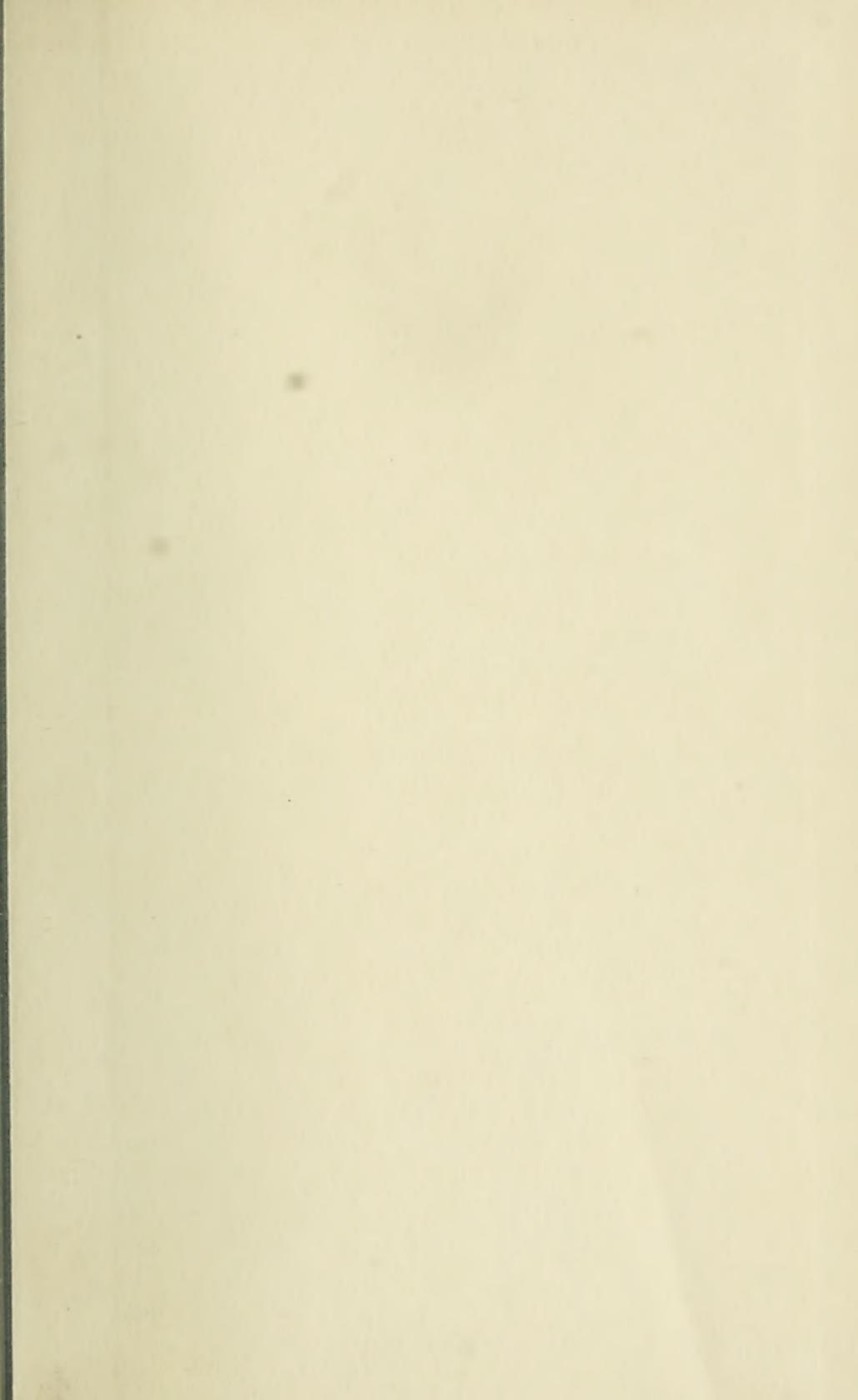
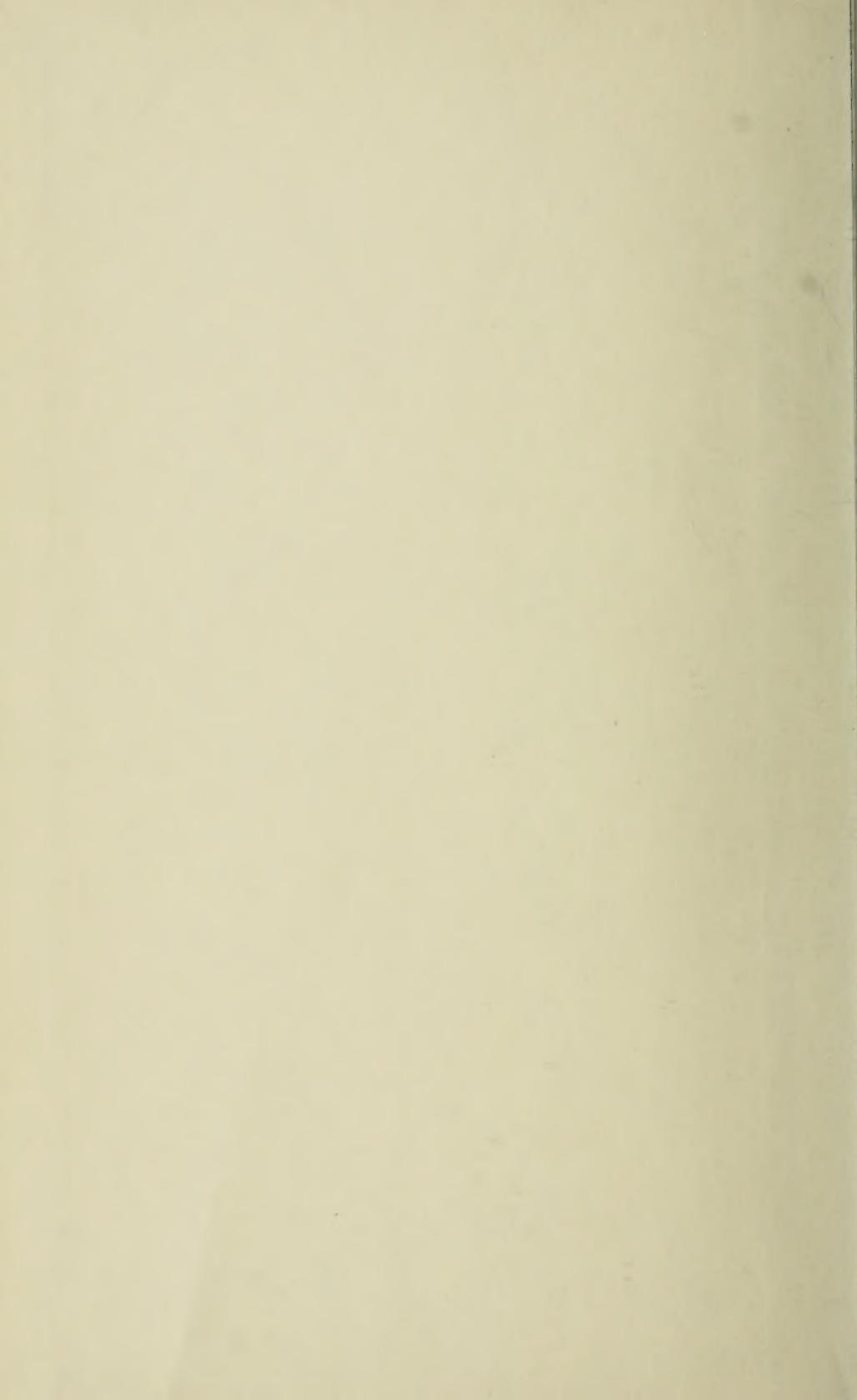


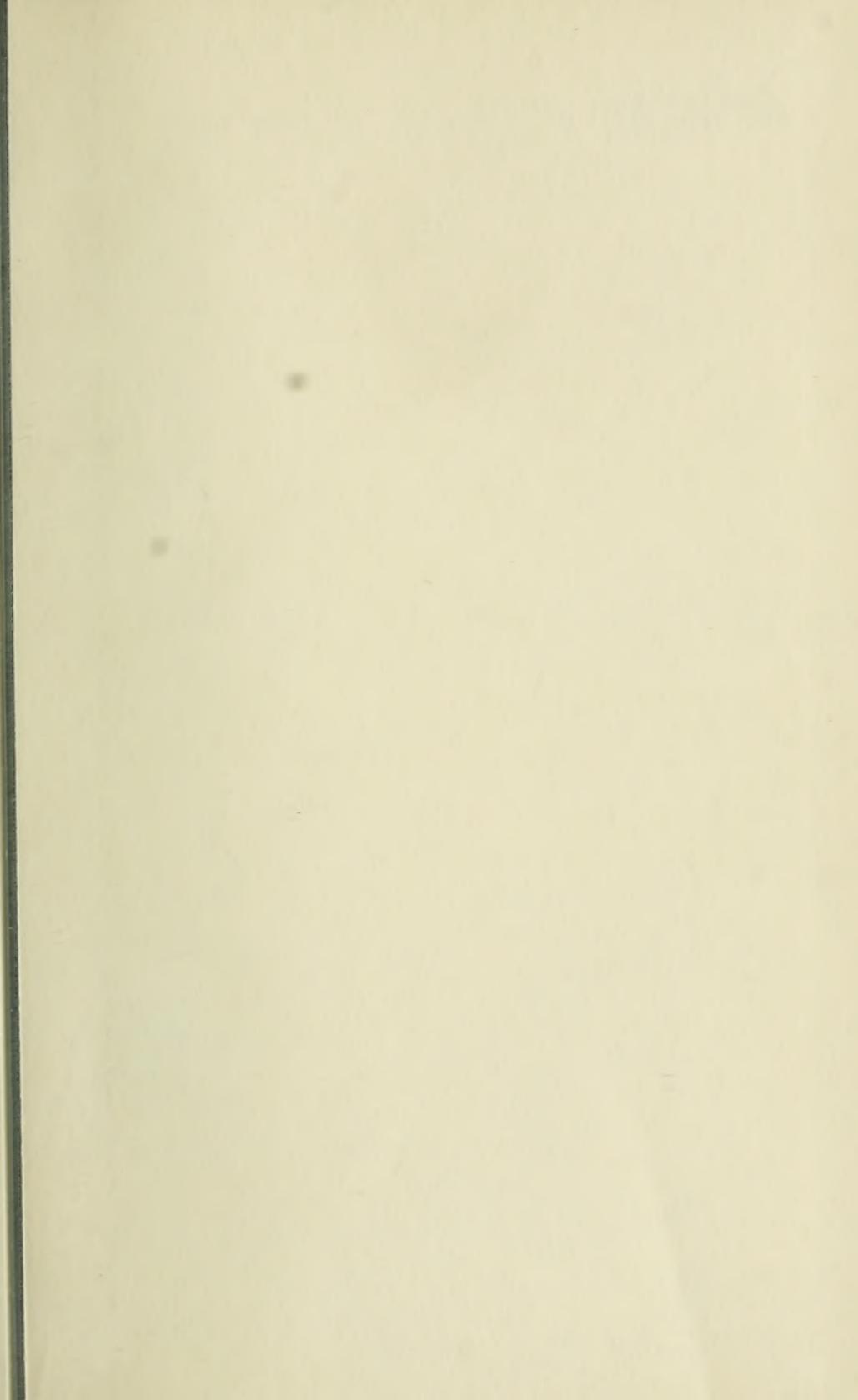
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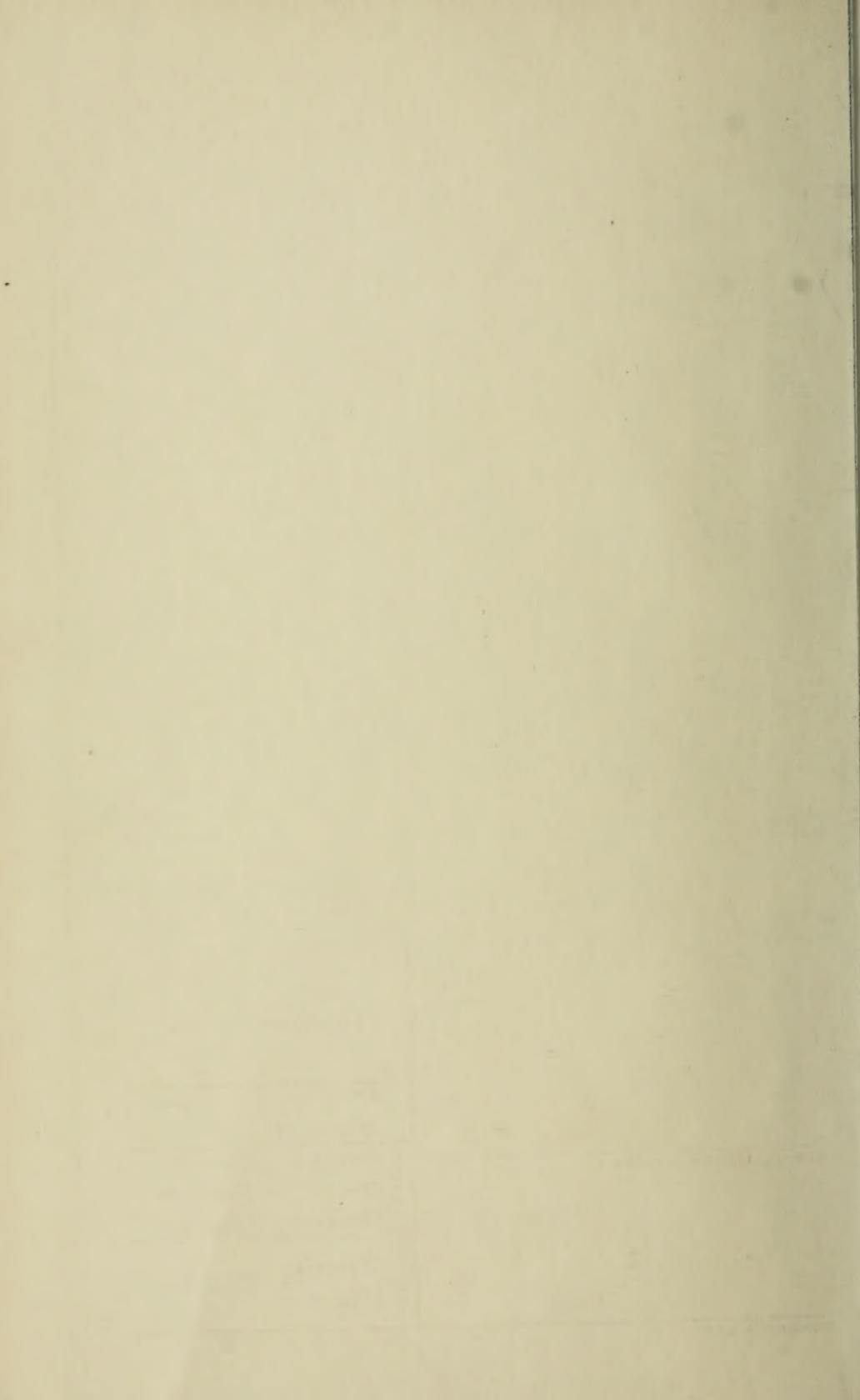


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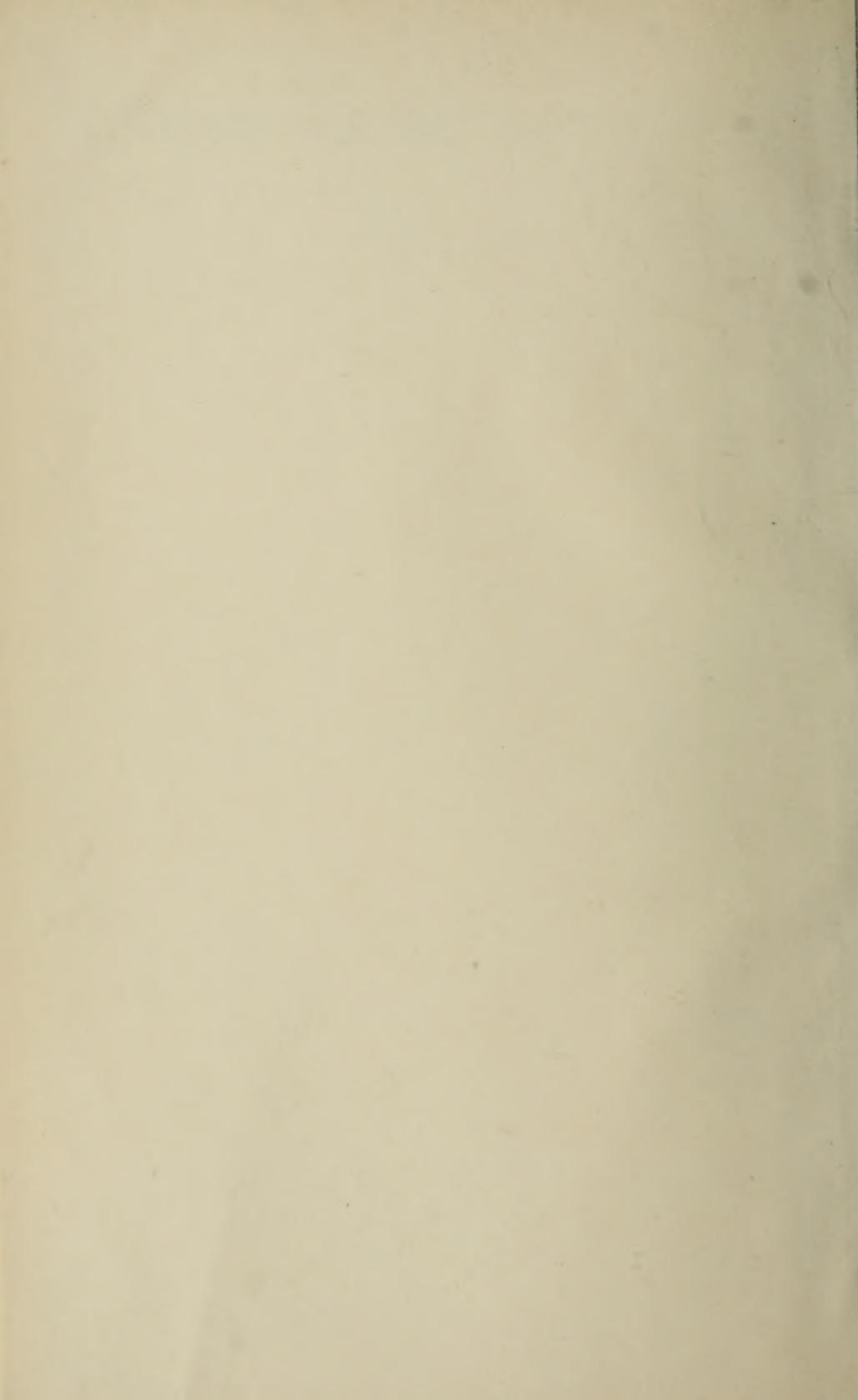


