropological work.

The *lens caps* must always be secured by a piece of cord (silk fishing line), to the lens mount.

The *screw* must be secured to the tripod head by a chain, and this head must be covered with leather or felt (sewn, not glued, on).

Use brass for all metal work, and avoid aluminium.

A *good shutter* will be required for instantaneous work. The Wollaston, Bausch and Lomb, Thornton-Pickard, and common metal drop shutter, are the best. The India-rubber bulbs and tubing for releasing the shutter pneumatically are useless, and the release should be given by a metal trigger.

*Glass measures* of assorted sizes are required. Say, one 40 oz.; two 20 oz.; two 8 oz.; and two 1 oz., divided into minims.

*Two ebonite stirring rods* should be taken.

*French chalk*, as a lubricant for woodwork, and vaseline for metal, must be carried. Dry curd soap is also a good lubricant for woodwork.

All apparatus should be in waterproof cases.

A couple of Winsor and Newton's Sketching Umbrellas will be found most useful, one to shade the camera, and the other to shade the subject.

They can be fastened into the ground.

The camera and the case of double backs should always be shaded by an umbrella when working in the open.

Each double back should be kept in a separate, numbered, silk or velvet bag. It should only be taken out of this bag, when under the focussing cloth, and, after exposure, should be replaced in the bag under the cloth.

VOL. XXV

G

82                    *Anthropological Miscellanea and New Books.*

Each lens should be kept in a locked leather box, lined with velvet.

Chamois leather should never be used as a lining for anything.

It is cheapest in the end to purchase the best things. All woodwork should be of mahogany; all leather, Russia. No iron, or metal that will rust, should be used. Weight is of no consequence. Strength is.

*Camera level.*—Good ones are supplied by all dealers.

A *good dark tent* is required. Both Meagher, and Wratten and Wainwright, supply these. Get the largest you can carry.

A couple of 5-inch, flat, camel's hair brushes are required for dusting the dark slides and plates.

Good handbooks on photography are: "Burton's Photography," "The London Stereoscopic Company's A.B.C. of Photographv," Hepworth's "Photography for Amateurs," Wall's "Dictionary of Photography," and Ewing's "Photography for Amateurs in India."

*Dishes.*—The best dishes are of ebonite or *papier maché*, and no glass or crockery should be



used.

Six dishes of the former material are required, which should be so sized as to pack one within the other in a nest, the smallest dish in the nest being of the largest size actually required for the work.

Six large *papier maché* dishes will be found very useful for the developing and clearing solutions used in platinotype printing.

A *washing tray* for the negatives, and another for the prints will be required. There are plenty in the market, and any strong, simple one can be chosen. Do not buy one to be used only with a tap or running water. Tylar's Metal Folding Washing and Drying Racks are convenient, and can be used with a bucket of water.

*Note.*—Do not attempt to wash negatives or prints in streams, and see that your washing water is free from grit.

Wash each plate well after developing, and after fixing when five minutes washing should be given to each plate separately. The backs of the negatives can be cleaned, while wet, with a tooth brush.

*Printing Frames.*—Six will be sufficient. All dealers keep good makes of these.

*Chemicals.*—Both for portability, good keeping, and other qualities, I advise a certain developer and fixing bath, as follows:—

*Developer.*

A.	Sulphite of soda . . . . .	6 oz.
	Hot water . . . . .	10 oz.
	Sulphuric acid (pure) ..	I drachm.
	Pyrogallol . . . . .	1 oz.

(Dissolve the sulphite of soda in the hot water, add the sulphuric acid, and pour the whole into a bottle containing an ounce of pyrogallol. Keep the solution in a blue glass, stoppered, bottle.)

B.	Anhydrous monocarbonate of soda ..	3 oz.
	Ferrocyanide of potash .. ..	6 oz.
	(Yellow prussiate.)	
	Hot water .. ..	20 oz.
C.	Potassium bromide . . . . .	I oz.

Water . . . . . 6 oz.

(A. portion of this can be conveniently kept in a dropping bottle.)

To develop a whole plate take—

3 drachms of A.  
6 drachms of B.  
20 minims of C., and make up to 6 ounces with water.

If the temperature is very high add 1 oz. of spirits of wine to the above, to prevent frilling.

Use boiled and filtered water for the solutions.

Just flush your plate with water before developing, in order that the developer may flow evenly.

Do not touch the gelatine surface of the plate with sweaty or oily hands, but handle the plate by the edges only. Take care that no perspiration drops on the plate in the dark room manipulations.