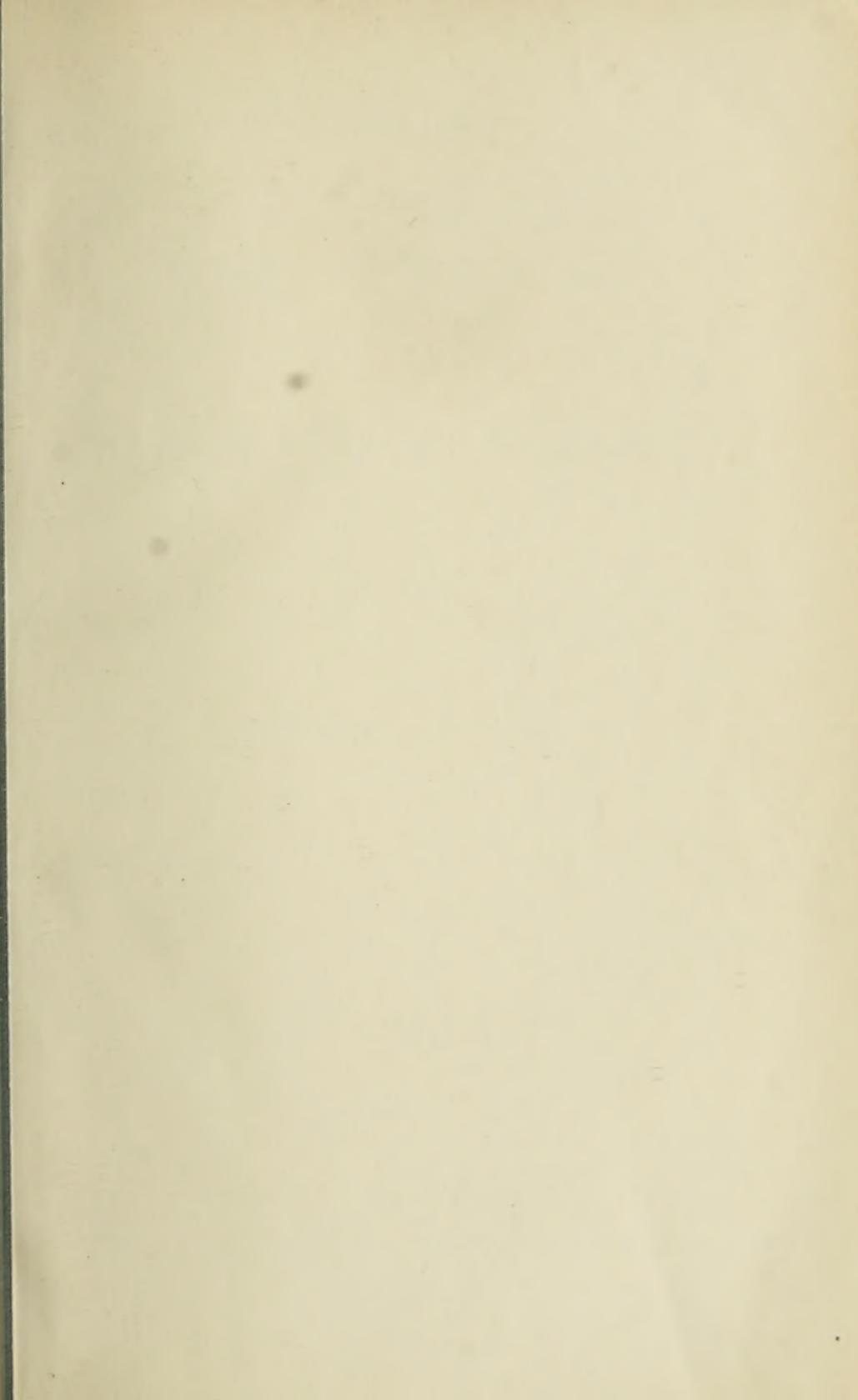


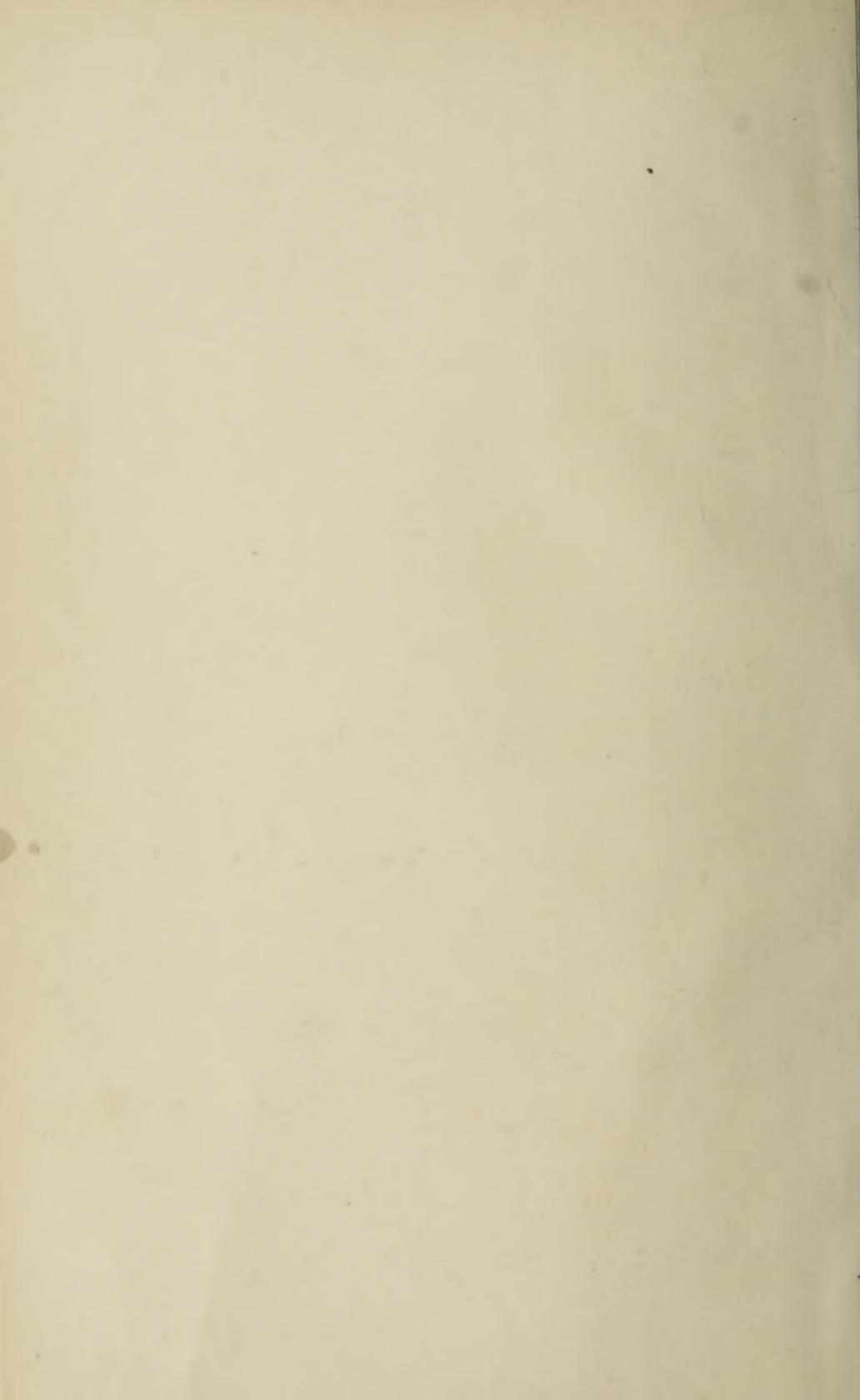




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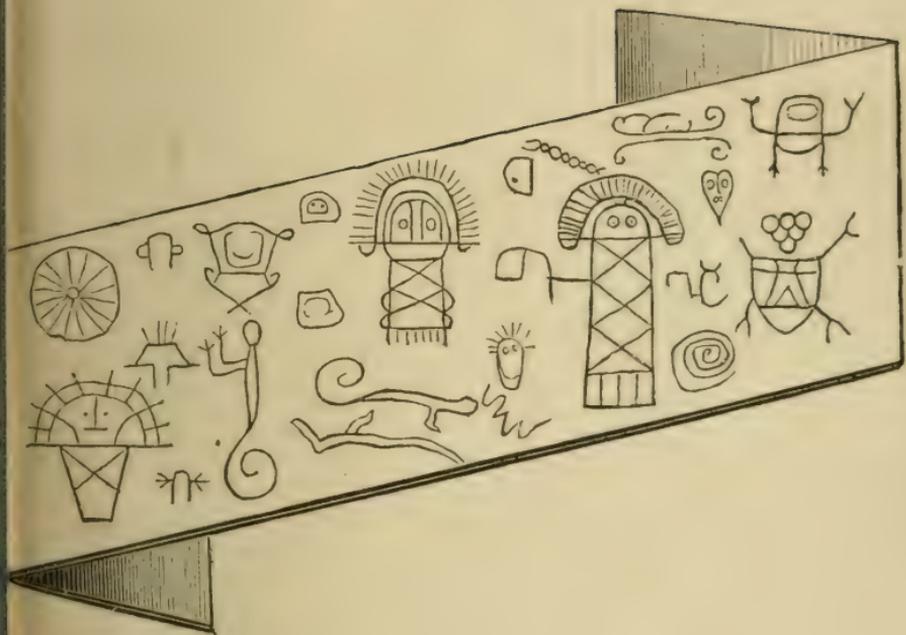
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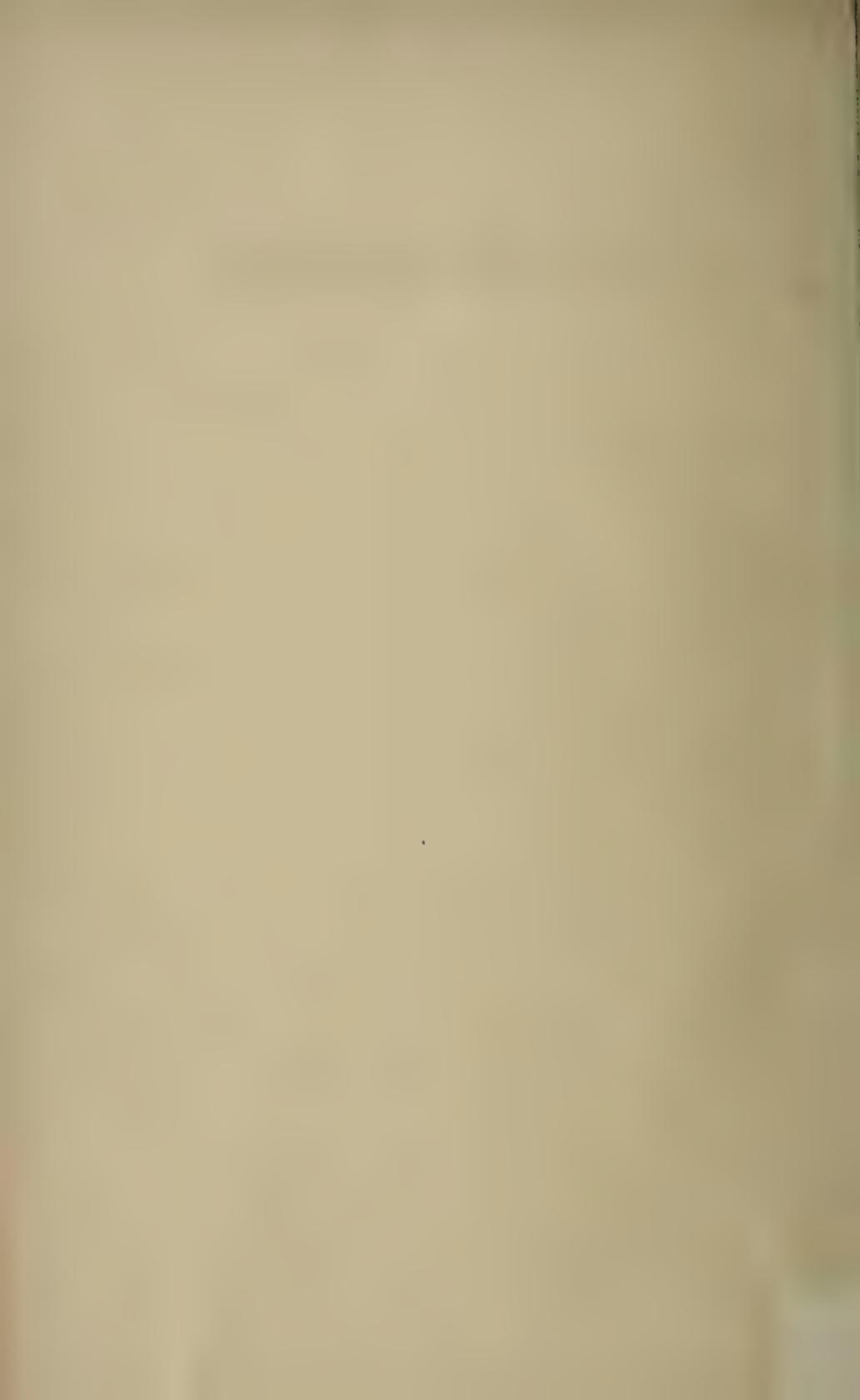
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The Seasons in Guiana.

By the Editor.



WHEN asked concerning the seasons in Guiana, how few can give information that is at all satisfactory! All know that there are wet and dry and even perhaps mango and guava seasons, but beyond this they are at a loss. Some time ago the question what time of the year the mango season came, was asked in a mixed company, and not a single person could tell. All had seen the period come round, had observed almost every second negro smeared over mouth and chin with the unctuous juice, and even slipped on the skins in walking along the side-walks, but could not tell whether there was any particular month in the year when it arrived, or if it was at all regular in its advent. Some said that mangoes were to be had at all times, but that they were plentiful or scarce at certain periods entirely regardless of reasons.

The fact is there are no great changes of the weather in the tropics to fix times and seasons on the minds of ordinary people. Where there is a distinct contrast, as between summer and winter, many things are noticed in connection with these seasons, but where,

as in Guiana, the only great difference is between drought and deluge, and these are proverbially uncertain, we are apt to ignore the other changes. In England we look for the opening of leaves and flowers in May and know from them that spring has come and summer is at hand, but here in Demerara it is said to be always summer. This may be true as far as temperature is concerned, but not in any other respect. Summer means a great deal more to residents in other climes. It is the time when flowers are in full bloom and fruits are maturing which comes after the awakening of spring and before the final ripening of autumn.

Have we anything like these seasons in Demerara? Visitors will perhaps say no, but that on the contrary everything is mixed. The flowers and fruit, in their opinion, are borne at the same time and all the year round. There is some slight ground for this view but not so much as is generally supposed. It is possible to find trees with mature fruit and opening flowers at the same time but it can scarcely be affirmed that this is at all general. Fruits ripen and fall and then the flowers burst forth as a rule. But that there should be ripe fruit still remaining when the tree commences to flower simply shows that there has been no time for rest. It must be up and doing if it is to hold its own. No nice quiet winter sleep can be indulged in, but as one cycle of its life is over another begins at once. Every plant, from the humble weed to the forest giant, has its seasons. There is for example, the time when the rains begin to fall. Then the seeds of annuals awake from their dormant state, and the roots of perennials which have lain quiet in the dry ground for several months, shoot out

afresh. This is their spring time, which is to a certain extent irregular, as are the rainy seasons. The trees however are not so dependent on the weather, and although by no means so regular as those of temperate climates they as a rule vary only within certain lines. Their spring comes at the time when, after ripening fruit, the leaves begin to fall and they become almost bare; then suddenly the tree braces itself as it were for another season's work. It has hardly slept, but simply languished awhile, and now comes well to the front with new leaves of most delicate shades and a wealth of flowers. Its spring has lasted but a week or two—it cannot afford to waste time on trifles. Instead of having twelve months in which to perform its task, this has to be done in six, and even then there is no rest, for it must go through its two cycles in one year. Its summer cannot be curtailed to any great extent—it lasts over several months—about as long as the hot season of temperate climates. Finally its autumn, winter and spring are hurriedly got over and the second summer comes on.

It may be generally affirmed that all our native trees perform two tasks every year, almost regardless of the weather. The leaves fall off by degrees, only here and there a tree becoming quite bare for a few hours, a day or two, or in the case of the silk-cotton tree, for two or three weeks. Then the flowers appear, those of the Jacaranda, (Wakenaam Lilac) and one or two others covering bare twigs with masses of flowers. Few leaves change colour before falling, but the Terminalia, (wrongly called almond) and the sea-side-grape (Coccoloba) are conspicuous exceptions. These may be seen about February and again in July and August with their thick

leaves suffused with rich crimson, littering the ground, and worthy of more appreciation than they generally obtain. The fiddle-wood is a conspicuous example of a tree which loses its leaves entirely for a short time, while the one most noticed is the silk-cotton tree, fine specimens of which afford such a great contrast between their thick canopies of foliage and the dome of bare twigs. Again the cannon-ball tree (*Couroupita*) may be seen quite bare for a few days in February and August, and almost before the fact can be realised the new leaves are fully opened and the branches again covered.

To the casual observer these changes appear to be quite erratic. Two trees of the same species are not necessarily bare at the same time. In temperate climates the oaks or birches are nearly uniform in their bursting into leaf, but not so the trees of Guiana. Two specimens of the same species and even of the same variety, under equal conditions, may vary much in their flowering and fruiting times. This is where individuality comes in. A tree may be not only a mango, and say a peach mango, but it is an individual, differing from its relations as much as JOHN does from his brother THOMAS. But with all this the tree is by no means so erratic as might be supposed. It may be possible to obtain guavas or mangoes in every month of the year, but the mango and guava seasons are still fairly well settled, and recur regularly, with only such variations as everywhere appear in the cases of other fruits. Years of plenty alternate with others when fruit of particular kinds or perhaps of all kinds are scarce but the general result is that the season is at the same time of the year, varied a little perhaps by drought or deluge.

Coming now to the time of the year when the seasons begin, it must be premised that all species do not open their flowers at the same time. In England some fruit trees blossom a month or six weeks before others, and similar differences appear here. Such cases we may consider as examples of the fact that the spring-time of all plants does not coincide, but this does not go to prove that there is no such season.

In Guiana we may consider the year as beginning about February. The long drought of the dry season (August to November) acts to some extent as a ripener of woody tissue as well as fruit. After the few weeks rain required to saturate the ground, the trees are stimulated to increased exertions and we get the result in a wealth of flowers. Some quick-growing plants recover quickly and flower as early as January but generally speaking we must put the commencement of this first round of the year's work a month later. At this time mangoes and hog plums are ripe, the fiddle-wood blossoms, and the cannon-ball and silk-cotton lose their leaves. This is the best time for orchids as they generally burst into flower after the rest of the dry season.

In the forest and along the creeks, the commencement of the cycle is characterised by a magnificent show of new foliage. Few travellers have noticed this, probably on account of its evanescent character, but it is a striking peculiarity of the tropics. Every-one has noticed the delicate tints of the mango leaves when they first open, but this is nothing compared with some of the forest trees. The Mora for example is most beautiful for a day or two when the foliage is renewed and other trees also show to as great advantage in their new vesture.

The most delicate shades of green, yellow, cream, olive, rose and ruddy brown are conspicuous everywhere, and the graceful manner in which the flaccid leaves hang adds greatly to the effect. Unlike the beauty of the autumn tints in temperate climates however, this is not so uniform in regard to time nor does it last so long. As before stated the spring lasts but a short time, in some cases apparently only a few hours. After, or sometimes before the new foliage, come the flowers, and these are accompanied by clouds of butterflies, bees and humming birds, which are also characteristic of spring-time in the tropics. Sometimes flocks of butterflies may be seen crossing the Upper Demerara River at this season, whereas at other times hardly a single one can be found. A few ripe fruits still remain on some of the trees and these afford subsistence to flocks of parrots and other frugiferous birds. Later will come a time when only green fruit is to be had and then the birds wander far and are difficult to find.

Following this short spring-time comes the summer. The awakening to the new course or cycle takes place in February or August, and these months are as a rule more or less showery. The summers which follow are however very distinct from each other, that of the first cycle being decidedly wet, while the later season is the driest in the year. As might be supposed this tends to modify the growth of the plants so that the fruit crops differ somewhat. This is well exemplified in the mango and bread-fruit.* During the years 1889-91 their seasons extended from November to February and

* I have to thank Messrs W. T. Binnie and Chas. R. Bevaun for statistics of the quantity of fruit brought to the markets of Georgetown and New Amsterdam.

June to August. In both fruits the average number brought to market was greatest in July, but the year 1889 was a conspicuous exception in the case of the mango. The greatest number of baskets of mangoes offered for sale in February and March in the other two years was only 45, while in the year in question the enormous quantity of 19,216 baskets were brought to Stabroek Market. The previous year was rather dry but a fair supply of rain fell in December. Whether this affected the crop or not it is hard to say, especially in view of the fact that the largest crop is usually gathered after the heavy rains of May and June. Observations must be made for a great number of years before anything definite can be formulated, meanwhile we can only indicate the lines on which researches can be carried out.

The principal guava season appears to arrive in May and June, but this fruit seems to be produced more often than twice a year. Ripening quickly it has the advantage over many others, some of which can only succeed in producing one crop a year. When this takes place the season often extends over several months, fruit ripening by degrees and a few at a time. This is especially noticeable in the mammee-apple which ripens from June to September, but is hardly to be found at the beginning of the year.

The *Erythrina*s flower only once a year from July to September. When tropical plants go through one course only, the time of flowering seems to differ according to the species. The sugar cane flowers only from September to the end of the year, although fields may ripen every month. The avocado-pear flowers in November and ripens in July, but individual trees may have one or

two fruit in February or March. In this as in many other trees we have signs of transition between one cycle and two. The Revd. J. L. GREEN states that in those Polynesian islands which are situated near the equator the bread-fruit produces two crops a year as it does in this colony, but outside the tropics only one. When investigating imported trees, allowances will have to be made for those which come from countries where there is a cold season; and in such cases heredity must be taken into account as well as the change of environment.

The so-called gum tree (*Sapium aucuparium*) is a conspicuous exception to the general rule. Not only is it content with one cycle a year but its autumn lasts during the whole of the long dry season. The leaves fall off very gradually until it is almost or quite bare, and then the leaf buds develop in the course of several weeks, followed by the flowers and fruit. Altogether the whole cycle is gone through in a most deliberate manner, quite unlike the trees of equatorial regions. Whether it can afford to go so slowly in the forest, we cannot say, but it is possible that it grows on sand reefs where the long dry season prevents it being handicapped by a host of rivals when the twigs are bare.

This reminds us that the forest trees cannot afford to remain bare for any length of time. Scattered beneath them are thousands of seeds, only waiting for a break in the dense canopy above to sprout and become their rivals. With a few months sunlight a dense jungle would spring up, and even if this were smothered when the tree put on its new vesture, the amount of plant food used up by the crowd would seriously weaken it. It has

therefore followed that the season of rest is reduced to almost nothing, the new leaves simply pushing off the old and quickly taking their places.

From the following notes taken in July and August last year (1892) it may be seen how autumn merges into spring, and how short these seasons really are. July was as usual rainy, and the wet weather of the previous months kept back some fruits from ripening. Oranges, bananas and mangoes were however plentiful and avocado pears ripe. The Flamboyant, which had been flowering here and there for some time previous was generally dropping its leaves preparatory to that grand show of flowers so conspicuous during the following months. The Oleander also began to flower and was in all its glory on the 1st of August. The King and Queen of Flowers (*Lagerstrœmia Indica* and *Regina*) were losing their leaves preparatory to the wealth of blossoms which came at the end of August. The fiddlewood, (*Citharexylon*), almost leafless, perfumed the air towards the end of the month and the mango was decorated with new foliage and flowers. August was showery up to the 20th and then the dry season set in. The fruits in season were pine-apples, oranges, and genips (*Melicocca*), while guavas, mamee-apples and star-apples were procurable in moderate quantities. Flowers were plentiful, the Wakenaam lilac making a pretty show with its blue bells on bare twigs. The Erythinas covered their almost leafless canopies with coral-red blossoms, and towards the end of the month the *Trip-laris* (Long John) began to let its shuttlecocks float down from the great panicles far over head. The cannon-ball tree in the Promenade Gardens lost its leaves for a few

days and almost before its bareness was observable the twigs were again covered. On the 1st of the month silk-cotton trees could be seen in various stages, some quite bare, others with new leaves, and a third class in full foliage. Some hog-plum trees were almost or quite leafless for about a week and then burst into flower, and the tamarind was decorated with new leaves. The latter appears never to be denuded or even sparsely covered, only varying a little in the density of its foliage.

The general deduction from these facts can be easily seen. Spring lasted for about two months on the whole, but different species had longer or shorter seasons, and individuals were particularly erratic. In an English orchard the apple trees will all blossom at the same time so that a grand show is produced for a day or two. The mango and other tropical fruit-trees however, differ much in their flowering times, two individuals in a garden rarely arriving at the same stage at exactly the same time.

In regard to the difference between what may be called the wet and dry summers of the year, long and careful observations are necessary. It appears as if certain trees ripen best in dry weather and are kept back by heavy rains. This can be easily understood when the immense amount of extra work produced by a long deluge is considered. Anyone who has a garden will have noticed the difference between the oozy soil where it is almost bare and the comparative dryness under the trees. The author of "The Great World's Farm" has aptly compared a tree to a still and estimated that a moderate sized elm has a leaf surface of five acres, from which is evaporated in the course of a clear dry summer's day the enormous quantity of seven tons and

three quarters of pure distilled water. Whoever has watched an expanse of foliage after a heavy shower must have noticed the quivering film of vapour produced as the sun comes forth, but few have appreciated the fact that we have such a grand work in progress as is here indicated. During the rainy season trees grow rapidly, cover every twig with as many leaves as it can bear, and extend their branches. This is obviously intended to provide a larger surface for evaporation, so that water shall not stagnate at the roots, and naturally means hard work. Fruits swell and attain their full size under such conditions, but ripen slowly, so that we might naturally expect the summer time to last longer when the rain-fall is heavy; than when on the contrary there is a drought. Extremes, either wet or dry, are of course injurious, the former tending to produce large fruit with little flavour and the latter small crops.

To lay down hard and fast rules in regard to the effects of wet and dry seasons would be impossible without a series of observations extending over a long time. However, it appears that the first summer of the year—the heavy wet season—retards some trees to a considerable extent, while others on the contrary enjoy the rains more than the drought which follows. It is well known that thick leathery leaves are not so well provided with stomata as those that are thin in texture. Looking around us we see the guava, mango and hog-plum with comparatively thin and the mammee-apple, sapodilla and star-apple with thick leaves. Theoretically we should say therefore that the guava would ripen soonest in wet weather while the mammee-apple would be retarded, and this agrees with the facts. The prin-

cipal guava season comes in the middle of the great downfall of rain of May to July, but the mammee is rarely gathered in quantity until August and September.

There is another aspect of the seasons' question for the elucidation of which unfortunately we have hardly any material. Spring-time is the season when birds pair and build their nests. A friend writes us from the Upper Massaruni that the height of the nesting season appears to be in March and April, but whether this is sufficiently general to be laid down as a rule is doubtful. Again, it is not impossible that there may be two seasons in a year although it is hard to say whether the same birds breed twice. It has been reported to us that nests and eggs of the ground dove have been found both in March and September. The migration of birds in British Guiana seems to depend on the ripening of fruits, parrots coming nearer the coast as the wild fruits ripen and retiring to the mountains, where perhaps the seasons may be later, when food becomes scarce. Plovers appear to alight on our coast about September when migrating, but in the absence of careful observations nothing definite in regard to their movements can be formulated at present.

In temperate climates the end of summer, and autumn, are noted for swarms of flies, gnats and midges, and here we have mosquitoes at the corresponding season. About May and June and again in October and November these little pests are most troublesome. It is a general opinion that mosquitoes are most plentiful in rainy weather, but this does not appear to be altogether the case. Very heavy rains apparently interfere with their swarming or keep them from wandering far. In October there is

rarely a shower but the mosquitoes are particularly obnoxious at that time. Where there are bushes and trees these little pests congregate on the windward side and do not enter far into the bush. It is a common error that trees around a house harbour them, for some of the most infested places in Georgetown are bare of vegetation.

Besides mosquitoes the end of a cycle is characterised by swarms of beetles (hard-backs) and flying wood-ants; these generally come with the rains. Accompanying them are the whistling and croaking frogs, the six o'clock cicada, and great hawk moths, all of which appear to have their particular seasons, generally coincident with the end of one and the beginning of another cycle. Careful observation will no doubt go to prove that the breeding times of animals coincide with those of the plants, but we can only indicate this as a subject for enquiry.

Before concluding this paper, which is by no means so satisfactory as might be wished, we may state that it is written to call attention to a very interesting matter which appears to have been hitherto overlooked. The observations of one person confined to a particular locality can never be anything like conclusive, but it is possible that by indicating the lines of research, others may be induced to supplement them. That it is desirable to know when certain fruits ripen is obvious without this anything like a regular trade could not be carried on. Again, we have indications that seeds should be planted at particular times to secure good crops. No doubt it will be found that if, for example, corn is planted at the right time, the crop will be larger

and more certain than if this is done regardless of the proper season. Many vegetables fail from inattention to this matter, and although we can hardly expect to lay down such hard and fast rules as have been formulated in temperate climates, nevertheless almost anything would be better than the present want of system.

Then there is pruning, the practice of which is perhaps more easily regulated than any other gardening operation. The best time is naturally the transition period between the ripening of fruit and flowering. Our gardeners believe in the influence of the moon and probably do serious injury to vines and flowering plants from their ignorance of the conditions most favourable to this as well as other operations, which depend on the right appreciation of the seasons.

There is a vast field for observation among the plants introduced from other countries. Do they flower and fruit at the same time as in their native habitats, or do they accommodate themselves to the seasons of Guiana? Heredity has great influence and will probably be stronger than environment for a long time, but ultimately we may expect the plant to respond to its surrounding influences. A grape vine that has been introduced as a plant will not be so accommodating as one grown from seed in the colony; it will be better therefore to grow seedlings, and, if possible, get them from acclimatised plants. To grow plants which require a long rest of four or five months will naturally be difficult. They cannot lie dormant while the conditions are favourable to growth, and as a natural consequence, get overworked and die. A dry season will have some slight influence in retarding growth but as it is attended by a high tem-

perature, the plants can get no congenial sleep. The bulbs and roots shrivel or sprout and either die or become too weak to bear flowers, while all their strength goes to produce extraordinary growths of foliage.

A Cavalier Planter in Barbados.

By G. H. Hawtayne, C.M.G.

In the course of enquiries into family history, there has been obtained from various sources some information as to certain settlers in Barbados named HAWTON, HAUGHTAIN, and HAWTAYNE belonging to the family of that name who possessed property in Oxfordshire from at least A.D. 1500 to 1638.

The documents and records from which this information was derived contain matter which may be of interest to those who care about the history of Barbados and the life of its earlier colonists. In these papers are found names which are borne by families in the West Indies, the United States and elsewhere to whom these memoranda may be welcome.

Many of the old Registers and Records of Barbados no longer exist. Fire, hurricanes and neglect have done their work. It is therefore satisfactory to know that in these later days the Colonial Legislature has appreciated the value of those that remain, and that a system of sorting and indexing has been commenced, the result of which will be the preservation of much that is interesting and valuable to the historian and genealogist.

I cannot omit to express my thanks to my friends, N. DARNELL DAVIS, E. G. SINCLER of Barbados, P. H. NIND and Mrs. C. J. SMITH of Barnes, who have kindly helped me in my researches.



IN the Herald's Visitation of the County of Oxford 1634, mention is made of one GERARD HAWTON or HAUTAIN of Esington, who married MARGARET, daughter of LAURENCE WASHINGTON, Mayor of Northampton and ancestor of GEORGE WASHINGTON, first President of the United States. Their son HENRY, described as of Colthorpe, married MARY, fourth daughter of Sir JOHN DOYLEY of Chisselhampton, by whom he had a numerous family including two sons

GERARD and JONATHAN. These two emigrated to Barbados. In HOTTEN'S list of Emigrants is this entry:—

28 June 1639.—REGINALD ALLEN of Kent, 30 years gent. ; GERARD HAUGHTON 30 yrs. Co. Oxon gent. and DAVID BIX 35 yrs. Com. Kanc. gent., free planters of the Barbathoes from Portus Southton, JOHN EVENSON of Co. Chester and THOMAS EVENSON, his brother ANDREW WALLER 18 yrs. Com.; HERTFORD, HUMPHRY BURGESS of 19 yrs. of Cornwall and JOHN WETHERED of 22 yrs., servants to the planters above named. They passe in the Bold Adventure of Hampton for the Island of Guernsey, from thence they take shipping for the Barbathoes who have taken the oaths vt Supra.

At that time there was considerable emigration from England to Barbados where in 1636 some 6,000 English had settled.

GERARD HAWTAYNE, who thirteen years after his arrival in Barbados was a staunch Cavalier, was closely connected with the Puritan party. His eldest brother, THOMAS of Colthorpe had married MARY daughter of Sir WM. DUNCH and first cousin of the Protector OLIVER CROMWELL, while his sister ANN with her husband ROBERT VIVERS, Mayor of Banbury on Decr. 11, 1640, gave evidence before the House of Lords against the Revd. JOHN HOWES, Vicar of Banbury for disaffection against the Parliament, and for "things said against Lord SAYE and SELE," who, it will be remembered opposed the levying of shi money.*

GERARD HAWTAYNE is mentioned as having held more than 10 acres of land in Barbados in 1638† so that probably his visit in 1639 was not his first settling in that Island. There is no record of when JONATHAN went there.

It may be mentioned that GERARD had another brother named HENRY born in 1615, who may have been the

* Calendar of State Papers.

† Memoirs of the First Settlement of Barbados p. 76.

HENRY HAUGHTON, to whom Lord WILLOUGHBY of Parham, Governor of the Caribbee Islands in 1666, left £100 a year for his services in Surinam and Antigua.*

In those days it was not allowable to carry any person or indeed anything off the Island without the Governor's leave, and bonds were exacted^d for the due observance of this rule. In 1640 GARRARD HAUTAINE and EDWARD OSTINE became security under the following instrument on behalf of Captain WM. FORTESCUE,†

These presents wittneseth y^t wee Capt. JERRATT HARTON and EDWARD OSTINE, both of ye Island of Barbados, Gents. doe hynde o^r selves, o^r heires, executo^{rs}, administrato^{rs}, and assignes, joyntly and severally in ye just sume of one thousand pounds sterlinge to pay or cause to be payd unto ye Right Worth. Seargeant Major‡ HENRY HUNCKS, Gov^r. of ye afores^d. Island of Barbados, his heires, executors, administrato^r. or assignes. The condicon of this p^rsent obligacon is such y^t if Capt. WILLIAM FORTESCUE doe not Induce nor entice any p^rson or p^rsons whatsoev^r. to de^pt. this Island to any other place whatsoev^r. in Company with himselfe or any other p^rson, and likewise y^t ye afores^d. Capt. FORTESCUE shall not any way by his meanes or p^rcurer. Transport any p^rson or p^rsons whatsoev^r. from this Island without a Spetiall Lycense from the Gov^r. w^{ch}. fores^d. condicons beinge Truly and faithfully p^rformed fullfilled and kept Then this p^rsent obligac[']on to be voyd and of none effect otherwise to stand, remaine and be in full force, power, strength and vertue. In wittness whereof we have hereunto sett or hands and seales the 5th day of October, 1640.

GARRARD HAUTAINE,
EDW. OSTINE.

Signed sealed and deliv^red in the presence of
WILL. POWREY,
CHRISTOPHER CODRINGTON.

* Rodway's Annals of Guiana, p. 194.

† Wm. Fortescue (Ffortescue) signed the declaration of adherence to the King in 1651.

‡ The rank of Serjeant Major was then equivalent to that of Brigadier.

CHRISTOPHER CODRINGTON had sold on the 20th March 1641, a "plantacion conteyninge one hundred acres of land" to JONATHAN HAWTAYNE, who had also bought from Capt. DANIELL FLETCHER "one halfe p^t of ye "plantacion commonly called *Charles Fort*" lyinge by "the Sea Syde in the prsh. of St. JAMES nere *The Hole*," containing about 400 acres of land,—and these properties were on 21 December 1643, mortgaged to Capt. DANIELL FLETCHER as security for the payment of "the full and just sume of thirty thousand pounds of "good sound well condiconed and merchantable tobaccoe "well made up in rowie and wreath at one whole and "entire paymnt. at or within the mancon situate on ye "plantacon abovesaid called *Charles Fort*."

To this deed is appended a Memorandum by "Leift." JOHN HOLMES "who soe far forth as it concerned him, his heires, or administrators," confirmed the said sale of the one hundred acres of land and eight negroes "menconed in ye deede of sale on ye other syde." The memorandum and deed are witnessed by ALEXANDER RIDDOCHE, JOHN BATT and HEN. STACYE.

The "Schedule or Invoice" shews that while one table cloth and six napkins constituted the stock of house linen, and there was but one drinking vessel a "pwtere pint pott" there were two Bibles;

To all Xtian people to whome this present wryteinge shall come, I JONATHAN HAWTAYNE of the Island of Barbados, Gent. send greetinge. Know ye that I the sd. JONATHAN HAWTAYNE for good and valluable causes and considerations me thereunto moveinge, have given granted bargained, sold, enfecoffed and confirmed and by these p^rsents doe give grant, bargaine, selle, enfecoffe and confirme unto Capt DANIELL FLETCHER of the s^d. Island of Barbados, his heires, executors, administrat^rs. or assignes all that my moyety or one halfe p^t. of ye plantacon

commonly called *Charles Fort* lying by the seasyde in the p^rsh of St. James nere *The Hole* and which I the s^d. JONATHAN HAWTAYNE lately purchased of him the said Capt. DANIELL FLETCHER (the whole plantacon, conteyninge about foure hundred acres of land) as by his Bill of Sale dat. ye fourteenth of this Instant, with ye halfe p^t. of all the houses, edifices, buildings, p^rfits, p^rvisions and advantages thereunto appteyninge together likewise with ye halfe p^t. of certaine servants (*sic*) for their tymes of service yet to come and unexpired and certaine goods, chattels, stocke, armes, utensills, soe named, menconed and conteyned in an Inventory or Schedule, hereunto annexed and beareing date with these p^rsents together with one plantacon, which I the s^d. JONATHAN HAWTAYNE purchased of Capt. CHRISTOPHER CODRINGTON as by deed of Sale, the twentieth day of March in the yeare of O^r. Lord Sixteen hundred forty and one, conteyninge one hundred acres of land or thereabouts on which plantacon, I the s^d. JONATHAN HAWTAYNE doe now or lately did live and inhabite with all the p^rfits, p^rvisions, houses, edifices, buildings, advantages and comodityes thereunto appteyninge with eight negroes, beinge six women and twoe men w^{ch} are called by these names, TONEY, MINGOE, GRANGE, MALL, BUTLER, MARIA, JUDY, NELL, ILLUMA, the s^d. halfe part of the *Fort* plantacon with ye other plantacon of one hundred acres of land together with all and singular the fore bargained p^rmisses with their and every of their appurtenances free and cleare freely and clearly acquitted, remised and released from all manner of former bargaines, guifts, grants, mortgages and ingagmente, whatsoever to him ye s^d. Capt. DANIELL FLETCHER, his heires, executors, administrators or assigns.

To Have and To Hold for ever without ye lett suite trouble molestacon, controversee or contradicon of me ye s^d. JONATHAN HAWTAYNE, my heires, executors, administ^rs. or assigns, or any other p^rson. or p^rsons. from, by or under us, or any of us provided allwayes and it is the true intent and meaning that if the s^d. JONATHAN HAWTAYNE doe well and truly satisfye and pay or cause to be satisfied and paid unto ye s^d. Capt. DANIELL FLETCHER, his heires, executors, administ^rs. or assigns the full and just sume of thirty thousand pounds of good sound well condiconed and merchantable tobacco well made up in Rowle and Wreath on the last day of May next at one whole and entire payment at or within the mancon situate on ye plantacon abovesaid and called *Charles Fort*, then these p^rnts to be voyd els to remain and be in full power, force, effect and vertue.

In witness whereof I the said JONATHAN HAWTAYNE have hereunto sett my hand and seale this 15th day of September, 1643.

JONATHAN HAWTAYNE.

Sealed and dt. in ye pnce. of

ALEXANDER RIDDOCHE, Witness,

JOHN BATT,

HEN. STACYE.

Memorand y^t I Leift JOHN HOLMES of ye Island of Barbados doe hereby soe farr forth as it concernes me my heires or administrators confirme ratify and allowe of the sale which JONATHAN HAWTAYNE of this Island Gen^t hath made of the one hundred acres of land and eight negroes menconed in ye deed of Sale on ye other syde soe that it shall remaine as absolute and effectuall to all purposes and intents as if I myself had sealed and delivered and subscribed the same. Witness my hand and seal this 15th day of September 1643,

JOHN HOLMES.

Sealed and ddt in ye pnce of

ALL. RIDDOCHE,

JOHN BATT,

HEN. STACYE.

A Schedule or Invoyce conteyninge the names of the servants goods and chattels the one halfe there of disposed and sold to Capt. DANIEL FLETCHER with the one half of the plantacon called "*Charles Fort.*"

Imp^{ts} The servants viz^{ts} JOHN CHITTENDEN MOSES WATKINS, JOHN RICHARDS GLOOMER, RICHARD GRYMES all for their severall tymes which are yet to come and unexpired. Twelve head of cattle young and old with their increase. One mare colt, five sowes one boare cleaven hamackoes* one spanish ducke one horse, twoe whipsawes, five howes†, foure bills, twoe axes, one Jugge, one table cloth, six napkins one copper, one fryinge pann, eleven musketts, twoe Bibles one pewter basin, one pewter pint pott, one bakinge Iron, twoe Iron potts, one brass grater, cleaven old pewter plates, foure old pewter platters, one engin one broad axe.

* Hammock.

† Hoes.

In witness whereof I have hereinto sett my hand and seale the 15th of Septemier, 1643, and more, one copper which is wholly sold.

JONATHAN HAWTAYNE,

Sealed and adt in pnce

ALEX. RIDDOCHE, witness

JOHN BATT,

HEN. STACYE

On 6 February, 1693, Capt. GERARD HAWTAINE, "conveyed to JONATHAN HAWTAINE his right title and interest in the plantacon whereon he then lived, containing 124 acres of land in the parish of St. George and adjoining the land of Mr. THOMAS WILTSHIRE, West, and on the land of Mr. JOHN SPENDLOVE, East, together with the crop and two negroes with four English servants for securing the payment of twelve thousand eight hundred pounds of well cleared cotton wooll :

To all Christian people to whom these p^rnts shall come Greeinge Knowe yee that I Capt. GERARD HAWTAINE of this Island, Barbados, gen^t, for divers good causes and consideracons me thereunto moveing and more espetally for and in consideracon of twelve thousand and eight hundred pounds of well cleared cotton wooll in hand received, Have given granted bargained enfeoffed and sold And by these p^rnts doe give grant bargain enfeoff and sell unto JONATHAN HAWTAINE of the st Island Gen^t: all my right title and interest that I have or ought to have of and in all that my plantacon whereon I now live, contayning one hundred and twenty and foure acres of land or thereabouts situate lyinge and beinge in the parish of St. George adjoyninge on ye land of Mr. THOMAS WILTSHIRE, West, and on the land of Mr. JOHN SPEEDLOVE East Together with ye p^rnt Cropp and twoe negroes wth fower English servants by name HUMPHERY BARGESS, PHILLIP SALMON, PETER BEUCHAMPE, JAMES GOODCHILD, as also two mares with colt, one Assnegoe and one horse colt as also ye stocke of one bore, ten breeding sowes with their increase To Have and To Hold to him the s^d JONATHAN HAWTAINE his heires executors Administrat^{rs}. or assigns, together with all houses, edifices, buildings, easm^{ts}. p^rfits comodities, what-oever, to ye s^d. pbargained p^rmisses or any pt. thereof belonginge or in any wise appteyninge for ever With-

out ye lett trouble, contradiccon, denyall, mollestacon, pturbacon evic-
tion or ejeccion of me ye s^d. Capt. GERARD HAWTAINE, my heires,
executors, administ^{rs}., or assigns, or any other pson or psons what-
soever, lawfully, clayminge, or p^rtendinge to have any right, title, or
interest of or in ye sd. pbargained, pmisses or any pt. or pcell. thereof,
from, by, or, through mine, or their assent, consent, or pairemt. Pro-
vided allwayes that if ye s^d. GERARD HAWTAINE shall pay or cause to
be pa. unto ye s^d. JONATHAN HAWTAINE, twelve thousand and eight
hundred pounds of well cleared cotton at or upon the five and twentieth
day of March next, ensueinge the date of these p^rsents that then the
pmisses of this Bill of Sale shall be utterly voyd or els to stand in full
force, effect and vertue. In witness whereof, I have hereunto sett my
hand and seale this second day of February in ye yeare of O^r Lord God
one thousand six hundred forty and three.

GERRARD HAWTAINE.

Sig^d. sealed and dd. in pnce of
DANIEL WIGHT,
JOHN HOLMES.

On the 17 March 1643, JONATHAN HAWTAINE and
“Leift.” JOHN HOLMES bought from CHRISTOPHER
NEVISON two boys named JOHN PAYNE and JOHN
SMYTH. The terms of the deed of sale which is
witnessed by DANIEL WIGHT and GEORGE WOOD,
Notaries Public, are extremely quaint.

In the same month, a further purchase was made by
the same persons from CHRISTOPHER NEVISON of “tenne
assinicoes, one mare and one horse” for which they
agreed to pay “nyne thousand fower hundred pounds of
“sound and marchantable Tobacco in Rowle.” So that
these animals were worth five times as much as the two
boys.

It will be observed that the purchasers of the boys
“stand to the hazzard of their lives” as indeed they do
with respect to the “assinicoes &c.”:

Received by us JONATHAN HAWTAINE and Leift. JOHN HOLMES of

CHRISTOPHER NEVISON twoe boyes by named JOHN PAYNE and JOHN SMYTH for which we doe hereby engage ourselves our heires, executors, and administ^{rs}. to pay or cause to be paid unto CHRISTOPHER NEVISON or his assigns. ye full sum of eighteen hundred pounds of sound merchantable tobaccoe in Rowles such as the said XOFER NEVISON shall like of at some convenient store house at ye sea-syde storidge free, the one half being nyne hundred pounds of ye like Tobaccoe to be paid within twenty dayes after ye date hereof, and for default of payment the said CHRISTOPHER NEVISON to re-enter and possess the said servantes as his owne without sute or mollestacon ye said JONATHAN HAUGHTAINE and Lev^t. JOHN HOLMES to stand to the hazzard of their lyfes and the other p^t. thei^rof, being nine hundred pounds of tobaccoe to be paid ye last day of Aprill next ensuinge and for better security of payment of ye said tobaccoe in mann^r. and forme afores^d we doe hereby engage ye s^d. servants w^{ch} are purchased as above exprest. In witness whereof, we have here unto set o^r hands this 16th day of March 1643.

JONATHAN HAWTAINE,
JOHN HOLMES.

Test. DANIELL WIGHT,
et GEORGE WOOD, Nor^{is}. Pub.

Received by us JONATHAN HAWTAINE and Leif^t JOHN HOLMES from CHRISTOPHER NEVISON tenne assinicoes one mare and one horse which we doe hereby engage o^r selves o^r heires executors and administrat^{rs} to pay or cause to be pay^d unto the s^d CHRISTOPHER NEVISON or his assigns the Just sume of nyne thousand fower hundred pounds of sound merchantable Tobaccoe in Rowle such as the s^d XOFER NEVISON shall like or at some convenient store house at the seasyde storidge free the one halfe being fower thousand seaven hundred pound of the like tobaccoe to be p^d within twenty day after the date hereof. And for default thereof the s^d CHRISTOPHER NEVISON to reenter possess ye said cattle as his owne pper goods without sute or mollestacon the s^d JONATHAN HAWTAINE and Leif^t JOHN HOLMES to stand to the hazzard of their lyfes And the other halfe partⁿ thereof beinge fower thousand seven hundred pounds of tobaccoe to be paid the last day of April next ensuinge and for better security of pay^{mt} of the Tobaccoe in mann^r and forme afores^d we doe hereby engage ye s^d Cattle which we purchas^d as above expressed being marked under the Right eare with twoe cutts

all except the horse and mayer In witness whereof we have hereunto set o^r hands this 16 day of March. An^o 1643

JONATHAN HAWTAINE
JOHN HOLMES.

Test. DANIEL WIGHT
et GEO. WOOD, Not^{es} Pub^{co}

In 1649 GERARD HAWTAINE was a witness to the will of Captain JOHN FLETCHER.

Readers of "Cavaliers and Roundheads*" will remember how that in 1651 Sir GEORGE ASCUE with a Parliamentarian fleet summoned Lord WILLOUGHBY the Governor of Barbados to surrender, and how the "representative bodye" of the Island met together in General Assembly declared, resolved and professed that they would with the utmost hazard of their lives and fortunes defend His Majesty's interest and lawful power in and to that Island. Among those who signed this historic document were some whose names are mentioned in the present paper such as RICHARD PEERS, WM. FORTESCUE, GERARD HAWTAYNE, PHILLIP BELL, HENRY HAWLEY and others.

In the following year, 1652, the islanders surrendered to the Parliament and Sir GEORGE AYSCUE became Governor. GERARD HAWTAYNE with others, accepted the new régime and he continued to own property in the island for some years after.

ANTHONY ASHLEY COOPER of Wimborne, Saint Giles, Dorsetshire, one of the most prominent characters of that period of English History which embraces the reign of CHARLES I, the Commonwealth and the Restoration, and who had fought for the King and then against him, had taken a leading part under CROMWELL and afterwards against his brother RICHARD, and whom CHARLES II

* By N. Darnell Davis, Esq.

rewarded with an Earldom, had joined GERARD HAWTAYNE in the ownership of a plantation in Barbados. When the partnership commenced is not known, but differences had arisen between them in 1652, in which year, an order was made by Sir GEORGE ASCUE, Governor of Barbados and his Council directing the payment by Capt. GERARD HAWTAYNE to Sir ANTHONY ASHLYE COOPER, of the sum of £890 out of the first profits of the former's part of the plantation and finding that there was due by Sir ANTHONY 42,219 lbs. of muscovado sugar which was to be paid out of his moiety of the plantation. One JUDAH THROCKMORTON had made advances for the Estate, and there was awarded to him 2,800 lbs. of sugar in payment thereof. THROCKMORTON and CHARLES REGAYNE were the attornies, or as it was then written, "authorneyes" of Sir ANTHONY COOPER. The transcript of this order is apparently imperfect, but it would seem that there was or had been a partnership between Capt. GERARD HAWTAYNE and Mr. MATTHEW HOPKINGS, and the order under quotation provided for the keeping of accounts and for the supervision of each owner's half of the plantation. Sir ANTHONY'S agents were to be duly provided with meate, drinke and lodging, besides "washing and starchinge" befitting their quality. In those days the "washer" apparently did not consider starching as part of her work. The use of starch was as we know introduced into England in 1553, by one DINGHEIM, a Flemish woman.

One of "the Authorneye's" was also to be provided with a horse when it could be spared, to ride about the plantation and to the Church,

This order is signed and sealed by JOHN COLLATON

HENRY SWEETE and JOHN JOHNSON and witnessed by J. A. BEEKE and ROBERT RUMBOLDT.

The "Survey" or Inventory of the plantation is an interesting document as shewing of what a plantation and its effects consisted 240 years ago. Nearly one half the acreage was in standing wood, a great contrast to the condition of a Barbadian estate now-a-days when every available yard of land is under cultivation. For the care of the 100 acres under tillage there were 21 Christian servants with 3 men, six women, 2 boys and 2 girls who were slaves. The Stock consisted of 5 horses and 20 beasts, 54 hogs and 3 goats, with turkeys, "dung hill fowls," rabbits and ducks.

There were Arms hung up in the hall "six Muskeitts and Bandeleires" with 2 cases of pistols, but no swords are mentioned; there is a drum, perhaps for sounding an "alarm," a clock, 3 pictures and a Surgeon's chest.

The parlour was furnished with 6 small tables, 18 joyned stooles (whatever they may have been,) 4 chairs and six low stools, a couch, 4 "Bedstidds," 6 pictures and a bible.

The "Kitchen" contained several useful articles and in the "Seller" were a table and 2 "Sylver tanckards." The "Cooke room without doors" *i.e.*, outside, had "keittles, pott and a skeillett." The plant of the "Boyleinge House" was of a very primitive description and is set down as consisting of Coppers, a brass cooler, brass basons, skimmers, ladles, a still and worme from which we may suppose that "kill devil" *i.e.* Rum was one of the products of the plantation, and an "iron bound pipe for temper." At that remote date the practice of tempering the boiled cane juice with lime seems to have existed.

In the stable were saddles and bridles and other horse-gear. Nineteen hammocks are included in the list of the stable furniture, so perhaps the Christian servants and slaves lodged there. The agricultural implements were not many. The list of "Tooles belonging to the Smith" is rather a long one, and includes one "buttrice" an implement in use some 30 years ago, but now discarded. The Carpenter's tools are also set forth, all with still familiar names save a "Wimble Stocke." In the Cureing Houses were 300 potts for Sugar presumably for making "Clayed Muscovado."

Shaftesbury Papers—Section X No 1.

By vertue of an order to be directed from Sr. GEORGE ASCUE, Govern^r. of Barbados and his Counsellors and by the consent of Capt. GERRARD HAWTAINE of the one p^{te}. and JUDAH THROGMORTON and CHARLES REGAYNE authornyes to Sr. ANTHONY ASHLYE COOPER, Baronet of the other p^{te}. for the hearing, auditing, examining and finale determining of the accompts and differances with all damages anywise concerning the estate or plantation now in co-partnership between the s^d. Sr. ANTHONY ASHLYE COOPER and the s^d. Capt. GERRARD HAWTAINE, we doe ordayne and award that the s^d. Capt. GERRARD HAWTAINE doe paye or cause to be paid unto the s^d. Sr. ANTHONY ASHLYE COOPER or to his assigns, the sum of eight hundred ninetye to pounds, fourteene shillings and ten pence of lawful moneyes of England out of y^t. first pftts insewing from the s^d. Capt. GERRARD HAWTAINE his p^{te}. of the s^d. plantation that is to say, the debts oweing by the said plantation for the joynt accompts and all future charges for the managing of the same to the time of payment, beinge first discharged and pd. and wee doe declare that we find due by Sr. ANTHONY ASHLYE COOPER for his moyety of charges on the s^d. plantation, the twentie fiveth. day of February las^t. past, disburst and ingaged for by the said Capt. GERARD HAWTAINE, the quantities or some of Fortie Five thousand two hundred and nineteen pounds of Muscovado Sugar w^{ch} wee further ordayne and award to bee p^d out of the first pduce of the s^d. Sr. ANTHONY ASHLYE COOPER's moytye of the s^d. plantation and that there be likewise paid in two months alter the date hereof out of the

whole pduct of the plantation that is to say as well out of the sd. Sr. ANTHONY ASHLYE COOPER'S p^{te}, as out of Capt. GERRARD HAWTAINE'S p^{te}. two thousand eight hundred poundes of Muscovadoe Sugar at some convenient store-house neare the sea-side unto Mr. JUDAH THROGMORTON or to his assignes, Being for and towards some charges he hath disbursd for the plantation's use and his charges and expenses durringe the time he lived from the s^d. plantation and wee doe further ordayne and award that a Booke or Bookes of Accompt. bee hensforward kept by Capt. GERRARD HAWTAINE or his assigns during the co-partnership or longer if hee shall manage the plantation of all Goods and Commodities whatsoever made or to bee made one ye sa. plantation and of all disbursements for ye use of ye same and that ye pticulars in ye inventorye hereunto annexed bee entered in ye s^d. Booke and an accompt. theirow kept and given up att ye end of ye co-partnership w^{ch} Booke or Bookes shall not att any time bee kept from ye view and examination of ye s^d Judah THROGMORTON and CHARLES REGAYNE or from any other authorneye or authorneys that ve s^d. Sr. ANTHONY ASHLYE COOPER shall appoint to look after his p^{te}. of the s^d. plantation and that accordinge to the Covenants of co-partnership betweene the s^d. Capt. GERRARD HAWTAINE and Mr. MATTHEW HOPKINS (to whom the s^d. Sr. ANTHONY ASHLYE COOPER, his executors or administrators, bearing date the twentieth daye of Agust 1646,† an accompt. be given by the Mannager of the s^d. plantation and keeper of the accompts. theirow to the other ptner or his assignes which in tenne dayes after it shall be demanded by the s^d ptner or his assignes) of the s^d plantation and stocke upon it and of such goods as shall be pduced from the same and of the charges and disbursements thereon and that there shall be noe considerable disbursements made nor considerable act or thing done touching the s^d plantation by either of the s^d pties or their assignes without the consent of each other or their lawful authorneys and that ye s^d authorneys or any other to be sent by the s^d Sr ANTHONY ASHLYE COOPER not exceeding two in all at one time for ye manninge of his sa p^{te} of the said plantation shall and may have Meate Drink lodging washinge and starching befitting their qualities upon ye sa plantation and goods from time to time out of Sr ANTHONY ASHLYE COOPER'S p^{te} of the s^d pduce of ye sa plantation for their needful expenses and aparell which is to be placed to ye pticular accompt of ye s^d Sr ANTHONY ASHLYE COOPER to whom the Receavers theirow are to

† Some words are apparently missing here.

bee accomptable and that one of ye ^{sd} authornyes may when a horse can be spared without pjudice to ye advancement of the plantation have a horse to ryde about ye affairs of ye plantation and to ye church.

In witness whereof we doe hereunto sett our hands and seals this 18th daye of June 1652.

JNO. COLLITON,
HENRY SWEETE,
JOHN JOHNSTON.

Signed sealed and published in the psence of us

JA. BEEKE,
ROBERT RUMBOLDT.

Recorded the 29th June, 1652 and is soe attested by me.

JOHN JENNINGS,
Deputy Secretary.

The 30th of Aprill 1652.

A survey of the plantation with the appurtenances in co-partnership betweene Sr ANTHONY ASHLYE COOPER of Wimbourne St. Giles in the County of Dorsett Barronett and GERARD HAWTAINE of Colthropp in ye county of Oxford Esquire.

				Acres.
Imp ^{rs} Land falled and unfalled	...	...	...	205
Whereof in canes younge and old	...	...	...	60
In Pasturage	...	...	...	14
In corne ground	...	...	...	12
In planton ground	...	...	...	06
In cassadra...	...	...	...	05
In potatoes...	...	...	...	05
In yams	...	...	...	03
In ground runn to ruine	...	...	...	05
				110
In standinge wood	...	...	...	95
				205

Christian Servants 21.

10 having 8 or 18 months to serve, 11 having 5 years a piece to serve,

Slaves.

3 men, 6 women, 2 boys, 2 girls, 2 sucking boys.

Stock upon the Plantation,

Horses	...	...	...	...	...	...	95
2 stone horses, 3 geldings, Bease(?)	...	...	...	...	...	...	20
2 bulls, 3 steers, 6 calves, 9 cows and heifers, hoggs of all sorts younge and olde	...	...	...	...	...	...	54

Goats.

1 ram, 1 she goat, 1 kidd,

Turkeys and Dunghill fowles, Rabbits and ducks.

In the Hall.

6 muskets and bandeliers, 2 case of pistols, 1 drum, 1 clock, 1 longe table 1 bench, 2 forms, 4 pictures, 1 surgeon chest.

In the Parlour.

6 small tables, 18 joyned stooles, 2 high chaires, 2 small chaires 6 lowe stooles, 1 couch, 6 pictures, 1 Bible, Twoe Bedstidds

In the Kitchen.

4 iron potts, 2 brasse skillets, 6 pewter dishes, 6 trencher plates, 1 large leathern cisterne for water, 2 bakeing stones.

In the Celler.

1 stronge short table of frame, 2' sylver Tankards,

In the cooke roome, without dores.

4 iron kettles, 1 iron pott, 1 iron skillet.

In the Boyleing House,

5 coppers, 1 large brasse cooler, 4 brasse basons, 2 round, 2 fittinge, 3 skeimers, 4 brass ladles, 1 still, and worme, 1 iron bound pipe for temper.

In the stable.

3 saddles and bridles, 5 horse padds and 5 pack saddle trees, 19 hammaccoes, 7 sugar baggs, 6 axes, 4 hatches, 15 bills, 10 hoes, 3 spades, 1 iron crowe, 6 wedges, 1 large beam and scales, 10 halfe 100 weights, 1 paire of stilliards, 3 iron chaines.

Tools belonging to the Smith.

1 anvile, 1 vice, 1 paire of bellows, 1 raspe, 1 hand vice, 4 paires of tonges, 6 great files, 5 lesser, 1 paire of compasses, 1 screw plate, 1 tewe iron, 1 buttrice pincers and hamar for shoeing, 5 punches, 1 buckone, 2 hand hamars, 1 hackle hamar, 1 sledge.