Keep a stick of paraffin wax in the dark room, and rub it round the edge of the plate just before developing. This often prevents frilling.

*Fixing Bath.*

Hyposulphite of soda.. .. 16 oz.  
Sulphite of soda .. .. 2 oz.  
Sulphuric acid .. .. 1 drachm.  
Chrome alum .. .. 4 drachms.  
Hot water .. .. 64 oz.

Dissolve the sulphite of soda in sixteen ounces of water, and add the sulphuric acid. Dissolve the chrome alum in eight ounces of water.

Dissolve the hyposulphite of soda in the remaining water.

Add the sulphite solution to the hyposulphite, and then add the chrome alum solution.

The plate should be allowed twenty minutes in this bath, and should then be well washed. I occasionally rock my fixing bath, when plates are in it.

A short washing in tepid running water is better than a long soaking in cold water.

The above bath will keep for months.

*The Chemicals* you will require, therefore, will be, for a small outfit, about:—

Pyrogallol . . . . .,	16 oz.
Sulphite of soda . . . . .	12 lb.
Sulphuric acid . . . . .	16 oz.

84                    *Anthropological Miscellanea and New Books.*

Potassium ferrocyanide . . . . .	6 lb.
Anhydrous monocarbonate of soda..	4 lb.
Potassium bromide I.. . . .	1 lb.
Hyposulphite of soda . . . . .	16 lb.
Chrome alum.. . . . .	2 lb.
Hydrochloric acid . . . . .	6 lb.
Platinotype developing sals . . . . .	6 lb.
Crystal varnish . . . . .	12 bottles.

A dozen tins of cold bath platinotype paper, each tin containing two dozen pieces might, be taken.

In addition to the above-mentioned cameras, for such purposes as recording the altitudes and movements of savages, and certain ceremonial and other details, a hand camera will be necessary.

There are several of these in the market, and very few of them would be of any use to an anthropologist. After much experience with them I can only recommend the following:—

Ross' 5-inch by 4-inch Portable Divided Camera, with Wollaston shutter. (This can be used as either a hand or stand camera, is a very good article, and can be considered an outfit by itself. It has double backs, and six of these should be bought. Do not use a changing box.)

The "Twin Lens Ideal" is a good camera, and so is the "Twin Lens Artist's," but perhaps the most suitable is the London Stereoscopic Company's No. 2 Binocular Camera, with eighteen plates and Zeiss Lens.

Instantaneous hand camera work is never as good as stand camera work, except perhaps in the hands of specialists.

In the above, and indeed in all cameras, care should be taken that the lenses, and all parts of the apparatus, are easily accessible for cleaning and petty repairs.

A *Developing Lamp* will be required if work is being done at night in an ordinary room, and all of the firms I have mentioned will supply a good one. There are some very good dark room candle lamps in the market, which might be bought if you are going where kerosine oil is not procurable, and candles can be carried. In case the glass breaks, take some spare golden and ruby tissue.

Have as much *safe* light as is possible. Rock the negative during development, and cover the developing tray with a lid of blackened tin or wood.

*A Bottle of Dead Black* for re-blackening the interior of lens mounts, and the woodwork of cameras and double backs, is useful; as is also some enamel paint or varnish for repairing *papier maché* trays.

(A pin-hole in the bellows can be mended with a little fluff or lint attached by some dead black.)

A walking-stick, or the bough of a tree, is a good thing to rest a hand camera against to steady it. Very good clamps are sold with which to fasten Indian cameras to trees or posts.

*Cleaning.*—This is an important item.

Lenses should be unscrewed every week, and lightly wiped with an old soft silk handkerchief.

All leather should be frequently wiped, and may be slightly oiled with camphorated vaseline.

Examine your cameras inside occasionally to see that they are light tight, and wipe the inside of the bellows, or luminous fungi may collect and fog your plates.

Oil the hinges of the legs of the tripod stand, and clean the points. All trays, &c., should be thoroughly cleaned and wiped after each time of using.

*Note.*—I have often enlisted native servants and savages, who may be the subjects with whom I am working, to do all this mere manual work of cleaning, and they seldom break things.

*Packing.*—It is better to use a number of small stout wooden or wicker boxes, than one or two large and heavy ones. Corrugated paper and crumpled, *not folded*, cloths are capital packing material. Coarse dusters which are used for cleaning the trays can be used for packing. Each bottle or jar should be in a separate compartment. A wisp of hay and paper, wrapped entirely round each bottle, is good.

As regards *lighting*, *backgrounds*, and *studios*, I can say little as circumstances alter cases so much.