Tooles belonging to the Carpenter.

1 broad axe, 1 D^o adse, 4 augures, 3 gouges, 6 w^{ch} chissells, 5 broade

chissels, 1 halfe inch chissel, 2 iron squares, 3 hand sawes, 1 frameing sawe, 3 cross cut sawes, 1 Joynter, 1 fore plainer, 3 hand plaines, 6 hand plaine irons, 4 whipp saws, 1 whimble stock, 1 maylering hamar, 1 lathing frowe.

In the Cureinge Houses 300 potts for sugar.

GERRARD HAWTAINE,
JUDAH THROGMORTON,
CHARLES REGAINE,

Recorded 20th June, 1652 and is soe attested by me

JOHN JENNINGS,
Dep^{ty} Secre^{ry}.

On the 30 March 1654, GERRARD HAWTAINE executed a deed, entered March 1657, whereby after reciting that differences existed between him and Sir ANTHONY ASHLEY COOPER, which had been referred to the arbitration of Coll. THO. MODIFORD*, WILLM. KIRTON, Esqr., Colonel HENRY (? HAWLEY, RICHARD BUCKWORTH, Gent. and Mr. RICHARD AG——Merchant, it was provided that if he GERARD HAWTAINE performed and fulfilled the award of such arbitrators, a conveyance to Sir ANTHONY ASHLEY COOPER, Knight Baronett, in such deed contained of the plantation, situate in the parish of St. GEORGE, containing 100 acres on which the said GERARD HAWTAINE then dwelt should be void. The deed is witnessed by THO. HASTEN, EDWARD COLE and WILL. CORDEROY and on 28 March 1657, its execution by GERRARD HAWTAINE was proved before the Governor DANL. SEARLE, by EDWARD COLE.

By a deed dated 7th August 1654 and entered 30 July 1656, GERRARD HAWTAINE conveyed to Sir ANTHONY ASHLEY COOPER, the plantation whereon he then lived, situate in St. George's parish and consisting of 100 acres, for securing the payment of £974.8.10 as by

* These signed the declaracion of 1651.

a certain award made between JUDETH (*sic*) THROGMORTON, as attorney to the said Sir A. COOPER, and the said GERRARD HAWTAYNE he is appointed to pay. The deed is witnessed by EDWARD COPE (? COLE) and JOHN HEWITT.

It would appear that the previous deed was by way of security for GERRARD HAWTAINE'S abiding the result of the award which was not made until the month following (28 April 1658), and on Capt. HAWTAINE being ordered under the award to pay £974.8.10, the second deed was executed so as to secure payment of that specific sum.

Barbados, 1654.

Be it knowne unto all men by the p^resents y^t I GERARD HAWTAINE of ye Island of Barbados Esq^re ffor divers good causes and considerations mee hereunto moviug have given granted bargained and sold and by these p^rents do give grante aliene confirme and sell unto Sr ANTHONY ASHELY COOPER of Wimborne in ye Countye of Dorsett Knight and Baronett all y^t mye plantation wherein I now live sittuate lyeing and being in ye s^d p^{sh} of St. George in ye above s^d Island consisting of one hundred acres bee ye same more or lesse being butted and bounded on ye land now in possession of ye s^d Sr ANTHONY ASHELY COOPER or his assigns and Capt. WILLIAM JARMAN, THOMAS WILTSHEER and HENERY HUNT, together with all ye houses and edifices and buildings thereunto belonging together with all ye stoke of servants, cattles, negroes and horses according to a schedule hereunto annexed together with all ye woods underwoods waies water courses p^rfit^s and advantages thereunto belonging or any waies appertaineing. To have and to Houkd ye aforesd land and p^rmisses to him ye s^d Sr ANTHONY ASHELY COOPER his heires and assigns for ever for his or their proper use and benefitt ffor evermore free and cleare and freely and clearly acquitted and exonerated and discharged off and from all and all manner of former gifts grants bargains, sailes, morgadges, titles, troubles and incumbrances w^t soever with warrant against all years (? persons) w^t soever clameing by or through or under mee provided nevertheless and upon this expresse condicon that if the s^d GERARD HAWTAINE his executors or assigns shall well and truly pay or cause to be payed unto the s^d Sr ANTHONY ASHELY COOPER or his assigns the full and just sum of nine hundred seventy and foure pounds eight shillings and tenn pence curant money of

England on the severale dayes and tymes and att the place and under such cautions (?) and advantages as In certayne Articles for an award hee is appoynted to pay the same Award beinge made betweene JUDETH (*sic*) THROGMORTON as attorney to the said Sa ANTHONY ASHLEY COOPER and the s^d GERARD HAWTAINE the 28th day of April 1654, as itt is testified by and under the handes and seales of Collonell HENRY HAWLEY, Colls. THOMAS MODDIFORD and WILLIAM KIRTON Esq^{re}, RICHARD BUCKWORTH Gen^t and RICHARD NEWBOLD gen^t and allsoe save and keepe harmless the s^d Sr ANTHONY ASHLY COOPER and his assigns of and from all debts duties and demandes any wages concerninge the sa plantation before the date of the s^d award as by the second artickle of the s^d award hee is ordered and appoyntted to doe as by Relacon thereunto beinge had more att large may and doth appear that then and from thence forth this present conveyance and every charge and artickle therein conteyned shall be voyd frustrate and of none effect to all intents and purposes whatsoever.

In witness whereoff I have hereunto sett my hand and seale,

GER. HAWTAINE.

A list of the servants, cattle horses and hoggs belonging to Capt. HAWTAINE upon the division.

4 Christian servants by name

(?) RONE MARRAN,

(?) POW. MACCAN,

JOHN GRAY,

DAVID MACKARNE,

WALLON LUKE

7 negroes by name

HARRY, MARIA, VENUS, her child,

JACK JUDE DAPHNE.

8 heade of cattle :—one ox, foure coves and three heifers.

2 horses.

10 hogges of all sorts.

Signed sealed and delivered in the presence of us,

EDWARD COPE, JOHN HEWITT.

BY THE GOVERNOR.

Capt. GERRARD HAWTAINE this 7th September 1654, appeared before mee and acknowledged the above writtynge to be his Acte and deede.

DANYELL SEARLE,

BY THE GOVERNOR.

Mr. JUDETH (*sic*) THROGMORTON this 29th July 1656, appeared before mee and made oath that hee saw Capt. GERRARD HAWTAINE to signe, seale and deliver the above writings upon the 7th day of August in the yeare of Our Lord 1654 and further sayeth not.

DANYELL SEARLE.

The first mentioned deed described GERARD HAWTAINE's plantation as

“scituate lyeing and being in ye Prsh of St. Georges in the said Island
“consisting of one hundred acres be ye same more or less being butted
“and bounded by y^e lands or plantation now or late in the possession
“tenure or occopation of y^e said Sr ANTHONY ASHLEY COOPER or his
“assignes and LODWICK WILLIAMS Capt. CHRISTOPHER LACY Mr.
“THOMAS WILTSHIRE and Mr. HENRY HUNT.”

Whether GERRARD HAWTAINE ever discharged this liability is not known, but on 2 April, 1656, he conveyed to RICHARD NOKE, Merchant of Barbados, the plantation which he had recently bought from Capt. CHRISTOFER LACY and ELIZABETH his wife, containing 15 acres and situate in Christ Church by way of securing payment to RICHARD NOKE, of the sum of 18,579 lbs. of well cured Muscovado Sugar. The deed was witnessed by HENERY STARR and WALTER SMITH and acknowledged before THOMAS NOELL.

To all Xtian people to whome this p^{re}sent. writing shall come Capt. GERARD HAWTAINE of ye Island of Barbados, Sendeth Greeteing in our Lord God everlasting, Know yee y^e ye s^d. Capt. GERRARD HAWTAINE for divers good and valluable considerations mee hereunto moveing, have given granted bargained and sold and by these p^{re}sent doe give, grant, bargain and selle unto RICHD. NOKE, Merchant of the same Iland all y^e Plantation which I lately had and purchased of and from Capt. CHRISTOPHER LACY and ELIZABETH his wife containeing by estimation fifteen Acres of land or thereabouts situate lyeing and being in ye parish of Christ Church with all woods, underwoods, easm^{ts}, pfitts and p^{re}vedges and emmollem^{ts} whatsoever to ye s^d. premisses belonging or in any wise app^{re}taining To have and To Hold all and by singular ye p^{re}misses and every p^{ar}t and p^{ar}cell thereof to ye use and behoofe of ye s^d. RICHD. NOCKE, his heires, executors and assignes forever. Provided

allwaies and uppon condition following: That if in case ye s^d GERRARD HAWTAINE his heires, executors, Administrators or Assignes shall well and truly pay or cause to be p^d unto ye s^d. RICD. NOKE, his heires, executors, or assigns, ye full some of eighteen thousand, five hundred and seventy nine pounds of well cured Muscovado sugar at or before ye first day of Jan^y. next insueing ye date hereof, y^t then this p^rent deed of Bargaine and saile to bee utterly voide and of none effect any thinge, or things, herein contained to ye contrairie in any wise notwithstanding. In Witnesse whereof, I have hereunto sett my hand and seale this second daye of April Anno. Dom., One thousand six hndred and fifty-sixe (1656.)

GER. HAWTAINE.

Sealed and delivered (and ye words forever and ye word heires twice Interlined) in ye p^rence of

HENERY STARR—WALTER SMITH.

June ye 23rd, 1656.

This day personally appeared before me Capt. GERRARD HAWTAINE and acknowledged ye pmisses to bee his aet and deed and delivered as his morgage and saile unto RICHD. NOKE. Accorling to ye Limitation and purposes therein expressed this done and acknowledged before mee.

THOMAS NOELL.

Estates in Barbados with very few exceptions frequently changed hands, and with each new owner a plantation received a new name. It has been difficult therefore to identify the estate on which GERRARD HAWTAINE dwelt in 1654. In OLDMIXON'S map *Wiltshire's*, (which was contiguous) is close to Drax Wood and may be where *Frenches* and *Edgecombe* now are. Plantation *Charles Fort*, bought by JONATHAN HAWTAYNE as mentioned on page 19, was in St. James' Parish, near the *Hole*; its site may now form part of either *Trents*, *Lascelles*, or *Sandy Lane* plantations. In former days there was a Fort or Battery at what is now Church Point, near Hole Town, now converted into a delightful residence.

JONATHAN HAWTAINE in April 1642, bought from Cap^{tn} WILLIAM HILLYARD for 5,500 lbs of cotton wool 30 acres near the "Hatchers" river, but in June following, he assigned his right title etc. to this land to FRANCIS COOKE. This sale and transfer were not recorded until 1656.

An extract from the council minutes of Barbados shows that on 3 August 1669, GERRARD HAWTAINE endeavoured to reverse a judgment obtained against him by CRISPIAN HOOPER Vouchee of WM. DALDARON but without success.

In Council, 3rd Aug. 1669.

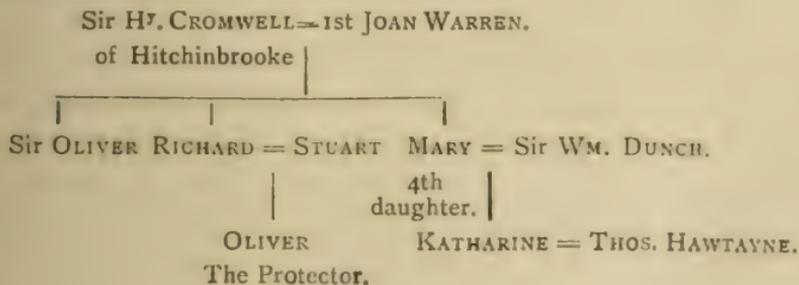
PRESENT: HENRY HAWLEY, DEPT. GOVERNOR; DANIEL SEARLE, PHILIP BELL.

HAWTAINE v HOOPER.—Upon the hearing of Errors brought by Mr. GERRARD HAWTAINE to reverse a judgment obtained against him by CRISPIAN HOOPER, *Vouchee* of WM. DALDARON, there being no error found, the said judgment is affirmed.

From the above mentioned mortgages, &c., it would appear that GERARD HAWTAINE found that his plantations were unprofitable and that he got rid of his Barbados property.

On the 1st of April, 1679, GERARD HAWTON returned to London from Barbados in the Ship Expedition JOHN HARDING Commander.

His elder brother THOMAS has already been mentioned. The link between his wife KATHARINE DUNCH and OLIVER CROMWELL is shewn thus :



Among the Records of JAMES I. and CHARLES I. suits in Somerset House, is one to which the celebrated JOHN HAMPDEN with THOMAS HAWTAYNE and his wife were parties in connection with the affairs of EDMUND DUNCH her brother.

In 1637, two years before GERARD emigrated, THOMAS HAWTAINE had conveyed COLTHORPE back to his mother MARY, from whom it had come. The subsequent history of this place is not easily traced, but there is reason to believe that THOMAS HAWTAYNE in 1648-50 no longer dwelt there, and was from some cause or another, dependent on his stipend as usher or schoolmaster in Magdalen College. EDWARD, another brother who was a doctor of Medicine, had died in 1666 without issue, and it is more than probable that GERARD came home after his long absence, as does many a colonist of the present day, to find himself friendless and forgotten.

The only further trace of him that has reached me is this;

On 26th———1686, a Commission was issued to JOHN EYLES and FRANCIS EYLES, attorneys of JOHN HOTHERSALL, of St. John's Parish, Barbados, principal creditor of GERRARD HAUGHTON late of Barbados deceased to administer during the absence and to the use and benefit of JOHN HOTHERSALL.

There is no record of the marriage of Captn. GERARD HAWTAINE the emigrant of 1639, although the Barbados Registers contain an entry of the marriage in 1680 of a GERARD HAUGHTAINE with HESTER WILTSHIRE, and in the following year their son GERARD was baptised. It was probably a son or other descendant of his who as above stated, married HESTER WILTSHIRE. It has already

been noted that THOMAS WILTSHIRE was a neighbour of GERARD HAWTAINE in 1643.

Perhaps a few remarks on other persons who have been mentioned in this paper may be allowed.

The PEERS family of whom mention is frequently made in Mr. DAVIS' "Cavaliers and Roundheads", were leading people in Barbados, where they owned *Libanus* or *Lebanon*, *Rendezvous* and *Staple Grove*, which last named estate still retains that name. They were connected with the HAWTAINES or HAUGHTONS. EDWARD PEERS a brother of Sir RICHARD PEERS in 1665 bequeathed to RICHARD HAUGHTON his nephew, 60 acres of land and 20 good working negroes and to his nephew VALENTYNE HAUGHTON, 40 acres of land and 10 negroes.

Sir RICHARD PEERS of Barbados, married MARY, daughter of JAMES HAWLEY, Esq. of Brentford and sister of HENRY HAWLEY, Governor of Barbados in 1651, and member of the Provisional Council in 1639-51 and 1660.* By his will† dated 18 Dec., 1659, and proved 14 May, 1662 he bequeathed to his son JOHN the plantations *Lebannon*, *Rendevce*, (*Rendezvous*). He speaks of his son EDWARD and daughter ELIZABETH PEERS, his brother (in law) JAMES HAWLEY, two other daughters SUSAN JONES and MARY BOOTE, wife of NICHOLAS BOOTE. He also speaks of his grandchild, RICHARD HAWTON and of JONATHAN HAWTAINE and VALENTINE HAWTAINE. Coll. HENRY HAWLEY and Coll. JAMES HAWLEY of New Brainford, Middlesex.

RICHARD PEERS, Esq., by his will dated 18th Decr., 1659, bequeathed to JOHN PEERS his Sonne and to his Heires the Plantations

* Archer's monumental inscriptions p. 365.

† P.C.C. Land 70.

Lebannon Ryndevee (Rendezvous) containinge be estimacon 600 acres and upwards with all the housings, &c., &c. and 6 best horses and mares and geldings and all the negroes both young and old and all coppers, stills &c., together with thirtie head of eattle, the youngest whereof to be 3 years old, and all stock of hogges and fowles and all household stufte, either bedding, or furniture, linen, woolen, chaires, stooles, or vessells of copper, or brasse, or pewter, whatsoever, and the Manor Testator late bought of Sr. WALTER PYE called LINERS ORKELL (?) in Co. HEREFORD; and also 50 sheepe and 20 goates and Bason and Ewer and 2 Silver Tankards and large silver salt sellers and all moneys, rings, jewels and whatsoever is Testators in the house and coach with harnesse and whatsoever belongs to it.

To EDWARD PEERS Sonne and to his heires the Plantation on which Testator now lives, containing 300 acres and thirtie cattell.

To SUSAN JONES Daughter 10,000 lbs. of sugar within 2 years and the use of 30 acres of land whereon she now lives and of the 5 servants thereon that shee may provide some thinge for her children provided shee abuse not my servants nor fall anie timber or wood from the land.

To MARY BOOTE Daughter wife of NICHOLAS BOOTE. "A cort and living or parcel of land lying in England valued at £60 per An. purchased by Testator's order for the use of Brother HAWLEY of Braineford in which land shee is to have her life, her husband's life and child's life and not the land soe much money out of Estate as should have been paid for the purchase within one yeare.

RICHARD HAWLEY Grandchild, 20,000 lbs. of sugar within 2 years.

JONATHAN HAWTAIN, VALENTINE HAWTAIN each 10,000 lbs. of sugar within 3 yeares.

ANNE PAYNE? Cozen, 70,000 lbs. of sugar within 2 yeares and her dyet and lodging and washinge and all other accomodations fitting in his dwelling house till fullie satisfied of the sugar.

JOHN PEERS, well beloved sonne lawful heire & Executor.

RICHARD HAWTON Grandchild, 2000 lbs. of sugar, Coll. HENRY LEY and Coll. EDMUND READE loving friends, Supervisors who are to call Overseers (*i.e.* Guardians) to accompt once in 3 months.

PHILIP DARBY, WILLIAM PURSON, ANTHONY PARSONS, servants each 1,000 lbs. of sugar and all wages.

In regarde to the young yeares of his 2 sonnes he appoints.

HENRY HAWLEY, Esq., EDMUND READE, Esq., JAMES HAWLEY of New Brainford in Middlesex, Guardians till JOHN PEERS, the sonne is 17.

Codecil. He formerly made a deed of Guifte in trust to certain persons of his Estate "it has never been recorded nor livery nor seizin given and is therefore invallid" Revokes it Mr. ROBERT TOTHILL loving friend another overseer 2,000 lbs. sugar.

THOMAS MODIFORD, JOHN ASHCRAFT, PHILIP DARBY. Witnesses.

2nd April, 1661. By the Hon. HUMPHREY WALROND appeared personally JOHN ASHCRAFT and PHILIP DARBEY and swore and proved 14th May, 1662 by JOHN PEERS the son.

1661, May 18, Commission to DAME MARY PEERS widow and relict of Sr RICHARD PEERS while he lived of Barbados in part dec'd.

Mrs. ANN HAWTAINE appears in the following order of Council, but it is not known who she was.

*At a meeting of Council presided over by the Rt. Hon. Daniell Searle,
11 March 1656-7.*

MARTIN BENTLEY v. Mrs. HAWTAINE.—Ordered that if the laste order made in the Corte of Chancery between Mr. MARTIN BENTLEY and Mrs. ANN HAWTAINE, be not observed by sa. Mrs. HAWTAINE that then Mr. MARTIN BENTLEY's proceedings agst. her be left free at Common Lawe.

In 1669, JONATHAN HAUGHTON married TEMPERANCE BAKER and SUSANNAH HAWTAINE, daughter of JONATHAN and TEMPERANCE HAWTAINE was baptized in 1670, in which year TEMPERANCE HAWTAINE wife of JONATHAN HAWTAINE was buried. The above are examples of the variations in the etymology of proper names existing in the Barbados Registers.

VALENTINE HAWTAYNE was no doubt the VALENTINE HAWTAINE, who according to the Registers, married ELIZABETH TOMLINSON 1666, and whose son JONATHAN was baptized in 1667.

Five years afterwards in 1672, the marriage of VALENTINE HAWTAINE with ANN HAWTAINI? is recorded.

VALENTINE HAWTAINE was otherwise connected with the PEERS family.

In Council, 6th August, 1672.

PEERS &C. v. KINGSLAND.—Upon a writ of error brought by HESTER PEERS and VALENTINE HAWTAINE (Attorneys to JOHN PEERS, Esqr.) to reverse a judgment obtained agt. ye said PEERS and one JONATHAN HAWTAINE at ye suite of NATHL. KINGSLAND Esqr., (upon a scire facias). It is ordered that the same be heard the first next Council day.

JONATHAN HAWTAINE is also mentioned in later records as having been associated with JOHN PEERS in some law proceedings, as appears from the following :

In Council 14th May 1672.

PRESENT: HENRY HAWLEY, DANIEL SEARLE.

PEERS &C.—It is ordered that ye Clerke of ye Court of Comon Pleas for the precincts of Christ Church doe against the next Council day being on the eleventh day of June followinge bringe to this Board all the Originall Records relating to the scire facias brought by NATHANIEL KINGSLAND ag^{ts}. Capt. JONATHAN HAWTAINE and JNO. PEERS, Esq.

In 1679 JONATHAN and VALENTINE HAUGHTON are recorded as having gone with their wives and families from Barbados to Jamaica, and settled on the Northern side of the Island.*

In 1679 JONATHAN HAWTAINE, gent. sold part of 300 acres of land in Jamaica to JOHN PEERS. This plantation was in St. Elizabeth's parish and contained 600 acres.

The Barbados records to which reference has been made, contain no further mention of the HAWTAINE family, but there were HAUGHTONS who may have been their descendants.

It is desirable that West Indian Colonists should follow the example of many of our American Cousins who take great interest in tracing the connection between the families of the Great Republic and those of

* Archer's monumental Inscriptions.

the Great Empire from which the former sprung. There is very much interesting matter in the records of the different islands which would well repay the trouble of adapting it for publication.

The Indians of Guiana.

Translated from the Dutch of J. J. Hartsinck.*

DESCRIPTION OF THEIR ARMS.



THE common weapons of these Nations are Bows and Arrows, of which they well understand how to make use, being taught from their youth, discharging their arrows on high with so correct an aim, that on their descent they seldom miss the object they aim at. The bows are made of letter and other hardwood, usually 5 or 6 feet long, rounded at the outside, tapering at both ends, with a cord or string.

Their arrows of the same length are made from the tops of reeds; they attach on the afterpoint of each arrow, which they adorn with feathers a piece of wood, 3 or 4 inches long, to increase the velocity of the motion; at the other end, they fix a piece of very hard wood, carved on to a point, or bones rather, or stone points, provided with crooked hooks or with a sharp fish bone taken from under the fins. They are not satisfied with having only one point, but fix on it 3 or 5 or even 7, which they call *Possirou*, using them not only in war but for fishing, striking often at once as many fishes as there are points to the arrow.

Many of them poison their arrows with the fruit of *Cururu* and of *Pison*, sometimes with the sap of a certain tree which they call *Pougoulay*. The proof of their being rightly poisoned lies in their shooting an

* Beschryving van Guiana, 1770.

arrow of that sort into a young green tree ; if the tree within three days drops its leaves the poison is sufficiently strong, ay, so powerful that not only the wounded immediately dies, but it is even related that during the last insurrection of the negroes in Berbice a child being carried on the back of its mother and shot through with a poisoned arrow, the mother although not in the least wounded herself, swelled enormously, and died shortly afterwards.

They stick their arrows in a quiver made of the bark of a tree, covered with leather, which they carry at their side.

They likewise make use of a cudgel or sword, consisting of a piece of letter, iron, or other hardwood, two or two and a half feet long, one inch thick, and three or four inches broad at the ends, but tapering at the centre and rounded, with figures carved on it.

Those of the Palicours Nation make use of a sort of pike, called by them *Serpo*, made of letterwood, this being the only distinguishing weapon of their Chief or Captain.

The only weapon of defence they possess, is a shield of very light wood, which they paint in different colours ; its form is almost square, a little hollow in the centre, where a handle is fixed. The Indians in the Dutch Colonies have no poisoned arrows which they shoot with the bow, the Acquoways excepted, who make use of long blow pipes in which they insert poisoned little arrows of a span long and very thin, snapt at the point, or curved inwards, in order that when pulling them out of the wound, they should break off ; with these they can hit their object at a great distance with a nicety.

DESCRIPTION OF THE DWELLINGS, MANNERS, OCCUPATIONS, AND HOUSEKEEPING OF THE INDIANS.

Little can be said regarding their places of residence ; they like nearly all other savages of South America dwell in a lot of villages, or hamlets, consisting of a few huts placed near each other, along the rivers and creeks, often changing them without any arrangement or order. These huts or *carbets*, are miserable square dwellings from fifty to sixty feet long, not so wide, round above, 18 or 20 feet high, and built of two posts, on which they place a long lath, which supports the entire building ; around it they plait branches of trees, which they understand to tie so close, that the interior of the huts are skreened from wind and rain.

They cover these with Palmiste or Ahouay leaves ; the door is the only entrance, and so low, that you are obliged to enter it in a stooping position ; the fire-place is in the centre of the hut, so that the smoke must pass through the opening of the door. Many of these natives live together in families ; the size of their hut being regulated according to the number of its inhabitants, sometimes 20 or 30 families reside in one *carbet*.

They generally have in their villages a large hut, called *Tabouy*, serving for an Armory, surrounded by palissades, or for a meeting place for the whole nation, where all meet, celebrate their feasts, and receive strangers. Sometimes such a building is 130 or 140 feet long, and 30 or 40 feet wide, at other times again but 50 or 60 feet long, and from 10 to 12 feet wide. In the centre and at both ends of it, are two large props shaped forkwise, which at the top receive a long piece of wood, this is for the use of the chief, on this lie

laths slantwise from top to bottom of the building, resting on posts of 4 or 5 feet; they afterwards introduce cross beams which they fasten with pieces of Liane, to which the hammocks of the men are slung, for the women possess no such privilege, these remain in a sitting posture on their heels, or lie in a large benab; this building is open at all sides, and covered with leaves.

Some Indians, like the Guaranos, or Warouws, who mostly live near the rivers and marshes, place their huts on Mangle or Mangrove trees, to escape the floods; these, as we shall hereafter describe, grow in fresh as well as salt water, and their hanging branches take root again and grow up, so that the bushes of Mangrove trees become so thick and dense, that you may walk on their branches and build huts.

They otherwise fix a few posts on the ground, of 8 or 10 feet in height, whereon they place a floor made of laths, 7 or 8 feet long, two or three inches broad, made up a sort of manicole, which easily splits; these laths are flattened at the other side, joined together and two across, when they form a pretty safe floor. The roof, like the other huts, is covered with leaves. One gets into it by means of trunks or stems of trees, hanging a little on one side, in which some notches are cut, to serve for ladders, but they are so shaky, that it is difficult to mount them, and more so to come down by them. Their roads, until they reach higher land, are formed of similar thick posts, standing upright, to defend themselves against high water and their enemies, for whoever makes a false step on them, falls into sharp-pointed thorns, with which the forest abounds; the Warouws however, by day or night, walk over them

with the greatest agility. The Caraihs have two sorts of houses, one serving them for the night, the roof whereof being built tent fashion, comes near to the ground; the other which they occupy during the day is higher, and much wider, raised in shape of a wall, but open on all sides and covered only with leaves.

Their furniture consists of hammocks, barbecot, painted pots, pagales, tools and arms. They have neither chairs or benches, as they always sit on their heels, some have however a sort of wooden chair, called by them *Moulé*, which is made use of when paying visits, it looks like a bench without arms, not of the easiest, for it is something in the shape of a canoe, and so hollow in the centre that you sink in it up to your middle, and the knees touch the chair.

As regards their institutions they are totally ignorant of any Government or Policy, each living as he likes best, so that there exists no distinction of rank or quality amongst them.

They have a Captain who commands only when at war, but has not a word to say on civil matters. Although unacquainted with laws, manslaughter very seldom takes place, they live peaceably together, and when it happens that an Indian kills another, he is freed, by giving to the widow or children, a male or female slave, should the manslaughter not be revenged by his friends; for which reasons the Governors in our Colonies always endeavour to unite and reconcile the relations. Amongst some of these natives like the Caraihs, who are very jealous, adultery is punished publicly in the presence of their people, by the death of both criminals; with others, the husband kills the wife

if he can prove the misdeed, nay, even merely on suspicion;—with others indemnification is allowed, the offended party being permitted to bed with the wife of the offender as often as the latter has laid with the offended party's wife, others exchange wives, by mutual consent, for a few months, and that time elapsed, retake their own. They are averse to stealing, though very nimble and handy; confidence with them is so great that nothing is locked up, the doors of their huts constantly remaining open (the Negroes on the contrary, a thievish set of people, mistrust each other, always locking their huts, with a lock somewhat curiously made by them of wood) possessing nothing costly which they could wish to hide, but a little basket they call *Pagall*. All Indians are indolent and lazy, as we have before stated, and do nothing but hunt and fish and cut timber in the forest, this they square and drag to the water sides, for which they allow themselves for a small pittance to be employed by the Europeans, the women and children settling on the estates. They are most willing, if you treat them well, but love liberty; they do not like to be ordered, or treated like a slave, as then they do everything wrong that they are desired to do; for instance, if sent to hunt, they will fish, and so *vice versa*, whereas everything asked of them in a friendly manner, they willingly execute; every morning they and their children wash and bathe themselves in the river. They are often obliged to go hunting for their daily food, of which they are at the same time great amateurs as well as judges. They have several sorts of dogs, who from their youth are trained to every sort of game; they are small, lean, and ugly to the sight,

resembling much a wolf ; they so highly appreciate them that the women are obliged to carry them in their arms on the road, and suckle them with their children ; to train them, the Indian carries the dog in his arms, until he detects the track of the game, he then shows it to him, makes him smell it, and lets him run for a short while with the other dogs ; the game being caught, he takes the intestines, then boiling with piment or Spanish pepper, gives them to the dogs, in order, as he thinks, to strengthen their scent and make them eager after the game. Should he be unfortunate enough not to get any, the fault is laid with the dog : whereupon he digs a small hole, in which he puts some Spanish peppers, places the dog in it, and covers him with some slight boards or pieces of wood, in which he remains so long, till he has rubbed his nose sore on the pepper, by which means he supposes that the scent of the dog is increased, and will hunt better in consequence. When they go hunting, a few Indians get into a corial or canoe, and paddle up the river, each armed with a bow and arrow, or gun, with a knife at their sides, and five or six hunting dogs. Having arrived at the place of rendezvous, they divide themselves on both sides of the river, with the exception of one, who remains in the canoe ; the Indians on shore enter the forest with their dogs ; on starting any game, the dogs give tongue, like our setters, and from the particular howl they make, the huntsman can ascertain what species of game they are after ; the dogs being thereto taught, drive it towards the river ; he who is in the canoe paddles quietly along the bank of the forest to the spot where he supposes the game will come out in order to shoot it. The game being skinned, the Indian in the canoe makes

a signal to his companions by a certain whistling or bellowing, when they reunite. The hunt being over, they paddle homewards, where they draw and clean their game, bringing it to the master, for whom they hunt, who rewards them either with a bottle of Kiltum (Rum) or other little knick-knack. They keep the intestines, head, neck, and a fore-shoulder to themselves, which they give to their wives to be washed and boiled in pepperpot, or to be put on the *Barbacot*, a sort of wooden grater either to roast or to dry; when on arriving home they throw themselves forthwith into their hammocks, remaining in it the whole day playing on their flutes, whilst their wives serve up their dinner.

When an Indian hunts small game, he goes by himself in the forest with the dogs, armed with an axe, bow and arrow, and generally with a gun; the dogs giving tongue he pursues the game, but as the forests abound with hollow trees it often happens that the game creeps in one of them to hide itself, when the dogs remain barking before it, till the Indian makes his appearance, who stops the hole with branches and leaves, cutting at the other side of the tree or opening with his axe, by which he can either shoot the game or drag it out with his hands; not being able to effect this, he lights a fire on the hollow tree, when the game is forced either to come out, or to stifle from the smoke.

Fishing is likewise carried on with bow and arrow, which latter they manufacture of sharp fish bones, with sometimes five or seven points; or with the hook, the lines of which they make of threads from the plant called *Pita*, which for strength and fineness equal the whipcord of our Country.

They likewise fish with baskets which they place before the Creeks, and with a certain poisonous wood, which they throw into the water, by which means the fish fall into a swoon and float in multitudes on the surface of the water, of this we intend to say more hereafter. Others occupy themselves with making baskets, and plait boxes of small twigs, called *Pagales*, of different shapes and sizes, square, oblong, and round, the rims of which they paint red and black; these are of great use to them, to keep and hide their provisions, tools, and other things in; some of these baskets are doubly worked, lined with Baroulou or Ahouai leaves, to prevent water penetrating into them; they are uncommonly neat and light.

Of this sort of basket work they likewise make a sort of sausages, sewing them into bags to squeeze out the Cassave.

They also make a sort of grater of small sharp stones, which they know how to grind for that purpose, and fasten chequerwise on a board two feet long, and eight inches broad.

Of similar stones their tools to carve wood with, and even to cut stone, consisted, previous to being made acquainted with the use of iron. They manufacture pots and pans, called *Canaris*, of different sizes, with figures painted on them, in these they keep the liquors. They also have a sort of spoons or cups which they call *Couis* of different sizes, which they prepare from the bark or shell of the calabash fruit, this they cut in two, varnish with much neatness, and previous to its getting ripe by tying it, can form it in all sorts of shapes, carving on the prettiest figures of flowers and other divers decorations.

They make mats of palmist leaves, which serve them for tablecloths, and blankets, or foot-mats, when sometimes they sleep on the floor. The hammocks, the principal and most useful of all their furniture, consist of square pieces of cotton which they hang up by cords to the roof; in these they sleep and pass the greatest part of their life, for this reason they cultivate the cotton tree. Hammocks are likewise made of the *Pita*, but they are not so good, as well on account of their hardness, as not being wove sufficiently close to prevent mosquito bites and fend off other insects. The loom on which they make them, consists of four large sticks, five or six feet long, fastened at the corners with wooden pins or pieces of *Liane*, in the shape of a frame, on which they cleverly know how to fasten chain-wise cotton threads; this frame being placed against the wall in rather a slanting position, they have a sort of shuttle with which they weave the hammocks, striking every time the threads close together with a piece of hard-wood, a little sharpened, in lieu of using a comb, like our weavers,—the hammock being finished, they fasten cords to it, and hang it where they like; they often paint them with Roucou and other paints which they mix with balsam copaive or other oils, in all manners of squares and notions, in no bad taste; the best are those of white cotton, seven feet square, though they make them of all sizes. In this work they are not exceeded but by the *Brasilians*. The masterpiece of their arts, in which as in all the sciences they are extremely ignorant, is the building of their Pirogues and Canoes, with which they paddle exceedingly fast, and carry large cargoes, navigating with them the rivers, over the sea and along the Coasts; they are

wonderfully light, formed out of a single piece from the hollowed-out trunk of a tree, and without nails. These are some 30 to 40 feet long, and smaller ones, go by the name of corials, one part ending in a point; they are so small that they hardly can contain 2 or 3 persons, they easily capsize, but for this the Indians care little, all being able swimmers; turn it up, bail out the water, and proceed; the bottom of these small ones, sometimes consists of only the bark or skin, of the thickness of a quarter of an inch, twisted or sewn together at the top with roots of trees, and the seams rubbed over with a certain gum or rosin.

The way in which they build their craft is simple enough; they look for a sound and straight tree, ten or twelve feet in circumference, and long in proportion; they cut longitudinally a small aperture 9 or 10 inches broad and cut the wood out on both sides as even and as smooth as possible in order to get it round; this done, they turn the tree over to give it outside the same form, usually somewhat narrower before, though sometimes fore and aft equally wide; they particularly take care to give the body at both sides an equal thickness. A large canoe is commonly two inches in the keel or bottom $1\frac{1}{2}$ in the sides and one thick at the bends; after this nothing remains but to open it to give it the proper width. For that purpose they make a sort of scaffolding of small posts, a little elevated, standing 3 or 4 feet from each other, on this they place the canoe; they then put fire in and outside, and when the bottom is well heated, they take a piece of hardwood made in the shape of a pair of tongs, with which they grip the sides of the canoe and gently keep them outwards so that they are bent open

at once in the space of 3 or 4 hours time ; they always have water on hand to extinguish the fire should it become too strong, and to prevent the canoe getting burnt ; a tree which has ten feet in circumference, is generally $5\frac{1}{2}$ feet wide, one of 9 feet $4\frac{1}{2}$ feet, and so on. Very seldom do the Indians trim up their Pirogues, as for that purpose they would require nails and boards, which they, and particularly those who live in the interior, cannot well come at ; for this reason some are contented with boarding up the sides, fore and aft, with thin boards of a certain palm tree, four inches wide, which they understand to fasten together so tightly, that no water can get in ; they likewise place across some pieces of wood to serve for cross beams, to make the craft tighter and at the same time to serve for benches for the paddlers, sitting two, side by side. In the after prow they fasten a sort of rudder, or steer it with a paddle, called *Pagaye*. The pagayes are made of very light wood, 5 or 6 feet long, in the shape of bakers shovels ; the other paddles are of the length of $2\frac{1}{2}$ feet, and six inches broad, thin at the end of that part which enters the water ; the handle ends commonly of a half moon shape, in order to have a better grasp.

In a hollow sea, a pagaye is preferred to an oar, because the waves must be cleared quickly and is sooner done with a pagaye than an oar, which requires two motions ; they not only make use of their craft for rowing, but likewise sail with them. Their sails are almost square, and sometimes made of canes split lengthways, in the shape of laths, placed close together, and fastened with Liane or Pita threads. The men fell trees, and clear the ground for provision gar-

dens, which the women in their turn must cultivate and plant.

In arithmetic they are exceedingly ignorant, their number not going higher than that of 5, pointing with their fingers to 10, and to 20 with their toes.

To express the number of days and to remember their meetings, be it for hunting, fishing, or going to war, they prepare a Chart, which is a talley stick, or string of reeds, in which there are as many notches or knots as days are wanting before they come together; every day they cut off one of these knots or notches, and by this means remember at the proper time what they have to do.

DESCRIPTION OF THEIR PROVISIONS.

Their daily food consists of meat of all sorts of game and animals, as deer, tapirs, hogs, several sorts of monkeys, goats, and what more the country produces, as likewise of different river and sea fishes, like manatis*, turtles, crabs in particular &c. and of fruits and roots. Meat they generally roast, or dry on a barbacot, or they boil it in their pepper pot, with fish, roots, and everything mixed, to which they add Atty or Spanish pepper which they use and eat for every purpose. They make their bread of a certain root, called by the Arawaks *Kallidallie*, or bread root, and by the Europeans and Indians *Cassave*, of which we intend to speak more fully hereafter.

After being well washed, they grate the root raw, as fine as saw-dust; the rasps used for this purpose are made of copper, 15 or 18 inches long, and 10 to 12 inches wide, nailed fast on a board half a foot long, and a foot broad in the centre; the negro wench who rasps

* Sea cows:

the root, fastens one end to a wooden trough, and holding the other end against her chest has placed next to her a basket filled with the cleaned root, of which she takes one in each hand, and in this manner rasps it fine ; after this, the raspings are taken to be placed into a press, called *Fouri*, to squeeze the juice out of it, when it is fit to be made into bread.

There are some who make this press from a wooden bowl, perforated with small holes, in which they place a mat or sieve made of small twigs, placing the flour on it, and covering it with a board, on which heavy stones are laid, in order from their weight to squeeze the juice out ; others put the flour in bags made of twigs, separated from each other by boards, which are squeezed by means of a heavy piece of wood or stick, acting like a lever, one end of which is fastened to a tree, a heavy stone being placed at the other, by which means they are squeezed out ; or they hang these bags to a branch of a tree with a heavy stone at the bottom, the weight whereof stretches out the bags, confines them, and the juice is thus expressed. After being expressed, the pieces are dried on a *Barbecot*, and afterwards sifted by a *Manarie*, which is a sieve made of *iteriti* leaves, when they fall into a *habba* or basket. The Indians previous to their being known to the Europeans, rasped their Cassava on pieces of wood, called *Samarie*, with small stones, or on sharp rock stones, which are found high up the river, baking the cakes on pans made of clay.

They have an abundance of *Yams*, *Patates*, roots, fruits, &c., which we will hereafter describe.

Drunkenness is the common fault with all Indians, there are no meetings or feasts where they do not in a

great measure exceed in their taste for strong liquors, which often causes quarrels and fightings; the Salivas, a nation of the Oronoque, boast however that they only drink in moderation, never quarrelling or fighting when intoxicated. Their liquors include *Graab*, a mixture of syrup and water, which having stood for 3 or 4 days, is sufficiently strong to create intoxication; *Beltier*, made of Cassava bread, which they break into pieces, or as others maintain is chewed by old women, and soaked in water, till turned into a thick pap, which they afterwards allow to dry, adding water thereto when they use it; it is so thick that one is obliged, when drinking it, to close the teeth, to prevent being choked, *Payewari* is prepared almost in the same way, but requires only one night to stand over, by which time it gets a sharp and pleasant taste; it ought properly to be pounded through a cloth to keep the large pieces in. *Cassire* is a beverage prepared in the same way of red yams, potatoes, cassava bread and sugar, leaving it two days to ferment, after which it gets the colour and strength of light red wine, very pleasant to drink. *Chica* is a sort of beer, made of different grains of corn or fruits, but generally from maize, or turkish wheat. After they have ground this corn fine, the women make bread of it, wrapping it up in palmist leaves, and afterwards boil it in a pot filled with water; when this bread is fresh, they crumble it fine adding warm water; they then take five heads, which they call *Sibery*, which are mouldy, and reduce them as fine as flour, which they then mix with the aforesaid pap, and leave to ferment in pots for the space of three days, after which it becomes a good, and when used with moderation, a wholesome beer.

The *Chica*, which they make of the cassava or manioc roots, is still wholesomer ; they take a few of these cakes, place them one a top of the other whilst warm, cover them with palmist leaves, and after having fermented, soak in warm water and place in pots, for further fermentation. This beverage they call *Pernou*, or *Berria*, after the berry of the cassava of which it is made.

OF THEIR RELIGION, MARRIAGES, LYING IN OF WOMEN, EDUCATION OF THEIR CHILDREN, MALADIES, MEDICINES AND FUNERAL CEREMONIES.

With regard to their religion, little can be said, as to my knowledge it has not yet been ascertained whether they pray to God, or adore him, far less what idea they form of the Almighty ; they however show some reverence to the Sun and Moon, and know a little of the course of the Stars, which serve them as guides in the forest. They believe in a resurrection, for which reason they at their death take with them in their graves, several necessaries of life, as we intend to show when speaking of their interments

No other religious exercises or solemnities are observed by them ; they however much fear the devil, who they affirm, does them much harm.

They likewise have amongst them some priests, called *Pagayers*, who at the same time are their physicians, and are called in, when they are sick, as hereafter will appear. The Indians generally marry in their tribes with cousins, even to the second degree ; the young men look upon them as their future wives, marrying them when scarcely two or three years old, though no cohabitation takes place, taking however in the meanwhile another wife, which they discard, when their cousins become pubile.

Marriages of most of them take place without ceremonies. At Cayenne, when a girl has made choice of a young man, she offers him drink, and a little fuel to light a fire under his hammock, should he refuse this, it is a sign he does not like her, if on the contrary he accepts it, the marriage is settled.

On the same day the girl hangs her hammock close to that of her future husband, they sleep with each other, and the marriage is thus consummated; the next day the new married wife provides meat and drink for her husband, and takes housekeeping in hand; the son is then obliged to fish, hunt, and procure everything for his father-in-law, he meddling himself with nothing, the son-in-law obliged to do everything.

When, with the Arawaks and Carraibs, an Indian wants to marry, everything is arranged between the girl and her parents, their family and friends come together, when the father, or one of the nearest relatives, counsels the Bridegroom "*to take care of his wife, to go daily hunting and fishing, and look well after his provision grounds, in order therewith to provide the house-keeping,*" counselling the Bride "*that she will respect and be faithful to her husband, place every day when he comes home, meat and drink before him, and take proper care of everything,*" when the ceremony is closed with singing, dancing and drinking; the Bridegroom taking his new wife, who sometimes is but 11 or 12 years old, to his hut, when the marriage is consummated. With the Guaykinos and Palencos greater ceremonies are observed. These make their daughters fast for 40 days, before marrying, entertaining the idea that when they are in their dangerous days, everything they touch gets

spoiled, and whoever puts his feet in a place where they have walked, gets swollen legs.

To prevent such and other accidents, and to deliver them over in an undefiled state to their husbands, they are locked up, giving them for daily use during this fasting, no more than three dates of the palmist tree (which they call Morichi) and three ounces of cassava, with a jug of water, so that when the marriage day arrives they look more like skeletons than good-looking brides.

The night previous to the marriage they pass in painting and greasing themselves, and tastefully decking themselves out with feathers of different fine colours, for which they take such a length of time that often the bride is not completely dressed before noon ; the Caçique, or Chief, however, of the village of the place arrives at break of day to give orders for the celebration of the feast. Immediately a troop of dancers make their appearance from the forest, with plumes and feathers, accompanied with flutes and drums (made according to their fashion) and dance several times round the house of the bride, when an old woman emerges from it, with a dish of meat, which she hands to one of the dancers, who thereupon all run as fast as possible in the forest, and throw the meat on the ground, one of them crying out "*Oh! dog of the devil, take this dish, and do not come to disturb our feast.*"

This over, the dancers decorate themselves with flowers, holding a bouquet in the right hand, and little bells in the left, accompanying the flutes, and return dancing to the bride's house, where another lot of dancers is met, likewise decorated with feathers, but of

another colour, having long flutes of black reed hung with feathers.

They perform on their flutes in two parts, the sound of which is not unpleasant. The new married husband joins the dancers, sprucely decked out with singular feathers, and not having undergone such a long fast as his wife, he dances to his utmost. During the march the young married woman makes her appearance, accompanied by two old ugly Indian women, who in their turn in a lacrymose strain sing airs in their language; the first who begins, enlarging on the troubles and difficulties of marriage and house-keeping; the latter, on the contrary, on the pleasures of marriage,—they go round the whole village, and on returning home the repast is found prepared, with every sort of fish and game and whatever fruit there is at hand; thus glorious drinking takes place all round, and the feast is concluded with dancing. The Othomacs have a singular custom when they marry. When the young men become pubile, they give them for wives the oldest widows in the village, but when these die, they can marry a young girl. The reason they give for this is, that when a young man and girl wish to marry each other they are like two children joined together who are unacquainted with the cares of house-keeping, whereas an old woman tells him what is needed for existence; this however creates irregularities sometimes. I suspect this law was made by grey old men, to keep the young girls to themselves.

Though polygamy is allowed with them, most of them rest satisfied with two or three wives, and when they take more, it is considered as a sign of fortune and greatness, because to obtain them, they either make

presents of game to, or barter for them with the parents ; a Captain of Caraihs had in this way thirty wives of different nations. These women seldom living at peace with each other, have each a separate house, in which they live with their children ; the game or fish caught by the husband, he divides amongst them according to the number of children each has, at meal time a mat is spread on the ground which answers for a table, at which he places himself, each wife bringing to him her share of meat, a cassava cake, or bread made of Indian corn, after which they walk out without uttering a single word to him, little caring whether he partakes of it or not. After a lapse of time each wife brings a calabash of Chica or other beverage, which they place before him for his use ; meal time over, the wife takes what is left with her children. Each wife has likewise her share of working the ground after the husband has cleared it, they plant, without disturbing their neighbours ; quarrels nevertheless often take place amongst them. From all this it is seen that the women must serve them like slaves, and are not only obliged to take care of the children and the housekeeping, but have to cultivate the grounds, sow them, gather the fruits, fetch fuel and water, and what further is required for preparing their meats and beverages, nay, even sometimes to look for their husband's meals ; who only occupy themselves with hunting and fishing, and moreover oblige them to fetch the game they have shot, whilst they themselves lazily and unemployedly lie in their hammocks, making use of their legs only in war, in traffic and dance, hunting and fishing.

When they take a dislike to their wives, they separate

and send them away, without caring for their maintenance; it is however usual for the father to keep the children with him. Other nations take only wifes for a certain period, which having elapsed, each look out for another husband or wife. When the women are confined of a child, which generally grows prosperously, they wash it in the river and carry it on their back in a little linen or cotton hammock slung from the right to the left side. Most of their nations have an absurd custom; the husband after the child's birth abstains from labour for a few days, as likewise from strong drink, which they believe to be pernicious to the health of the new born (from which the tale is derived that the men in lieu of the women are confined). Nay, in Cayenne, the husband, when his wife is confined for the first time, is obliged to remain lying in his hammock, which is hung high close to the roof, little or nothing is given to him to eat, but a trifle of cassava and water, just as much as to keep him alive; after having undergone this hard fasting for a few weeks, he is allowed to leave his hammock, and with large fish bones or the teeth of the Acoury a quantity of gashes and cuts are made on sundry parts of his body, and he is even sometimes treated to a few lashes of the whip.

After this ceremony, the young father is obliged to quit his wife for a few months and take service with some old Indian, who treats him on the whole as a slave. Meanwhile he abstains from eating deer, pork, and other coarse game, neither may he chop wood with a large axe, for this would harm the child. This time of slavery past, he goes crab catching, and having caught a great number, prepares a large repast, where a great deal is

drunk, the husband being carried afterwards with great pomp to his wife's house.

A woman being delivered of twins is considered by most of these Indians a sure sign of adultery having been committed, she gets jeered on the occasion, and is severely punished by whipping from the husband; to prevent which, they have the custom to destroy and bury one of the twins, or both if ill-shaped, before the husband becomes aware of it. The Salivas have the custom of circumcising their children on the eighth day, but they understand the operation so little, that many of them die in consequence. This custom is observed by the Guamos and Othomacs, both residing at the Oronoque. Amongst some there is also the custom that on the birth of a daughter the mother's first work is to wind round very tightly under the knees and above the ancles of the child, four broad and thick bands, made of the threads of Pita, which they must preserve round their legs until death; the flesh pressed out by these bandages, gives towards the calf of the leg, by which means they swell into an ill-shaped form, but is with them considered a beauty. Not less ridiculous is the custom which the wives of the Abani have at the Oronoque; they perforate on the tip of the ears of their daughters, when young, a hole, which now and then they widen, so that on arriving at puberty a piece of flesh is depending from each ear, in which an egg might be inserted; these are not the only ones who disfigure their ears.

HERRERA assures us, that when the Spaniards landed at the gulf of Honduras, they found the ears of the women similarly bored, wherefore they called the Coast

Costa de Orej, or the Ear Coast, as yet may be seen on several old charts. Some consider it a beauty to have the fore and alter head flat, as the Tapouyranas, already mentioned. They never beat their children, nor have they any other way of punishment, seldom do they correct them for their faults; their whole education consists of instructing them from their youth in swimming, fishing, shooting with the arrow, and making the necessaries for private use, in which exercises they do excel.

They take great care of the children as long as they are young, but when arrived at the state of boyhood they do not meddle themselves any more about them, and treat them like strangers.

They neither will order, contradict, or punish them, which by the by, they do not dare to do, an instance of which we will quote. A Caraib Indian from the Spanish possessions having slightly reprimanded his son in the presence of a Spaniard, he became so incensed at this, that he gave his father a blow; the Spaniard offended at such conduct, found fault with the Caraib for his forbearance, inciting him to severely punish the sauciness of his son; on this the Indian replied. "*Do you imagine our children are like your's? nothing of the sort; and were I to punish him for this fault, he on getting older, would kill me for it.*"

These nations are subject to few diseases; which is principally attributed to their plain food, and plenty of exercise; there are hardly any to be found ill-shaped or infirm; they are strong by nature; many attain a great age, nay, were you to believe some, the incredible age of above 100 and 150 years; they are however subject to a swelling at the throat (which is attributed to eating

raw meat) to diseases of the chest, and small pox, which are very dangerous.

The Yaws, a bad sort of disease, is common with them, and so contagious, that if a fly has pitched upon such a person and places itself afterwards on an open or wounded part of another, the infection is carried with it, which many Europeans have experienced.

This disease properly consists of large ulcers, something of the size of a guilder; when the ulcer is ripe, which can be seen from its yellow appearance, the sufferer is brought to the river, where he is washed, after which he is rubbed with lime juice, which has for that purpose been previously boiled, mixed with some fine ground charcoal, this generally proves a cure.

They are likewise much subject to dysentery caused by eating raw or unripe fruit. There is also an epidemical disorder, a sort of scurvy, accompanied with much headache, giddiness, and such like. Amongst the diseases or disorders the *Mebiky*, or *Sieken*, may be reckoned a sort of Worms, which we will hereafter describe. They treat their sick with great inattention and most uncharitably, without considering whether they are their parents or other near relations who are ill; it is sufficient for them to place the meals of the sick under their hammock, without uttering a word, far less to see if they partake of them. The sick however never complain, or make any noise, let them feel ever so much pain; most of them die with an astonishing serenity. They possess a few medicines and herbs of which they know the strength, and often use with much success, but in grave diseases they send for one of their *Pageyers*, being at once their priest and physician, to exorcise the

Jawahu, or devil, who they believe causes the disorder. This impostor goes by himself at night to the sick, holding a Calabash, which they call *Wieda* and in which they believe some devils are contained.