Open air groups are more satisfactory on a dull day than when there is brilliant sunshine, on account of the very heavy shadows in the latter case obscuring detail.

In brilliant sunshine in the jungle a very objectionable spotty lighting is often found.

In full face photographs care should be taken that the lighting is even, and not with a high

light on one side of the face, and a heavy shadow on the other. A reflector of some white material is here useful to lighten the shaded side of the face.

On no account should the subject face a brilliant sun.

A dull grey or drab background, being unobtrusive is the best. A wall slightly out of focus may be used. If the only available background is foliage, it should be as much out of focus as possible, unless it is essential to the subject. The smoke of a damp leaf fire makes a good background, and is of use in blotting out foliage, &c., which are not required in the photograph.

With a 15-inch by 12-inch camera some sort of studio is a necessity on account of its weight, &c., as the operator will be less fatigued by working under shelter from the sun. A good studio stand will be required, and will be found most useful.

A substitute for a properly constructed studio may be made by building two sheds of matting, facing each other, and walled in on the top, back, and two sides. Coarse blankets could be hung for a background. These sheds might be 10 feet deep and 15 feet apart.

A very good form of studio is a long building, 14 feet high to the eaves, and open from the eaves to the ground on the north side, if north of the Equator, or on the south side if south of it,

G 2

86                    *Anthropological Miscellanea and New Books.*

In the tropics this is better than a studio with top lights of glass, on account of the heat of the latter.

The ends of the studio may be covered with a drab lime-wash for a background.

A couple of light, white reflectors about 3 feet square, and a good head and body rest will be found of great use in a studio.

In conclusion the following hints may be of some use.

Most of your work will be done with the rapid symmetrical lenses, and the wide angle rectilinear lenses should only be used when you are unable to get sufficiently far away from your subject to use the others, or when a wide angle is required for large groups with no distance in the background. They are also used in the thick jungle.

Keep a note book, and as soon as you can, take a print from each negative, and paste it into the book, writing detailed description of the facts illustrated. Then, if your negatives are afterwards broken, your work can be reproduced from your note book.

The negatives, when varnished, should be packed in dozens, face to face (as received from the makers), with a piece of blotting paper between each, folded up in paper, tightly tied together, and then put into their original box. These boxes can then be packed away in a case well surrounded by crumpled shavings, or crumpled cloths.

Number all negatives and prints. Fresh arrowroot starch is good for mounting the latter, used as follows:—

After the print has been trimmed, place it on the mount, marking its position with a pencil. Then wet the print on the back until it is wet all through, paste all over the mount, put the print in its place, put a sheet of blotting paper over it, rub it down with a flat squeegee, and then, with a wet sponge, clean off the superfluous paste.

For trimming prints I use a set square and pencil, and then cut along the pencil lines with scissors. This will be found handier in the jungle than glass trimming shapes, and knives which continually require sharpening.

Have a large jar to keep the fixing solution in. Keep some spare stoppered blue glass bottles for the pyro, and small dropping bottles for the bromide. Vermouth bottles are useful for some solutions, being large with clear glass. Put vaseline on all corks and bottle stoppers, and when travelling tie these in.

If your focussing screen is broken, fix a dry plate, without exposing or developing it, and when dry and varnished it can be used as a substitute.

Arrange your negatives systematically. Lock up all apparatus from savages and others, and on no account let your camera get wet. Stick to one make of plates. Learn to count seconds correctly. Have labels or marks on your bottles so that you can distinguish them in the dark room. Overhaul your kit before starting on your day's work, and see all is present and in good order. Do not retouch or add clouds, &c., to scientific photographs.

Having purchased your apparatus, study it before you start, so that you may be a thorough master of it, and of the exposure developing, and printing, &c. (with the formula given), so that the difficulties of the technique of photography will not in any way hinder you, or take your mind off your anthropological work.

A friend recently wrote to me “that there would be plenty of money and people available for anthropological research, when there were no more aborigines.”

Could not the Anthropological Institute take an active lead in this matter. A committee chosen from the members resident in England could ascertain exactly what work is required, and could then apportion this work among anthropologists residing in the several countries, and willing to undertake it.

The committee in England would collect funds to purchase collections, and supply apparatus, &c., to those workers who were unable to pay for them, as the Royal Geographical Society does. The results of the work, *i.e.*, the collections and photographs, could be deposited, say, in the British Museum, and the records could be published in the Journal of the Institute.

PORT BLAIR, THE ANDAMAN ISLANDS. M. V. PORTMAN.

18th May, 1895.

*Officer in charge of the Andamanese.*