In this he places some stones, blows into it, shaking it hither and thither, in order, as he says, to force the therein locked up devils to seek for their comrades who afflicted the sick men with the disease, for which purpose he roars and screams throughout the whole night, making all sorts of noises, such as of a monkey, tiger, parrot, and other animals, nay, these fellows know so well how to change and control their voices, that when standing outside the hut, one would suppose a second person was speaking to him, answering his questions; should the sufferer die, he always has his excuses ready; it is either the patient had done too much mischief, waited too long, or *Jawahu* had told him he was too angry to help him, but should he by good luck recover, the *Pagayer* is nobly rewarded for his trouble, everything being given to him that he asks for, even if it were the wife or daughter of the sufferer.

The Othomacs constantly sprinkle their sick with cold water, in which way they despatch them the sooner.

The Guabayas and Chirocoas cover their sick with wet clay, or place them in water up to their neck, to drive away the fever, of which they often die; they notwithstanding still proceed in the old way.

Funeral solemnities are not always the same amongst all these nations, differing sometimes in a nation according to the place they reside in. At the death of most Indians, and particularly of the Arowaks, the nearest relations lay by their trinkets and go naked for a short

time, this being their manner of wearing mourning. They make an incessant howling and moaning until the body is laid in the grave, to which they invite a number of men and women, The corpse is previously washed, the head rubbed with oil, put into a cotton hammock, and lowered into a large round pit or hole which has been dug with rather a little hollow at the bottom, and covered with Manicole laths, so that the corpse is placed at least two feet from the ground in a sitting position. His furniture such as cotton laps, hunter's horn, scissors, knives, looking glasses (which they get from us by barter) with his bow and arrows are buried with him, to which some of his friends add the like presents, to be by him made use of in the other world, or to be exchanged for meat and drink. After that his friends place a board over the grave, in order that the earth shall not touch the deceased, and other women cover it with leaves and then with earth, whilst those women who remain during this solemnity begin to cry and moan most miserably, joined with other lamentations.

They bury the corpse with all that the deceased left behind him in his own house or hut, which only a year after they re-inhabit, but should many die at once in their village, they depart from it, saying the devil has punished the place. To those interments all the neighbouring Medicos are invited, and plenty of Pernou, and Berria, or Bassia is poured out to them. After this they place themselves in two circles, holding in each hand a whip made of Pita, with which they alternately lash round each other's legs, so that between the knees and ancles you can hardly place a finger without touching a bloody stripe, whilst the women with dismal screaming and mourn-

ing, cry out, *Who now will protect them against their enemies. go hunting, fishing, catch crabs for the Widows or children, &c.* and in this manner the feast is concluded with hard drinking the whole night through. A year after, the Indians come to bewail their lost friends, making a large fire round the different graves, round which they carouse and dance, drinking so much that they are obliged to vomit, when they allege they are sick from grief. With the Warouws or Guaraunos at the Oronoque, the corpse is thrown in the river, but tied to a rope, one end of which is fastened to a tree to prevent it from floating away; in an instant, certain fishes, called *Guacantos*, who live on human flesh, appear and eat away all the flesh, so that the next day nothing remains but the skeleton, which they take out of the water. After this they place the bones in a basket adorned with glass beads of different colours, arranging them in such a way that the head is placed immediately under the cover; this done, they hang these baskets to the roof of their houses.

The Achaguas make use of the same solemnities as the Arowaks with respect to their Captains, except that the last covering of the grave is laid with heavy clay, without crevices, which prevents the ants from disturbing the corpse.

The Caraihs have the custom at the demise of their Captains to lay the body in a cotton hammock fastened at the ends to the roof; the wives of the deceased then range themselves round it, getting up at times; within 24 hours, from the great heat, the corpse begins to smell and decay, to which also a large number of flies are attracted; these they are obliged to drive away for

thirty days, without a single one being allowed to pitch on the corpse. The day of interment having come near, the friends of the deceased place his weapons next to the corpse, and oblige one of his wives, who generally is the oldest, to seat herself at the other side in the grave, to accompany her husband and to save him in the other world, who consequently is buried alive with him ; this solemnity over, the oldest son takes over the inheritance of his father, and his wives, and when a year has elapsed, the bones are dug up, gathered in a box or basket, and hung up to the roof as a remembrance. They sometimes burn their corpses with everything the deceased possessed, even his slaves, as some likewise do with the bones of their Captains.

Several nations wear mourning for their relations ; the Jiraras, Ayricas and some others rub their whole body with a black paint, which is made from a fruit, called Jagua, and is so adhesive, that it cannot be washed off. The wife, children, brothers and sisters of the deceased, paint themselves with it from head to feet, when they look exactly like negroes ; the friends of the deceased in the second degree paint only the feet, legs and arms, and part of the face ; others rub with it only their hands and feet, with a few patches in the face ; their mourning lasts one year, during which time they are not allowed to marry. Some of these nations accompany their interments with a doleful and sad music, composed of a sort of Bassoons and Flutes of different sizes made of reeds ; the men provided with these instruments having arrived at the place of interment, the young men place themselves, then the girls in another row, and the women behind them. The widow or widower

then begins to cry out in a sad voice and weeping, *Ah! We unfortunates! He or she is dead! How unhappy we are!* without adding a single word more; this is repeated in the same strain by the bystanders, which added to the mournful tune of their Bassoons and Flutes, and the moanings of the women and children, creates as dismal and tragical a scene as can be well conceived.

The Annibali, and some others, have such a fear of death, that as soon as they have buried anyone in his house they not only abandon their village, but also their grounds, and settle 10 or 12 miles further on, building on this new dwellings. On being asked the reason of this, they replied, that as soon as death comes amongst them they do not consider themselves safe in his presence; others do not quit their villages, but burn the house with the mats and the arms of the deceased, in order in this manner to burn death with him.

To choose a Captain for their Chief, who commands during war but cannot interfere in civil matters, they had formerly, like some far distant Indians at this moment, extraordinary ceremonies. They assembled the Indians of the sundry villages, where, as likewise at all their meetings, plenty of Pernau and other drinkables were poured out and handed round in a calabash by the handsomest young girls, holding three or four fingers in it and the thumb outside, without any one else being allowed to touch the calabash either by finger or hand; afterwards he who was to be elected Captain, for which office they almost always chose the hardiest and cleverest archer, was presented to the meeting, accompanied by two or three other Captains, who constantly

exhorted him to be valiant ;—after that he placed himself in the centre with his hands on his head ; the other Captains then each took a *Maquary*, which is a twisted whip of Pita, about five feet long, thick at the bottom, and tapering at the end, beating him alternately round the body, so that little of his skin from the arm-pits to the stomach remained whole, everything being beat to rags, all this, without his being allowed to show the least sign of pain ; he was then placed on a wooden grate, or Barbecot, covered with leaves, under which a gentle fire was raised ; if he fainted, he was lifted off and sprinkled with water over the face, after which he was complimented with 8 or 9 blows from each of the Captains, and brought into a small square room where he could hang his hammock, in order to have a little rest, whilst the women sang songs in honour of his courage ; this proof was to be repeated two or three times before he could be elected a Captain ; if he was married, his wife likewise received two or three blows, to participate in the honour and valour of her husband. Generally their courage and intrepidity consist in being able to endure blows, whilst most of them (the Caraihs excepted, who possess great courage) are great cowards, of which we will quote a small instance : a certain Captain or Owl of the Arowaks, in the Colony of Berbice, called *Kak-kebareteje*, living in the village Abary, had accidentally arrived at the Fort of that Colony with some of his people to sell some merchandise, when a few English freebooters in the year 1665 attacked the Fort with a Barque of 10 guns ; the Indians took flight to the forest, but this Captain to give a specimen of his courage, remained with the whites, where, frightened by the roaring

of the guns, which lasted for about half an hour, he crept into an empty sugar boiler, which was lying in the store, dirtying it in no small degree; being found in this position trembling, he was much jeered; returning afterwards to his Indians he reproached them for their cowardice, boasting that the Dutch owed the preservation of the Fort in a great measure to his valour. At present, however, no such ceremonies are observed at the election of a Captain of Indians residing in the possessions of the Dutch, as they are raised to that dignity by the several Governors of the Colonies, who, as we shall observe hereafter, make him some presents, and inculcate in him lessons of obedience.

Notes on a Journey to a portion of the Cuyuni Gold Mining District.

By Harry I. Perkins, F.R.G.S., M. Inst. M.M.

BEING the river on whose banks the first serious attempts at gold mining were made during the present century, the Cuyuni should hold, if only from a sentimental point of view, the first place in the minds of all successful gold-diggers in this Colony.

It has long been known as amongst the most dangerous, if not *the* most dangerous, of all the larger rivers of British Guiana, and there are times when the height of its waters, either above or below a certain point, gives it every right to claim this unenviable notoriety. My first experience of it was a highly unpleasant one in 1887, when, with a brother surveyor, I spent about four weeks journeying up and down a portion of it, and surveying placer claims on its right bank. On this memorable occasion we lost two boat-hands from dysentery a third dying on his return to Georgetown from the same disorder, and last but not least, in coming down stream our boat capsized at the Accaio—the lowest fall in the river—where one man was drowned and everything was lost, except some heavy iron brands and surveying chains, which had become firmly wedged under the ribbons of the boat, and which were recovered when it was picked up. The Government however, very generously made good the losses sustained by ourselves and the boatmen; and we had therefore not much to deplore beyond the unpleasant feeling of having

made a most unsatisfactory journey. It is not my intention now to dwell upon this disastrous trip, but to describe a much pleasanter experience which I underwent in March and April last. Reaching Bartica per steamer on the 1st of March, I was able, thanks to the special arrangements made by Messrs. FORBES & CO. of that place, to start in good time the following day, with a thoroughly sober crew, captain and bow-man; and camped at the foot of the first fall. Proceeding thence onwards through eight different falls I passed the first magazines at Tiger Island, on the left bank, which belong to claims working at the sources of streams tributary to the Groote Creek. The next camps are at the foot of the Arrawak Matope Fall and known as the Perseverance landing, on the right bank. Above the Arrawak Matope, there is a long stretch of still water free from falls till three small rapids are met with named Simiri, Tukuri and Mutusi, then another piece of still water to the Stop Off and Tinamu or Maam falls and again still water to the Payuca fall and thence the next rapids are those of Olupikai, or Popikai, near which my destination the Pap Island landing is situated. Having had to camp all day Sunday at Arrawack Matope and therefore not including it as a travelling day, I managed the whole distance from Bartica—some sixty miles as shown by BROWN'S map of the colony—in five and a half days; and on my return journey in a day and a half, having on the latter occasion, the stream in my favour. Arrived at the river end of the bush path to the placers which I had come to survey I found the ground surrounding the various magazines in the usual rather unsanitary state. Each of the store-

houses is guarded by a watchman who delivers to the carriers from the camps in the bush, the various stores ordered by the manager for the time being; and though I do not wish to libel any of these watchmen, it must be here recorded that one and all have a curious fondness for old, empty salt-fish boxes and salt-pork and salt-beef barrels, in the immediate vicinity of their dwelling places. Some men have two or three, others half a dozen or more of these unsavoury objects near them, I found one man apparently so devoted to them that he had actually made rough sides to his house out of the staves of these same barrels and when I asked him if they did not smell disagreeably he said "no boss, first time dem stink, now dey sweet."

The road to the placers from the Pap Island landing is claimed, by those who make use of it, to be the shortest and best graded of the three which communicate with the placers aback. One of these starts from the Quartz Stone Island landing below, and the other, from the Waiamu landing above. These two form with the river as base, a rough triangle, of which the apex is the collection of placers which are situated at no great distance apart. To describe one path would be to describe all three. The Pap Island path runs through flat swampy land for the first two miles, crossing one or two creeks about fifteen feet wide, which in rainy weather flood the surrounding flat to the depth of three or four feet. When the Cuyuni itself is full, the water rises higher and has been known to maintain its height for weeks, so that access to the riverside from the placers is a matter of great difficulty and hardship for heavily laden carriers. After the first two miles the road passes over

low hills and their intervening creeks, and as the placers are neared the hills become slightly higher and steeper, and large boulders of white sugary quartz are met with on every hill top, while the forest on all sides is rich in large trees, principally Greenheart and Mora.

The camps are not so large, nor in most cases so well found, as in the Potaro and Conawarook, though I had the good fortune to stop chiefly at the best of all of them—owned by Messrs. D'AGUIAR and DUARTE, where a nicely shingled logie with such comforts as a table and benches were placed at my disposal. At one camp an effort, which has been partially successful, has been made to grow vegetable produce, and many a bunch of plantains and basket of tannias have rewarded the enterprising manager who planted them.

Most of the managers however, look at the subject of planting the land near them with too selfish an eye, for they say their positions are not certain, and the land located is small, or likely to cease to pay before any return can be gathered from the plants, and then follows usually a comparison of the far superior manner in which the same subject is treated in Cayenne or Surinam, where immense tracts are licensed for gold mining, of which there is no fear of exhaustion for many years. But a direct question put to them as to their preference for gold mining in the three Guianas, is always answered in favour of this Colony, where they say everyone, even a poor man, has a chance of finding and working some good claim. It is to be hoped that the amalgamation of claims, which is feasible under the existing law, may satisfactorily dispose of the objection as to the small area of land held by different indi-

viduals and companies, and that wherever this is taken advantage of, the owners of the claims will insist upon the land in the vicinity of their camps being planted-up; for a good supply of fresh vegetable food will not only maintain the labourers in better health than they enjoy at present; but the improved health of the men will ensure better and more remunerative work on the placers.

The land is not rich, and not many crops can be expected from the greater part of it. From what I have seen of it myself, it seems richer on the flats and valley bottoms, and if kept well drained will prove more productive than that on the hill sides, where plants are mostly placed in order to avoid the trouble of making drains. Crickets, of which there are millions, are a serious obstacle to agriculture in the Cuyuni, and so far as I have observed, throughout the diggings generally. They love to feast on the tender shoots of the young plants; and as they are nocturnal in their habits, it is not easy to keep them away. Many a digger knows to his cost too, that they do not disdain to eat clothing of all kinds, and at night, when they sally forth from the chinks and crevices of the houses, it is imperative to secure all clothes not in use against their attacks. As a recompense however for the annoyance they cause the digger, they furnish excellent food for the fowls (which perhaps are kept on the claim) and along with other insect food are no doubt the cause why poultry in the diggings thrive so well and are second to none in the colony.

The Cuyuni camps are nearly all situated on hill slopes in the neighbourhood of the claims worked by their

owners, and the distance from end to end of the area thus inhabited is about 3 miles, most have a huntsman attached to them, whose varying success supplies the labourers with fresh meat. The huntsman at the camp where I stayed was particularly fortunate, and varied his performances with the gun, by occasionally poisoning a creek with hiari (*Lonchocarpus densiflorus*). Once he and his brother, who acted as Nimrod for another Company, obtained about a hundred weight of fish from a creek they took two days to dam up and poison. Some of the fish they brought home, haimara (*Erythrinus macrodon*) weighed seven or eight pounds a piece and were much appreciated by all. I asked the huntsman how much of a creek about ten feet wide and one foot and a half deep, a pound of hiari would poison; he did not seem to have any very concise idea, although I showed him the piece of water I spoke of. HILLHOUSE in a paper on the Mazaruni River read before the Geographical Society in 1833, says a solid cubic foot of hiari will poison an acre of water, but he does not specify the depth of the water. He mentions one famous poisoning where upwards of two thousand fish of four pounds average weight were taken. I was not fortunate in my own sport, beyond shooting a few powis and parrots. The most interesting game bird I obtained was a very diminutive trumpet bird, (*Psophia Crepitans*), which was brought me alive by one of my boat-hands, who had caught it in the forest. It could not have been more than three or four days old and at first was very wild; but soon became tamer, readily fed from my hand and followed me everywhere. Its downy covering was somewhat prettily marked from head to tail with

lines of russet brown and light bluish French grey. Its cry resembled that of the adult bird with the exception of the trumpeting which gives the animal its name. Like most of my pets it has since unfortunately met with an untimely death.

During my stay in the district there was but little to be observed of insect life, with the exception of the ever present crickets. The only uncommon insect I captured was a trap-door spider, whose curiously constructed den, some five-eighths of an inch in diameter, by three and a half inches in depth, I discovered in a gloomy part of the forest, close by a path, leading from one claim to another. I am not aware if the species has been found before, or if so, whether it has been noticed in this colony. The specimen I possess is remarkable chiefly for its very powerful mandibles if I may call them so, which to all appearance are much stronger than those of the largest tarantula or bird eating spider (*Mygale avicularia*) I have seen. In fact so strong are they that in consideration of the habits of the insect, I conclude its prey consist chiefly of coleopterous insects, so admirably are its mandibles adapted for piercing their hard elytra.

I was unable to secure the nest owing to the difficulties of carriage over miles of rough pathway, but hope the insect itself may prove useful to identify its species.

The Cuyuni diggings are somewhat unfortunately situated as regards the regular despatch of supplies to them; for in the heavy rainy season, the river becomes so rapidly flooded and remains at a dangerous height for so long a period, that it is almost impossible for loaded boats to ascend it; and were it not that a portion of the Camaria road—so called on account of its upper end being

situated just above the Camaria fall—is then navigable for boats, communication would be impossible. This road or path, for it is merely a bush path, though in some parts quite twelve or fourteen feet wide, is on the left bank of the river and is about four or five miles in length from its commencement at the foot of the Accaio or lowest fall to the end at the top of the Camaria fall.

At its lower end, and for about the first two miles, it traverses low lying ground liable to become swampy during the wet season; but the upper portion is always well drained, being situated on a sandy plateau, well above the level of the river. The total rise cannot be much more than, if even so much as, forty feet; and it would be a matter of neither great difficulty nor expense to lay a light rail or tramway along it. Were this done a great saving of time—some 3 days in going up and a few hours in coming down the river—would be effected, and a series of eight tiresome falls avoided. Although these notable Cuyuni rapids would be cut off, there are more met with as the river is ascended; two of the worst of these can be surmounted without danger by portaging the loads and boats. The remainder have to be faced by hauling up.

There is a popular idea amongst the Boviander population of the Essequibo and its tributaries that the water of this river has a peculiarly copperlike taste. I have never detected it myself, but have noticed that the usual colour of the water is much lighter than in most Essequibo streams, and it is well known that the Bovianders prefer the water from a dark to that from a light coloured, but not limpid stream. The river derives its name says SCHOMBURGH from two Indian words. Cuyu,

the white headed maroudi (*Penelope pipile*) and wini or uni, water.

The Cuyuni has several large tributaries on both banks, with courses of several miles. Their mouths are hardly discernible to the ordinary traveller, as they are mostly choked by fallen trees matted over by a dense growth of creepers; none of them so far as I am aware has been ascended, nor is any use made of them to communicate with the placers far from the riverside. In one or two cases this might be done, and notably in the case of a creek near the Pap Island landing and of the Waiamu Creek. The carriage of provisions to the placers from the river is always a very large item of expense in gold mining at present, and might be materially lessened if water carriage were adopted for the greater part of the way. Most of the people object to doing anything for themselves in this way, as they state that they can get no one to assist them in clearing a creek, and if they do it for themselves, there is nothing to prevent other people from using the creek, and thus benefiting at a cost of neither labour nor money. The same lack of combination is noticeable also in the construction of the bush roads; and where these exist it retards their improvement more than any other factor at the present day. It is indeed almost a pity that the consensus of opinion among the placer owners of one locality for the adoption of one particular line of road (to be maintained in proportion to the use made of it by each set of claims owned by a distinct company or individual) is not made compulsory, for were one such road established it might be gradually improved until the less swampy parts were thoroughly drained and

rendered passable at all times; and the creeks crossing it were roughly but strongly bridged.

The nomenclature of the creeks and mountains given by the gold diggers in the Cuyuni as in other parts of the colony where gold is being mined, is peculiar, and rarely bears any analogy to the object to which it is applied. Some creeks have different names for different portions and though there is an illustrious precedent for this in the case of the Essequibo River itself, it is very confusing and apt to lead to litigation and trouble where claims are jumped, the name of the portion of the creek on which they are situated being amended for the occasion.

The names of the mountains or rather hills, for they are not high enough to merit the name of mountains, usually express the condition of those who have climbed up them on gaining their summits, or whilst doing so; for instance there is one named Blow-Hard, another Eye-Turn, Burst my Liver, etc. Two particularly exhausting climbs are called Sodom and Gomorrah, and the placer workers in their vicinity if occupied at the tom or sluice are referred to as being in the Pit, which of course means really nothing more than the hole dug in the soil to extract the gold-bearing sub-soil, but gains a peculiar significance if the hills named have just been traversed. Bush walking is at all times laborious and exhausting and has been aptly described, as going through a Turkish bath with a bag over one's head. The usual rate of progress is about two to two and a half miles per hour, in fine weather, and over a good average path. In wet weather and in swampy or flooded land not much more than one and a half to one and three quarters of a mile can be accomplished in sixty minutes.

By the appointment of Surveyors as Government Officers, it is to be hoped that maps of the different districts, necessarily rough at first, but constantly being extended and improved, may gradually be made. As these maps become more and more reliable, the existing roads can be altered, and made to run more directly and with easier gradients to the river's bank than they now do, and effect thereby a great saving of time and labour. The general distribution of the gold-bearing areas may then also be better defined; the occurrence of gold in the Colony better understood, and some guide furnished whereby other rich fields may be discovered.

The Cuyuni district geologically speaking promises extremely well for the future of the Gold Mining Industry. The principal rocks are metamorphic, and consist largely of shales, slates, schists and gneiss, pierced in many places by extensive igneous rocks. Quartz appears to be abundant every where.

On the journey up, as the river was only about half full of water, I had many opportunities of examining the rocks. Granite occurs near the Penal Settlement and in many places along the course of the stream, being frequently highly quartziferous. Mica-schist is found at the lower part of the Caribise Matope, while a short distance above there is diorite. At the Arrawak Matope an indurated slate with veins and nests of bluish quartz impedes the free passage of the river. At Mutusi and Tukuri rapids, dolerite is met with, while at Quartzstone Island large blocks of white vitreous quartz are plainly visible when the river is low. Quartz of the same nature lies scattered in all directions in the part of the country visited, and on some hill tops there are

water-worn masses of it many tons in weight. In one instance an aggregation of these blocks looks from a little way off like a flock of sheep lying on the ground. Much of the quartz appears to be barren, but where it is gold-bearing the metal is plainly visible in isolated specks and granules. In many places both on hillside and in valley, where a tree had fallen and lay uprooted, I found masses of angular quartz fragments attached to the roots; and sometimes some of the pieces were rounded and water-worn.

In one case where the side of a hill showed itself partly in section, there appeared to be a thin layer of quartz gravel spread all over it. From amongst this gravel I washed several battels of dirt, and from some of them obtained small crystals of gold along with other little pieces and specks of the same metal. Hæmatite is abundant in the locality and occasionally one finds lumps of bog-iron ore. On the heaps of tailings at the placers, pieces of quartz containing schorl or black tourmaline are common. Its appearance is somewhat peculiar and reminds one forcibly of the thorns of the species of *Bactris* sticking in the flesh, as it occurs in long needle shaped prisms with a bright sparkling lustre, and often runs deeply into the quartz.

One of the most noticeable features of the claims is the absence from their lower portions of any fragments of rock except quartz. At the heads of the creeks shale and slate occur but these seem to have entirely weathered away as the course of the creek is followed, and in consequence the creek beds or the valleys in which the streams flow are wide and flat; owing to which they swamp easily during the heavy rainy weather. The

water however does not take long to run off, and very often a difficulty is experienced in maintaining a supply of water sufficient to conduct gold washing operations at their proper force.

The gold appears to be very unevenly distributed on many of the claims and much disappointment has been experienced in working ground which prospected well but did not afterwards come up to expectations.

The conditions of labour appear to be the same as at the other gold digging centres in the colony, a noticeable feature everywhere being the improvement in the general health of the labourers as compared with the state of things six years ago. It is amusing to see a manager, lately,—very lately,—a mere labourer, going about his daily duties. Previous to attaining his new dignity he has never troubled about a coat nor boots, nor the work he performs, nor the supposed many snakes and wild animals and noxious insects in the bush; but now he must always wear a coat, boots and gaiters, and also always have a breech-loading gun in his hands; some even aspire to a companion constantly with them in going from one place to another. Occasionally serious accidents arise from this practice of carrying loaded firearms. On my way up, I learned that a quondam manager had had to postpone his trip, after proceeding a short way up the river, owing to his having accidentally, of course, but not the less carelessly, put a rifle bullet through the shoulder of one of his boathands. Another serious accident happened to a man who had one of his hands shot to pieces by the gun of his companion. This same individual began his gold digging career in an unfortunate manner by being lost for nearly forty days

in the bush. It is always advisable when walking through the bush in company with others who may have guns with them, to satisfy oneself that the guns are not loaded. A breech loading gun can easily be charged, if necessity or opportunity to fire a shot should arise, and when the necessity or opportunity is past the charge if not fired should be withdrawn.

The claims I visited seem, from an examination of BROWN'S map of the colony, to be in the same line as the Barima, Barama, Puruni (Mara-Mara) and Potaro diggings, and if the positions of these different fields are correctly defined on the chart it appears that there is a well marked belt of auriferous country running about 25 deg. West of North which if continued further southward slightly to the westward, may prove to be at its richest in the Canuku mountains.

Taking it for granted that the above named fields are in one and the same belt, it may not be conjectured unreasonably that the rich gold-bearing quartz formations of the Barama district will be found to traverse the Cuyuni and other more southern localities also.

The permanence of the Industry in the Cuyuni will of course depend largely on the discovery of such a formation; and it will not be out of place here to remark for the benefit of those who may some day wish to purchase quartz mining properties there, that it is always advisable to have a report on the same by an expert, quite independent of any one employed by or for those who are anxious to sell the same properties to would-be purchasers.

The Discovery of Alcohol

*Translated from the French of M. Berthelot, by G. H. Hawtayne, C.M.G.**



ALCOHOL plays a considerable part in modern civilization. It is by hundreds of millions that the produce of the taxes imposed upon it in the budgets of the great European States is counted; it is by thousands of millions that the profits gained by this manufacture are to be reckoned in both town and country. The tax upon drinks, the licenses of rectifiers, the development of distilleries, are subjects of meditation for financiers and legislators; alcoholic liquors whether as food or poison or as substances useful to hygiene and in manufactures, or harmful to health, are to be found everywhere. But if wine, beer, and mead, have been used since pre-historic times the active principle which is common to them,—that which produces agreeable excitement or hurtful drunkenness, that which is concentrated in spirituous liquors—alcohol, has only been known for seven or eight centuries, and was unknown to antiquity. Perhaps it will not be uninteresting to tell how it was discovered.

The history of the successive attempts of man in the discovery of useful things as well as of general truths is always worthy of our attention. We should be indifferent to nothing which concerns the progress and the successive phases of the human mind.

*Sic unum quid quid paulatim protrahit ætas
In medium ratioque in luminis eruit oras;
Namque alid ex alio clarescere corde videmus
Artibus ad summum donec venere cacumen.—Lucretius.*

* La Découverte de l'Alcool et la Distillation, par M. Marcelin Berthelot. *Revue des Deux Mondes*, 15 Novembre, 1892.

The name of alcohol so far as it is applied to the product of the distillation of wine is modern. Up to the end of the seventeenth century, this word of Arabic origin signified any principle attenuated by extreme pulverisation or by sublimation. For instance, it was applied to powdered sulphuret of antimony (Koheul), employed to darken the eye-lashes, and to different other substances as well as to spirits of wine. In the thirteenth and even in the fourteenth century, no author is found who applies the name of alcohol to the product of the distillation of wine. The word "spirit of wine," or "burning spirit," although more ancient, was not known in the thirteenth century, for at that period the word spirit was reserved for only volatile substances, such as mercury, sulphur, arsenic sulphuret, or sal-ammoniac, capable of acting upon metals and modifying their colours and properties.

As to the denomination "Eau de Vie" this name was given during the 13th and 14th centuries to the elixir of life. ARMAND DE VILLENUVE was the first to employ it as designating the product of the distillation of wine. He also employed it not as a specific name, but in order to mark its resemblance to the extracted product of wine. The "elixir of life" of the old alchemists had nothing in common with our alcohol. This confusion has occasioned more than one error with the historians of Science. In fact, it is under the denomination of 'fire water,' that is to say, inflammable water, that alcohol first made its appearance, and this name was given as well to the essence of turpentine. Let us endeavour to determine according to the ancient authors and those of the middle ages, the origin of the discovery

of alcohol by shewing the successive steps taken in acquiring a knowledge of this substance.

The ancients had already observed that wine furnished something which was inflammable. We read in ARISTOTLE "ordinary wine possesses a certain exhalation, and that is why it emits a flame" we read also in THEOPHRASTUS the intimate disciple of ARISTOTLE, "Wine poured upon fire as in libations, throws out a flash," that is to say produces a brilliant flame. PLINY employs a still more decisive phrase. He teaches us that "Falernian wine produced by the Faustian fields is the only wine which can be lighted by contact with a flame," in fact he describes what occurs to certain wines rich in alcohol.

These were the common phenomena and accidental occurrences observed in the course of sacrifices and banquets which served as a starting point for discovery. The following is an amusing trick, imagined no doubt by some conjurer, and described in a latin M.S. in the Royal Library at Munich. "Wine can be made to burn in a pot by the following method:—Put into a pot some red or white wine, the top of the pot being raised and furnished with a cover pierced in the middle—When the wine is boiling and vapour comes out through the hole, put a light near it—immediately the vapour will catch fire and the flame continue as long as the vapour rises."

Nevertheless alcohol was not isolated by the ancients. To proceed further, a new discovery of a more important and general character was required—that of distillation, necessary to separate from the wine its inflammable principle. This discovery went through many stages.

Its point of departure was the result of common

observation. When water is warmed in a vessel its vapour condenses on the surfaces of surrounding objects and above all on the cover of the vessel, as everyone can observe on the lids of soup pots, kettles, tea and coffee pots. ARISTOTLE records the fact in his "Meteorologica." Vapour he says, condenses in the form of water if one takes the trouble to collect it. He recalls in another passage a less trivial fact which is doubtless due to chance, but which has received in the present day most extended application. "Experience," he adds, has taught us that sea water reduced to vapour becomes drinkable, and the vapourised product "once condensed does not reproduce salt water. Wine "and all liquids, once vapourized become water." It appeared therefore, according to ARISTOTLE, that evaporation changed the nature of vaporized liquids, and reduced them all to one identical condition—that of water. This change agreed with the philosophical ideas of the author, wine as well as sea water being thus reduced to the same state, that of water, the type of liquidity and regarded by the ancient philosophers as one of the four fundamental elements of all things.

ARISTOTLE'S remarks on sea water did not take long to become the origin of a practical process, noted by ALEXANDER D'APHRODISIUS, one of his earliest commentators, about the 2nd or 3rd century of our era. According to this author sea water was warmed in pots of brass, and the water condensed on the surface of the lids collected for drinking. Such is the first germ of the distillation of sea water practised at the present day on so large a scale on board-ship. The process now adopted, thanks to the science of the 19th century, has

served as a substitute for those large stores of water formerly carried on long voyages, the insufficiency or deterioration of which caused so much of the suffering and sickness related in the accounts of old voyagers. These constantly speak of frequent stoppages for the purpose of taking in fresh water, involving a search for water on the shore, a task which now-a-days is not necessary.

But, in order to obtain in a short time from sea water large quantities of nearly fresh drinkable water, the discovery of distillation with its modern perfection was necessary. I have just told what was the process noted by ALEXANDER for extracting drinking water from sea water. Similar processes are described by DIOSCORIDES and by PLINY in the first century of our era, for the preparation of two liquids of very different character—mercury and essence of turpentine. These discoveries, made by accident in the course of observation, were the commencement of the generalization of the ideas of the workmen and physicists of those times. Such was the beginning of advances which several centuries afterwards ended in a knowledge of alcohol.

Cinnabar or sulphuret of mercury was employed from antiquity as a red colouring matter (vermilion). The Romans drew their supply from Spain, where still exist the principal quicksilver mines of Europe.

It was early remarked that in heating it in an iron vessel, in order to purify it, it gave off vapours of mercury which were condensed on neighbouring objects and especially on the lid of the vessel.

This became the origin of a regular process of extraction described by DIOSCORIDES and by PLINY.

The cinnabar was placed in an iron capsule in an earthen pot, which had its cover luted, and was then heated. After this operation the cover was scraped in order to detach and unite the globules of mercury which had risen from the capsule. Artificial quicksilver was thus obtained, to which the ancients attributed properties different from those of natural quicksilver—I mean that found in mines. This was however, an illusion, the mercury being identical whatever the mode of extraction.

The process employed to extract mercury by vaporisation, is the same as that described by ALEXANDER APHRODISIUS to render sea water drinkable, and this process is the origin of the alembic, as I shall soon explain.

Another rudimentary process, the first which has been applied to the extraction of an essential oil, is described by DIOSCORIDES and by PLINY. It was that of the distillation of the extracts of the pine or fir, which we now-a-days term turpentine. These were heated in vessels over which was stretched wool which condensed the vapour. Then the wool was squeezed so as to express the liquified product, that is to say, the essence of turpentine now called oil of resin or flowers of resin. It was not long before this played an important part in the composition of inflammable materials employed in the art of war. But in the end, these names appear to have meant the more liquid part of the resins as well as the water charged with soluble constituents, which in the same way as the whey of milk, floated on these resins at the moment of their extraction, in fact the distilled and scented water which was evaporated along with the essence. Between these different materials, which

modern chemistry so easily distinguishes, there existed with the ancients a certain amount of confusion, and this it is which renders the reading and interpretation of the old writers so difficult. The decisive step in acquiring a knowledge of distillation was taken in Egypt. There the first distilling apparatus properly so called, was invented in the time of the first ages of the Christian era. They are described with precision in the works of ZOSIMIUS, an author of the 3rd century, according to the technical treatises of two female alchemists named CLEOPATRA and MARY. In the margin of a Greek MS. of ST. MARK, are drawings of the apparatus, and these are in strict conformity with the Greek text of the ancient writer. I have produced elsewhere these figures and this description. The apparatus consists of a boiler or rather a receiver of balloon shape, in which the liquid is placed; but for the lid is substituted a more complicated system, namely a large tube over the balloon, ending above in a top for condensation, shaped like a reversed balloon. This top is furnished with lateral tubes, conical, and bent towards the base, which are to receive the condensed liquid and allow of its flowing out into smaller balloons. All the essential parts of a distilling apparatus are there defined. These are the lateral tubes and receptacles which characterise the alembic. The word alembic as we employ it, results from joining the Arabic article *al* with the Greek word *ambix* already employed by DIOSCORIDES to designate the condensing lid or cover; the words *békos bikos bikion* are inscribed in the drawings of ZOSIMIUS on the upper balloon or top, where the condensation is effected, as well as on the lateral recep-

tacles which receive the distilled liquid. Such is the exact origin of the word alembic still in use at the present day.

One distinctive character of the primitive alembic described by ZOSIMIUS, is the multiplicity of the tubes leading off the vapour—he distinguishes alembics with two or three necks, namely, the *dibicos* and *tribicos*. The flowing of the vapour took place simultaneously through these multiplied necks and condensation took place in two or three receptacles at the same time. In another figure is seen an alembic with one neck which is provided with a large copper tube. Again, an alembic described by SYNESIUS, an author of the 4th century, and figured in less ancient manuscripts, shows the boiler with its head or top furnished with one tube, the whole heated in a bain marie or water bath. This form was hardly altered up to the 16th century. Perhaps one of these apparatus may be found in the temple of Phta at Memphis where researches have been recently commenced. ZOSIMIUS in fact speaks in formal terms of apparatus which he had seen in the temple of Memphis.

The alembic passed from the Greco-Egyptians to the Arabs without any notable change. The latter were not the inventors of distillation as is often affirmed. In chemistry as in astronomy and medicine, the Arabs confined themselves to the reproduction of the apparatus and processes of their masters the Greeks, bringing however to the task a certain completion of details. It is wrong to attribute the discovery of distillation and of alcohol to RASES or to ABULCASANI and other Arab authors—at all events quotations verified with care, have not furnished me with any indications of this kind.

In fact RASES (10th century) in the passages quoted in support of this opinion speaks only of *vina falsa ex saccharo mell et rico*, that is to say vinous liquids, —false wines,—obtained by the fermentation of sugar, honey, or rice, some of which, hydromel for instance, were known to the ancients.

But there is no mention of distillation nor of extracting a more active principle in any writings of RASES known to me. As to ALBUCASIS or ABULCASIM, a Spanish doctor of Cordova who died in 1107, in the works on pharmacy which are attributed to him, there is only found a distilling apparatus for preparing rose-water, an apparatus differing in principle in no way from those of the old Greek Alchemists. Let us at the outset establish this identity which is worthy of attention. It results from the following phrase which it is useful to give *in extenso*. “Take a brass pot like a dyer’s, put it on the wall and place over it a lid carefully made with tubes to which the receivers are adjusted.”

Besides this, the number of tubes is fixed at two or three. Now this description applies exactly to the alembics with two or three necks of CHRYSOPIUS, of CLEOPATRA, of ZOSIMIUS and the Alexandrian Alchemists.

Thus the Arabs at the beginning of the 13th century, still used the complicated distilling apparatus of the Greco-Egyptian Alchemists.

Alembics with more necks than these, were still in use among the western Alchemists of the 16th century. In the Treatise by PORTA entitled “Natural Magic” which is a compilation of practical processes or secrets, the author speaks of a head or cap with three or four necks. But these ideas were abandoned, at least there is no

trace of them, in the following ages. In this case, as in many other circumstances, the men of the 16th century saw what constitutes the most advanced progress, but by a kind of intuition and without possessing those clear notions and exact principles of physics, without which progress remains but accidental and fleeting.

Another more lasting improvement was that of the worm. The alembics of the Greeks permitted them no doubt to obtain distilled liquids, but on the condition that they worked very slowly and with a very low heat. In fact, the vapours condensed but badly in the tubes and caps with small surfaces represented in the manuscripts. However little they tried to push on the distillation, the receivers become heated and condensation was almost impossible. Thus the old writers directed that their apparatus should be heated over very small fires. They worked with intermediary baths of sand or ashes, or of water. The name of Bain Marie applied to the kitchen apparatus of the present day affords a remote souvenir of MARIE the Egyptian alchemist. They often confined themselves to carrying on distillation by the mere heat of fermenting manure or at most by a slow fire of dung or saw dust. Hence their operations were so slow, that their distillations took days and weeks. "It requires 14 days or 21 days says one book, to accomplish the operation." Thus not only were the effects of operations intended to cause sulphurous and arsenical substances to penetrate little by little into the heart of metallic laminæ when subjected to the action of elixirs, secured, but the evaporation and collection of liquids placed in the alembics were also rendered practicable.

The operators of the Middle Ages finished by finding out that they could more rapidly conduct distillation by cooling the cap and the pipe which led to the final receptacle. To this end, they first placed around the cap a bucket filled with cold water. This facilitated condensation but caused a portion of the liquified vapour to fall back into the boiler. A fresh improvement which PORTA describes, consisted in bending the pipe between the cap and the receiver so as to give it the form of a serpent (*anguineos flexus*). Thus came into existence our "worm" and it was surrounded with cold water contained in a wooden vessel. The modern alembic was thence constructed. Nevertheless the use of the worm spread but slowly, and the invention was regarded by the writers of the 18th century as of recent origin.

Such is the successive progress made in the middle ages in the construction of apparatus for the distillation of liquids.

Let us here observe that in the present article, the word distillation is understood in the modern sense of evaporation followed by condensation of liquids: but with many of the authors of the middle ages it had a wider meaning. In fact, the word in a literal sense, signifies flowing drop by drop, and is also applied to filtration and indeed to any refinement or purification. The word 'distil' even in modern language is sometimes used in this sense.

Nor is this all—it comprised formerly in the Greco-Egyptian ages two distinct operations, namely, the condensation of moist vapours such as water, alcohol, and essences; and the condensation of dry vapour in a solid form, such as metallic oxides, sulphur and metallic

sulphurets, arsenic acid and metallic arsenic, which was the second mercury of the Greek alchemists, and later the chlorides of mercury—sal ammoniac, &c. We describe this condensation of dry vapours now-a-days as sublimation. It requires special apparatus, which was employed by the ancients and which gave rise to the arabic *aludel* or subliming pot. It is sufficient to note this other branch of the subject, from which several modern industries derive their origin—for although connected with the study of distillation, it is foreign to the discovery of alcohol.

“Heavenly things above, Terrestrial things below.” Such is the axiom by which the Greek alchemists designated products of distillation and sublimation. They called the sublimated vapour which arose from below “divine,” they also called mercury “divine” because it issued on high from below, and the drops which attached to the lids of their boilers were equally called “divine.” But as was their wont, the alchemists translated these purely physical notions by symbols and a strange mysticism. Already DEMOCRITUS (that is to say the Alchemist author who assumed that name) called the spherical apparatus in which distillation of water was performed “Celestial beings.” The separation which these effected between the more volatile water and fixed materials is thus described in a passage of OLYMPIODORUS who lived in the beginning of the 5th century. “The earth “is captured after dawn still impregnated with the “dew which the rising sun attracts by his rays. She is “then as a widow deprived of her husband accord- “ing to the oracle of APOLLO—by divine water I mean “the dew, the aerial water.” In the same way COMARIUS,

a writer of the 16th century, repeats the allegorical picture of evaporation and its accompanying condensation. And of condensed liquids reacting on solid substances exposed to their action "Tell how blessed water descends from on high to visit the dead, stretched out and chained, in the shades and darkness of the interior of Hades, how the new born waters begotten by the action of fire penetrate. The clouds support them; these rising from the sea support the waters."

This singular language, this enthusiasm which borrows the most exalted religious formulæ ought not to surprise us. At that time men, with the exception of some superior minds, had not arrived at that state of calm and abstraction which permits the contemplation of scientific truths with cool serenity. Their very education, the symbolical traditions of Ancient Egypt, the gnostic ideas with which the earlier alchemists were filled, did not permit them to preserve their *sang froid*. They were transported and as it were, intoxicated by the revelation of this hidden world of chemical transformations which for the first time appeared to the human mind.

Thus in the early Greek treatises all the active liquids of chemistry are compounded under one common name, that of divine water. "Divine water," said they, "is one in its genus but is multiplied as to its species, and allows of an infinite variety of treatment." They gave to these varieties different symbolical names, aerial water, river water, dew, virginal milk, natural water of sulphur, water of silver, Attic honey, sea foam, &c. The confusion caused by this variety of denominations was however systematic, since its object was to hide from the world and uninitiated persons the secret of their manufacture.

If it is sometimes possible to discover in the vagueness of the descriptions of the Greek Alchemists something precise, there is as far as I know nothing which is applicable to the distillation of wine. The principle of fractional distillation and the variety of its products are just touched upon in one or two passages, but these passages appear to relate to the treatment of alkaline polysulphurets, or of sulphurated organic matters having nothing in common with alcohol.

I have not met in the Arabic treatises on medicine and materia medica printed in French, or in the Arabic MSS. or GEBER and other alchemist writers which are before me and which I am preparing for publication, any precise passage relating either to alcohol or to any definite distilled liquor. I have already expressed my views with respect to the text of RASES, sometimes erroneously quoted, for this refers only to fermented liquor, without any allusion to its distillation or the extraction of alcohol. In the same way mention is made of ALBU-CASIM but this author having described certain distilling apparatus reproduced from the dibicos and tribicos of the Greeks merely adds, "In this way he who wants distilled wine can distil it." And he also gives directions for distilling, by these means, rose water and vinegar. He only speaks of a distillation in bulk. Nevertheless it is certain that the idea of preparing an aromatic distilled water such as rose water, much used in the East, appears here for the first time, but there is nothing applicable to an essence properly so called, nor to alcohol in particular.

In these works I repeat the distillation of wine is only treated of without any distinction between the successive products of fractional distillation. However it was

thenceforward perceived that distilled wine was not identical with water, contrary to the old opinion of ARISTOTLE, but our authors nowhere speak of alcohol, though the knowledge of this substance must have almost at once resulted from the study of distilled liquids obtained from wine.

The oldest MS. which contains a clear indication in this direction, is that of the 'Key to painting' written in the 12th century. I have already spoken of this work—it is a compilation of technical receipts from different sources, especially Greek and Latin, with some Arabic additions. We cannot say to which of these sources the indication of alcohol has been traced. It is in fact, contained in one enigmatical phrase which I have succeeded in deciphering. The use of enigmatical words or cryptograms exists in many manuscripts of the period. We know that the formula of gun powder has been thus pointed out by ROGER BACON in a phrase which gave rise to much discussion. A similar method of transmitting scientific traditions under a precise form, however unintelligible to those not initiated, and contrary in some degree as it may be, to our modern scientific practice, constitutes by comparison real progress from the vagueness of the old symbolical formulæ.

I ask leave to reproduce here the phraseology of the old text so as to give the reader a more complete idea of the historical problem relating to alcohol and its solution. "Itis de commixtione puri et fortissimi xknk Cum III qbsuf tbnkt cocta in ejus negocii vasis fit aqua que accensa flammami incombustam servat materiam."

This receipt at first sight is without sense, but these cryptographic words can be interpreted after a mode of

which several applications are found in the MSS. of the 13th and 14th centuries. It is sufficient to replace each letter of these words by that which precedes it in the alphabet. We thus find xknk is vini, qbsuf is parte, tbnkt is salis, and the passage can be translated (some grammatical errors of the copyist being corrected) thus:—
 “ By mixing a pure and very strong wine with three parts
 “ of salt and heating it in vessels provided for this pur-
 “ pose an inflammable water is obtained, which is con-
 “ sumed without burning the substance (on which it is
 “ placed).”

It then treats of alcohol. This property of burning on the surface of a substance without burning it had greatly struck the first observers.

Another more explicit indication is contained in the book “ On Fires” by MARCUS GRÆCUS, a latin work of Arabic and Greek origin, but of which the MSS. do not go back further than the 13th century. It is a compilation of technical receipts, for the most part relating to the Art of War.

The receipt relating to “ Fire Water” must have been added as an after thought to the original text, for it forms no part of another MS. which exists at Munich, and is transcribed from the treatise on Fires. We reproduce this receipt on account of the new and characteristic indications contained in it.

“ *Preparation of Fire Water.* Take a black thick
 “ old wine. To every quarter of a pound add two
 “ scruples of sulphur in fine powder, one or two of tartar
 “ extracted from good white wine, and two samples of
 “ common salt in large pieces. Place the whole in a
 “ leaden alembic—put the cap on top, and you will distil

“ fire water, which you must keep in a well stoppered glass vase.”

The MS. of Munich adds :—“ The virtues and properties of fire water are these. Moisten with this water a linen rag and light it ; it will produce a great flame. When it is put out, the rag remains intact. If you wet your finger with this water and set fire to it, it will burn like a candle without your receiving any injury.” This was a conjuror’s trick. The part these latter gentlemen played is shewn in a great many inventions of antiquity and the middle ages.

The facts indicated in this description show how often the first observers were struck with the real or apparent properties of different bodies however trifling they might be.

But they often complicated their observations by certain superfluous details to which they attached as much importance as to the rest, on account of theories which served them as guides ; these theories have played a certain part in the history of science. For instance in the first receipt of MARCUS GRÆCUS there is that singular direction, to add sulphur before distilling. This direction also exists in a book of AL-FARABI transcribed in another MS. of the same period, and which is found in the work of PORTA, *Natural Magic*, composed in the 16th century. It is therefore not accidental. It is in fact the result of a theoretic idea set forth at length in many works. Chemists then thought that the great moisture of wine was opposed to its inflammability and it was to combat this that they added either salts or sulphur, the dryness of which they said increased combustible properties. One of the old writers quotes in support of his

theory the case of dry wood and green wood, which are unequally combustibile according to the season when they are cut and the quantity of moisture they contain.

Let us remember that volatility and combustibility were then confounded, and described by the term *sulphurity*, "a term which was applied in this sense in the time of STAHL at the commencement of the 18th century. These ideas go back even to the Greek Alchemists, who called every liquid volatile, and every sublimate given out from below to above, sulphurous water, or divine water."

Here we see the origin of those preparations so complicated and difficult to understand now-a-days, used by the older chemists. They tried to communicate to substances qualities which they lacked by adding to them certain matters in which these properties were supposed to be concentrated, thus sulphur was added to wine in order to facilitate as they believed, the manifestation of its inflammable principle. The first savant of whom the name is known, who has written about alcohol, belongs to an age later than that of the composition of the writings alluded to. He was ARMAND DE VILLENEUVE, and is usually described as the author of the discovery, which he never pretended to be. He confined himself to speaking of alcohol as a preparation known in his time, and which had astonished him to a very great extent. ARMAND DE VILLENEUVE has recorded it in his work intituled "*On the preservation of youth*," a work written about 1309.

"There is extracted" says he, "by the distillation of wine or of its lees, burning wine, also termed *Eau de vie*, water of life, which is the most subtil part of the wine."

Then he exalts its virtues. (Discourse on *Eau de vie*, Water of Life.) "Certain modern writers say that this is "permanent water or water of gold, on account of the character of its preparation. Its virtues are well-known." He enumerates the maladies which it cures. "It prolongs life and this is the reason why it deserves to be called water of life. It must be kept in a golden vessel; every other vessel except that of glass is liable to cause some alteration. By reason of its simple nature, it acquires every kind of taste, and of odour. When it has had communicated to it the virtues of rosemary and sage it exercises a favourable influence on the nerves."

The pseudo RAYMOND LULLE, a more modern author than ARMAND DE VILLENEUVE, speaks with the same enthusiasm of alcohol. He describes the distillation of fire-water—derived from wine and its rectification—as repeated if necessary seven times until the product burns without leaving a trace of water. It is called, he adds, vegetable mercury.

We see that the alchemists at the commencement of the 14th century were seized with such admiration of the discovery of alcohol that they assimilated it with the elixir of long life and the mercury of the philosophers. It is the echo of these memories which RENAN reproduces in his philosophic drama *L'Eau de Jouvence*.

But care must be taken not to consider every passage which treats of the mercury of the philosophers, or the elixir of long life, as applicable to alcohol. The elixir of life is an imagination of Old Egypt. DIODORUS DE SICILIA mentions it under the name of the 'Immortal Remedy'; its invention was attributed to ISIS and its composition is to be found in the works of GALEN. In

the middle ages formulæ had not been much altered. This elixir of life was supposed to be susceptible of changing silver into gold, that is, it enjoyed the same chimerical properties as the philosopher's stone.

If the discovery of alcohol does not respond to these illusions it has not had less grave consequences in the history of the world. It is an eminently active agent, one at the same time useful and harmful. It may possibly prolong human life, it will certainly shorten it according to the way it is used. It is also an inexhaustible source of riches for individuals and States—a source more fertile than can have been the elixir of the alchemists, whose long and patient labours have not been therefore lost—their dreams have been realized beyond their fondest hopes by the discoveries of modern Chemistry.

Amateur Insect Collecting in British Guiana.

By *H. C. Swan.*



THE whole continent of South America, and British Guiana especially, from an entomologist's point of view, is noted for the number and diversity of beautiful and curious insects. Intersected by magnificent rivers flowing through long open savannahs, thick bush, and, in the far interior, mountainous districts, this colony offers the collector such opportunities as probably never occur in any other country. Even close to town, nay, in the very streets of Georgetown and its suburbs, many rare beetles and butterflies are found, while at night round the lamps and attracted by the glare always flit numbers of moths. In the public gardens, magnificently coloured butterflies may be seen flying by day, and it is not saying too much to state that a collector could procure a very fair representative collection of Lepidoptera and Coleoptera within a radius of about 10 miles from the city of Georgetown.

Of the native Coleoptera we have the cocoanut beetle which almost everyone knows ; it may be found at the roots of old cocoanut trees and other old palms and rotten trees of almost any sort. In an old Eeta palm in the South Canal of the Polder on the West Coast, we found, on cutting it down, a perfect nest of them, with some small Tarantula spiders. The top of the tree had been once a nesting place for parrots. The cocoanut beetle is a great pest to growers, as they do a great deal of damage by boring. It is said they were used in the

olden time to extort confessions from prisoners or slaves. A number were put in half a cocoanut shell, this was tied firmly on the victim, and the confession extorted by the excruciating pain caused by the boring and scratchings of the beetle. In the cocoanut palms are also found the palm weevil or "gru-gru" beetle, an oval black beetle with a curious proboscis covered with fine hair. Mantidæ, of which there are several species in the colony, may be found among vines, and creepers or trees covered by these plants, but are somewhat difficult to detect owing to their resemblance to leaves, being green and very much of the same shape. The thorax is very thin and carries a pair of long powerful front-legs, while the abdomen is large and full. The Chinese it is said amuse themselves by placing two of these Mantidæ in a bowl or glass and watching them fight. Sometimes the elephant beetle (*Megasoma Actæon*), may be caught under the electric lamps in the town at night, becoming stunned or wounded by flying against the lamp with great force, after having been attracted by the glare. Hardbacks from the same cause may be frequently seen lying by hundreds under each lamp, often blackening the road. The Harlequin beetle, (*Acrocinus Longimanus*) so called from the peculiar red and black markings on elytra or wing, has been found on soursop trees in Georgetown, but is a rather rare "find." They appear to be common in the Corentyne, and are handsome insects, the largest measuring, if the legs are extended, fully 8 or 9 inches. The Beetle known as the "Sawyer" (*Prionus Cervicornis*)—so named for its woodcutting propensities—is an exceedingly beautiful and powerful insect for its size. It possesses enormous jaws of great strength, very much jagged,

which it uses for sawing off the branches of trees in the bush, cutting them so clean that it is difficult to believe a beetle could do it. Place an ordinary bit of stick or a lead pencil between its jaws, and it will break it in two as though it had been matchwood. It is beautifully marked with brownish yellow, and a pattern on the wing cases in dark brown. The finest specimen I have seen here, was given to me by Mr. FRANK FOWLER, Government Surveyor, who caught it on the Upper Demerara River. The Cicada, or as it is commonly called, the Six o'clock Bee, may be heard anywhere about the town about six o'clock, but it would be a great mistake to suppose that these insects only make their peculiar stridulation at that time of the day. In the bush, where there is always shade throughout the day, the cicada may be seen flitting from tree to tree all day making this noise. They are found in great numbers on the Berbice River. It is generally thought that this insect makes the sound by vibration of its wings, such however is not the case. "The organs by which this "stridulation" is produced are situated at the base of the abdomen, in two cavities enclosed by large horny plates. The special organs enclosed in these cavities consist of elastic folded membranes attached to a horny ring, and the noise has generally been described as produced by the vibration of these membranes, caused by the action of the muscles originating from the median partition of the second abdominal segment" (CASSELL'S Nat. Hist.) They are very hard to catch, as one generally hears, but hardly ever sees them. The mole crickets are very numerous at certain times of the year, and become very troublesome at night by flying against the lamps. The

insect *par excellence* with which newcomers to the colony are especially familiar is the ubiquitous mosquito, which I think of all other insect pests is the most annoying. The mosquito frequents low marshy land, the mouths of rivers which are at low tide expanses of mud, and mangrove swamps. In the far interior in the high lands, and well-drained tracts however, they are wanting. The eggs of the mosquito are generally laid in water, where they hatch and become swimming larvæ which remain there until the larval stage is complete when they attach themselves to grasses or water plants, turn into pupæ, and afterwards crawl out of their cases as perfect mosquitoes. The presence of fish in a tank or water with larvæ is a remedy for mosquitoes, as the fish feed on the larvæ and prevent their reaching the perfect stage. Many kinds of centipedes and millipedes can be found in British Guiana, but the commoner species of the former, *Scolopendra angulata*, is to be met with almost everywhere; it is capable of inflicting a severe bite which causes swelling and great pain. Scorpions are found in dry places where rubbish is put, under leaves and dead twigs, often too common in some places to be pleasant, and the collector has to be careful when handling or meddling with them. In this colony they do not grow to anything like the size of the African Scorpion and can hardly be said to be as dangerous. By examining bushes and undergrowth one may often come across the Locust and the flying leaf Locust, the latter so named because it closely resembles a green leaf. I obtained a fine specimen of the latter at the Hobabo Benab, where it flew in towards the light. They are capable of jumping long distances, and have

powerful hind legs for that purpose. The female, when about to lay her eggs, makes a small hole in the ground, and by means of her ovipositor deposits them in this hole and covers it up afterwards. The Mantidæ deposit their eggs in a similar manner.

The Lepidoptera of the colony are so numerous, and include such a curious and interesting collection, that it would take up too much space to describe more than the commoner ones, which may always be procured by taking very little trouble. We cannot of course include the beautiful Morpho Butterflies, which may be seen in their glory in some creeks of the Demerara and Essequibo Rivers. The upper surface of the wings is of a splendid metallic blue which shines in the sunlight. Two of the best creeks for them are the Madewini and Camouni, in which I have seen a great number. They are exceedingly difficult to net, flying high and dancing up and down with very quick movements. In the Camouni creek, while passing in a bateau near the Chinese settlement, five or six of these (*M. menelaus*) were seen. I stood on the gunwale and holding on to the top of the tent, net in hand, was about to make a sweep and catch them, when suddenly I missed, the boat lurched over, and I fell over board into the stream. I lost my net, and experienced the inconvenience of a sudden ducking (moral,—never try to catch Morphos from a bateau). About dusk in the Botanic Gardens near the Lamaha Canal, *Caligo Oberon* may be seen flitting about under the trees, while it is not uncommon to net *Caligo Teucer* in the same place. The under surface of the wings are marked very curiously, the hind wing having a large “eye.” It is not often that a

good specimen is caught, as they are generally much damaged by flying against twigs and branches. The upper surface of the wings are of a dull metallic blue. The butterfly known as *Colænis Dido* may be generally caught round flamboyant trees, at certain times. The trees on the Brick-dam are favourite places for these. They are black with open green spaces on the wings. *Papilio polydamus* may also be seen hovering about places in which that peculiar plant, called commonly the Dutchman's pipe (*Aristolochia trilobata*) grows. The larvæ are so numerous sometimes as to eat every leaf of the plant, they are of a maroon colour, with black heads and markings of yellow, and grow to the size of half or three quarters of an inch. The butterfly is black with chrome spots round the edge of the hindwings. Hard to net, but fairly common is the *Urania Leilus*. The wings are black with stripes of bright metallic green, with swallow tails; a good specimen of this insect is a handsome addition to a collection.

Among the moths the Sphingidæ are conspicuous for their strength and swiftness of flight. The best known are the vine moths, of which there are the green vine moth (*Argeus Labusca*) the brown vine moth (*Philampelus satellitia*) and the striped vine moth (*Ph. linnei*), which are most delicately coloured, especially the striped vine moth; they may be caught in gardens or on walls while resting in the daytime. The humming bird moth, (*Macroglossa* sp.) so named for the resemblance it bears to the humming bird, is a small dull olive green moth with marking of greenish brown on the forewings and two silver spots in the centre of each forewing. I have caught them several times in one corner of the Public

Buildings almost always on the same spot. Moths are as a rule disinclined to move during the day and when the net can be dispensed with it is so much the better, as by gently placing a paper bag over the moth and closing the mouth, a capture is easily made. In fact if you gently place your finger under the moth and push it up very gradually it will generally cling to the finger and may be removed without trouble, and then may be taken on the finger for long distances if not disturbed. Amongst the largest of the Lepidoptera of this colony, is the owl moth, (*Thysania Agrippina*) its wings a greyish white with dark markings in a zigzag pattern. Sometimes these moths measure from 8 to 9 inches across the wings. The silkworm moth of this colony (*Attacus hesperus*) is a very interesting insect. The larvæ are gaily coloured, being black, with bands of bright yellow and red. The larva when about to undergo the pupal stage spins a cocoon in which it envelopes itself. This moth is of a rich dark brown with yellowish edges to the wings, and having peculiar "saco" or transparent patches in the wings. The cassava moth, *Dilophonota Ello*. may be also caught without much trouble, it is of a grey colour, the body marked by bands of black and yellow. The soursop moth (*Metopsilus Tersa*) may be found about soursop trees for which it has a preference, hence its name. The forewings are of a dark marbled appearance and the hind wings of yellow edged with black. This moth sometimes grows to a large size, some of the largest specimens having been captured in the vicinity of the Gardens. The spiders of British Guiana are very numerous and are exceedingly interesting. Among the largest are the bird catching spider (*Mygale Avicularia*) and the

common Tarantula, the latter of which is able to inflict a severe bite causing great pain and irritation. The former is somewhat rare, and consequently not often found in a mixed collection. Most of the commoner spiders, such as house spiders, and garden spiders, are very beautifully marked and form very interesting objects under the microscope. About the bees and wasps much might be said; the common bee, black with yellow bands is too well known to need any further notice; of the wasps, there are a good many sorts. The Marabunta is about the best known of these. It builds its nest under bridges, under eaves, or in houses and on walls, it stings very severely, the poison being so potent as to cause great pain and swelling. There are also those that build the peculiar papier maché-like nests on the boughs of trees.

The study of Entomology is not only interesting and instructive, but may be made remunerative. Dealers on the Continent and in England, for good specimens of moth butterflies and insects, are willing to pay a fair price but they decline to have anything to do with damaged specimens.

The best method then, of course, is to obtain the larva, and place it in a "breeding cage" (an ordinary packing case about 2 feet long with two sides knocked out and covered with perforated zinc, which will cost a trifle, will answer,) and by feeding the caterpillar on the leaves of the plant on which it was found, it will assume the pupal stage, when it may be placed in earth slightly damped, or bran, and left until the moth emerges. Next procure from the chemist, a French plum bottle, get it filled to a depth of half an inch with powdered cyanide of potassium and plaster of paris, which must be allowed

English people know better now-a-days. But, what do we find in BUCHANAN'S "Master of the Mine," published in 1885? The heroine came from Demerara with a black nurse who could only speak *Portugueze* and this is what she told her lover:—

"Oh I love a long walk! Even in Demerara I used to wander for hours and hours in the woods; and once I was nearly lost. Night came down suddenly and I had to creep into the bole of a great tree; and I wasn't frightened, though I could hear the tiger-cats crying all round me; for the fire-flies made it almost as light as day."

Her father, the Demerara planter, with a hundred coolies, found her by beating the woods, and she, hearing them, "popped out" and "cried, quite coolly, here I am papa!" The delicious absurdity of such a situation can only be appreciated by the real planter's daughter.

It will be said that both these examples are taken from works of fiction, but there are many choice tit-bits to be gleaned from the works of travellers who profess to be telling their experiences. Lady BRASSEY writes as if sand-box paper weights grew on the trees with the lead already poured into them, and says that the cacao has little *black* seeds surrounded by a pulp which is very pleasant to the taste. These mistakes may be set down to superficial observation, but what can be said to the following extract from a school-book of to-day in general use throughout the colony? "The Royal Reader No. IV," under the heading "Scenes in the Tropics," says:—

"Dangers of every kind lurk in the forest. The quick subtle Indian dare(s) not venture there without his pe
rows, nor the white man without the thunder

and lightning of his gun. The enormous snake may live coiled among the bushes, or traces of the savage jaguar may be seen upon the path."

Every one that knows the forest also knows that snakes and jaguars are very difficult to find. In all our experiences the nearest approach to seeing one of the latter, was his footprints on the Mourie and the remains of a bush-hog which had formed his dinner. As for snakes, they are so sluggish generally, or if active, get away so quick, that only a very quiet observer such as the hunter or naturalist can see them at all except by accident. Travellers speak of alligators as if they were not only common but also dangerous, and here again experience contradicts them. They may be common enough, for example in some estates' canals, but the little children are not afraid to bathe in, much less to fetch water from, such places. Children, and even grown up men and women, impregnated with fear of dangers that are non-existent, are very troublesome, their fright often causing much pain and spoiling their pleasure; it is therefore highly desirable that our school books should be free from such misrepresentations for this reason if for no other. Let there rather be a lesson on the dangers of the streets, which are getting more serious every day.



Epic poem on Guiana.—Mr. DAVIS has given (*ante* p. 122) a few lines from CHAPMAN'S "De Guiana Carmen Epicum"; but there are other portions also worth quoting at the present time, especially the following:—

Riches and conquest and renowne I sing,
 Riches and honour, conquest without blood,
 Enough to seat the Monarchy of earth
 Like to Jove's Eagle on Eliza's hand.

* * *

Then, most admired Sovereigne, let your breath
 Go forth upon the waters, and create
 A golden world in this our iron age.

* * *

But we shall forth I know ; Gold is our fate
 Which all our acts doth fashion and create.

* * *

And now she blesseth with her wonted Graces
 Th' industrious knight, the soul of this exploit,
 Dismissing him to convoy of his stars.

* * *

To his Argolian Fleet, where round about
 His bating colours English valour swarms
 In haste, as if Guianian Orenoque
 With his Fell waters fell upon our shore.



Negro Folk-Lore Scraps.—Perhaps some of our readers can add to the following :—

Birth and Childhood.—A cat crying in the house portends that a birth will shortly take place.

To prevent a baby seeing ghosts put a bible or prayer-book under its pillow, or tie a string (red preferred) round its neck, and hang to it a bag containing a piece of asafætida or the caul of another baby of the opposite sex. You must never let an unbaptised infant sleep alone without either the bible or prayer-book ; after the ceremony has been performed it does not matter.

To cure thrush, take a cloth, clean the mouth with it and hang it on a wall or partition to dry. As it dries the child will get better, but you must not put the cloth in

the sun or before a fire to make it dry quicker. A woman must not be separated from the father of her child while she is suckling, or the infant will not thrive.

If a hog-plum tree is growing in your neighbourhood and the fruit is ripe, you must not pierce a girl's ears, or the lobes will ulcerate or swell, producing those unsightly abnormal growths sometimes seen in the negro.

If a boy is going home late and expects a beating from his parents, he must pick up a number of stones as he goes along and throw them backwards over his head to charm away the expected punishment.

Marriage and Love Charms.—If you pare an orange in one long string and throw it backwards over the head it will form the initial letter of the person you are to marry.

If you stumble in walking upstairs you will soon get married.

The bride must always retire first on the wedding night, or the marriage will be a very unhappy one.

At a wedding, whichever of the newly married couple turns first away from the altar will die first.

Death.—If two or more old witches (crows) perch near the house there will soon be a death; if only one a marriage.

Something falling without being touched, is an evil omen.

Lizards crawling about the house are a bad sign, and if large toads come into the doorway an enemy is at work to injure you; to defeat the sinister design sprinkle the animal with salt.

The two pennies used to close the eyes of a corpse are not to be spent: if you cannot afford to keep them, use two halves of limes instead of the coppers.

It is not good to use perfume when going to a wake or visiting the dead, and when you are leaving the party never say "good night."

Deprecating harm.—If you have to cross a pool of water in the street, spit into it first, otherwise you will get a glandular swelling or abscess.

When you have occasion to pick sour-sop leaves to keep away mosquitoes, always do so before sunset, but if you really want them at night, humbly ask the tree to allow you to have them, otherwise the tree spirit will trouble you all night.

Plantains.—If you have only plantains without any fish or meat, do not eat them alone or you will get dropsy.

Finger-nails.—Cut your nails the first Friday in the month, wrap the cuttings in paper, hide them in a corner, and you will be lucky for the whole month.

Hair.—Have your hair cut at the full moon and it will grow thick; do not thank the hair-cutter nor the person who combs and dresses your hair, otherwise it will begin to fall off and refuse to grow.

Poisons and their Antidotes.—In baking cassavabread, and boiling cassareep, the operator often gets cramp in the stomach from inhaling the poison, and a case was reported to us of a woman and her babe at the breast dying from these symptoms. It is a popular idea that if some of the clay in which the root has been grown is mixed with water and drunk the poison will be rendered innocuous. (There may be some sub-stratum of truth in this; the poison is prussic acid—most clays contain oxide of iron in a finely divided state—and the same result may be produced as by a dose of freshly-precipi-

tated oxide, i.e. the formation of the innocuous prussiate of iron.)

In the West India Islands, the antidote to the poison of the Manchioneel is sea water taken immediately, (Here again the popular notion is not unlikely to be true, as sea-water causes vomiting and purging, and these operations are nearly always useful in poisoning cases.)

A wood-cutter states that in the absence of spirits, ammonia, or other remedy for snake bites, he once gave an Indian suffering from the bite of a labarria, a table-spoonful of kerosine oil, at the same time rubbing the part with the same liquid. The man had been bitten on the thigh, the whole leg was swollen to double its natural size, and the man was quite unconscious when the remedy was applied. There were no hopes of his recovery, but, to the surprise of everyone, in four or five hours he sat up, and in a few days had perfectly recovered. (Our informant, who had this story from the wood-cutter, could not say whether the oil was drunk neat, but we should suppose it would be safer to swizzle it with water, or perhaps, thick syrup. Given this way it could do no harm and might be beneficial, as it is a very powerful antiseptic, and would probably be very quickly absorbed.)

Cane Seedlings.—The following letter was reprinted from the Barbados *Liberal* in the *Royal Gazette* of British Guiana, February 24th, 1859:—

Glendale, February 8th, 1859.

Dear Sir,—In accordance with your request, I now send you the following particulars regarding the canes established from the seed, and which are now growing on *Highland* plantation. I think it was

somewhere in the month of May last year that my attention was called to the fact of there being several plants in a field of ratoons, which the Superintendent pronounced as having grown from the seed of the cane arrow. On first examination, I thought it was a mistake; they bore so close a resemblance to guinea grass when it grows from seed; but as there was not any of this kind of grass growing on or near the field in question, I could not account for its presence there, and this circumstance caused a stricter examination on my part, the Superintendent all the while declaring positively that they were veritable canes. After being satisfied myself that they were really canes, I caused all that could be found to be removed and transplanted to another field, but in consequence of the weather being very dry I could only save seven plants of them, and these are now alive and are growing. I intend having the plants from these put in one spot by themselves this year, hoping to obtain seed from them again. The field on which they grew is in that part of the estate which runs down a hill into Scotland; the soil is very moist, and is composed of clay, siliceous sand and chalk, and had been the year previous thoroughly tilled, and was in what we planters call "fine heart," that is in a finely divided and pulverised state. The parent canes were very vigorous, and there were several varieties growing together in the field. It appears as if there are seed from three kinds growing—the Bourbon, Transparent, and native; that is, the plants which are growing have the appearance of these at present. I would also remark that these plants were not found growing in one spot, but were scattered over a space of more than half of an acre, and grew up wherever the trash did not cover the land thickly. Any further information that you or any other gentlemen might require concerning the above, I should be most happy to afford, as far as I am able, or to show the plants as they now stand.

JAMES W. PARRIS.

SAMUEL J. PRESCOD, ESQ.,
Editor of the *Liberal*.

Pirara and the Savannah Region.—Mr. C. A. LLOYD has just returned from the Brazilian frontier, where he spent several months among the Macusis and Arcunas.

In reply to our enquiries he gave us the following scraps of information, which although miscellaneous in their nature are worth recording :—

Breeding Seasons. The harpy eagle nests in the tops of large silk-cotton trees; the young were beginning to fly at the end of March. The Surinam toad (Pipa) was breeding in March, and a month later the eggs on the back full and ready to hatch. They are common in the Arawarycoo Creek, an affluent of the Rupununi.

Indian Curios. Among the Macusis, in the village of Taranambo, a home-made cross-bow is in use as a toy by the children, who shoot small pebbles at marks and birds with it. From a specimen which he brought, it appears to have been copied from the ancient weapon so well known at the period when America was discovered. The stock is part of the midrib of an Eta frond, and the natural groove forms the channel by which the missile is guided. This is a most interesting "find" as it shows that the native Indian is able to adopt a foreign weapon and retain it, after the world has almost forgotten it. It must be something like three centuries since the cross-bow was in use by the Spanish conquerors, and even then it is hard to conceive how the Indians obtained the idea, unless they brought it from some Mission on the Amazon. Even as a toy we have never seen it used in Demerara.

Another article which is not altogether new has also been brought down by Mr. LLOYD. This is the silver nose-plate, which he informs us is almost universally worn by the men. It consists of a circle or crescent of silver attached to a little ring by which it is hung from the septum of the nose. The greatest interest attaches to this ornament, as it represents the "gold moons"

which drew the attention of the Spaniards and then of RALEIGH to the country of "El Dorado." In speaking of the Corentyne river, Captain KEYMIS said the inhabitants got their moons by exchange, taking one for a large canoe, and "they do somewhat extraordinarily esteem of them because everywhere they are current money." Mr. LLOYD has not seen any "moons," made of gold; those he collected were Brazilian silver coins beaten until they became much larger and thinner.

Salt.—On the Pirara Savannah are depressions, from which in former times salt was collected. A sample of the soil brought down by Mr. LLOYD is a black sandy humus of a saltish taste with small visible crystals; he says this earth was washed and the water strained and evaporated in the well-known earthen pot. Now that salt is more easily procurable the Indians do not take the trouble to collect the inferior product. This is very interesting in connection with the old story of Lake Parima, the great salt sea as large as the Caspian, which tradition located in Guiana, and which may perhaps have existed ages ago. The fact that the tradition was so widespread seems to show that it is very old, and it is not impossible that there may have been such a salt lake where now the great savannah extends.

Professor J. B. HARRISON, who has been kind enough to analyse a sample of the earth, states that it contains Chlorides of Sodium and Magnesium, and Sulphates of Calcium and Magnesium, and is similar in respect to its salts to the subsoils near the coast.

Beenas.—We have been making enquiries for some time past into the subject of "beenas." Those who have studied works on the Indians will remember that

these are charms, supposed to have a special influence on the man who uses them, to make him skilful in hunting, invisible to the game, or to bring a particular animal where it can be captured or killed. The whip-like nose beena seems to be a universal charm which makes its user skilful in hunting generally, but besides this there is a large number of beenas, every kind of animal having its particular variety which is used when the hunter fails in shooting that animal. When this takes place he thinks his virtue has gone out of him, slashes himself with a knife and rubs in the acrid juice of the root of the plant which is the specific charm. Most of the beenas are varieties or species of *Caladium*, the well-known form of *Caladium bicolor* with suffused crimson on the upper surface being the tiger (jaguar) beena. Mr. LLOYD has brought down a specimen of the maipuri (tapir) beena which appears to be a variety of one of the cultivated tannias. It is not coloured or spotted in any way, but its peculiarity consists in the growth of a dwarf and malformed leaf on the back of the mid-rib. This is compared by the Indians to the mane of the tapir, and this idea no doubt suggested its use. Other specimens brought down by Mr. LLOYD were the wikan (deer) beena, *Cipura paludosa*, and the macaw beena a species of *Piriqueta*. *Hippeastrum equestre*, the well-known Belladonna lily, is also a beena; and other lilies found growing near their settlements will probably be utilised as charms in a similar manner. This beena idea is a very interesting one as it accounts for the few cultivated plants among the Indians which are not otherwise useful, and might be considered as showing a taste for beauty which really is non-existent. It also has

a bearing on the fairy-tale notion of invisible caps and cloaks.

Indian Names.—Among other things Mr. LLOYD made some enquiries into the meaning of certain names of places. He was informed that the village of Taranambo was so called from an extinct tribe called the Tarana, who are credited with having been giants, from which we may presume that they were very powerful at one time. Pirara means a spotted fish; Quimatta, place of Qui (Eta) palms; Warroche, a pigeon; and Maccouria, a small maam.

Coryanthes maculata.—We have lately had another good opportunity of observing the wonderful contrivances by which the flowers of this orchid are fertilised. At seven o'clock in the morning the buds were a trifle loose and they must have opened about an hour later. At 8.30 the bees were seen round the fully-opened flowers, and an hour later every pollen mass had been carried away. At the latter period from six to eight bees were continually hovering round, crawling under the dome-like appendage above the cup and dropping into the trap below. Their green and gold bodies flashed in the light as they buzzed round; on one of them a pair of pollen masses between the shoulders showed conspicuously against the metallic green back. One that we watched go into the cup, turned itself round and round for a few seconds, and then, apparently seeing the light shining through the gap where the column approaches the lip, commenced to drag itself through the spring-like opening. The bottom of the cup

was evidently slippery and the insect fell back several times. However, at last it put both fore-legs through and grasped the under lip as we may call it, where there are two gaps on either side of a single tooth. By holding thus it was enabled to push its head through, but the body still remained inside. About a minute passed before it could get through entirely and during that time it was evidently straining every muscle, turning a little to this side and then to that, taking a fresh hold with one of its fore-legs and looking thoroughly exhausted when it got through. Altogether it took about two minutes to come out, and in its exertions had rubbed and broken the pollen masses on its back so that the ragged pieces remained on the stigmatic surface. The problem which puzzles us most is how these bees, which we never see at other times, discovered the flowers were open. There was a perfume, but this was not very strong. No bees came in the afternoon or next day.

JAMES RODWAY.

OBITUARY.

Exley Percival, B.A.: Principal of Queen's College,
died March 5th, 1893. Aged 44 years.

By the death of Mr. PERCIVAL the colony has sustained a serious loss, as he was one of the few gentlemen of culture in British Guiana, who try their best to make it something more than a place to retire from as soon as possible. He took a great interest in botany and zoology and was a naturalist in the widest sense of the term. We had a very interesting paper by him in the volume for 1889, p. 515, entitled "Wild Flowers of Georgetown," and since his death his list of the birds found in the Botanic Gardens has been published in the *Argosy* newspaper and reprinted in pamphlet form. As Principal of the most important educational establishment in the colony he endeared himself to all his pupils, who will miss his pleasant face for a long time to come.

Honourable William Samuel Turner: Chief Commissary and a Managing Director of the Society, died May 4th, 1893. Aged 61 years.

(See Minutes of the May Meeting of the Society.)

Report of Meetings of the Society.

Meeting held on the 12th January.—Hon. Dr. Car-
rington, C.M.G., President, in the chair.

There were 33 members present.

Elections.—*Members:* Messrs. H. Lawrence, F. Thorne, A. J. Haggin, W. J. Kenswell, and E. P. Wood, Dr. J. H. Conyers, Revds. F. P. Roth and A. Jemmott, and Capt. Shaw.

Associates: Messrs. A. A. Ridley, T. F. Burrowes, E. G. Bagot, J. J. Crombie, R. F. Jardine, W. S. Cook and W. F. Bye.

The President said that as he understood it was usual for the newly-elected Chairman to give an outline or programme of what was intended during the coming year, he would, with their permission, follow that custom. He would again thank them for the honour they had done him in electing him President and again state that his acquaintance with agriculture was somewhat limited. In his boyhood days he took a great interest in that subject, and as a young man had gone riding round estates with the old sugar planter of Barbados, Mr. George Pitcher, with whom, no doubt many there present were acquainted, and watched the primitive process of making sugar. Ever since those days he had continued to feel a very active interest in all matters connected with agriculture, and although wanting in experience of the subject in this colony, he hoped they would believe him to be still interested in it.

He proposed to divide his remarks under two heads ;

first, the programme of the year's work of the Society, and second, a brief review of its position and the objects for which it was incorporated, with suggestions for extending its usefulness. In regard to the programme, the Directors had been so well satisfied with the *Conversazione* held last year that they had decided to have another shortly after Easter and perhaps repeat it later if this should be successful. The course of lectures which had been found useful and interesting would be continued. So far they had promises from the Rev. Canon Josa in continuation of his previous lecture on the East Indians, Rev. Jas. Millar of the West Coast, Mr. G. B. Steele and Sir Charles Bruce. He had the names of several other gentlemen who would be asked, and the Directors would endeavour to keep up a regular course with a touch of popular science in them. For the afternoon meetings they hope to have papers on agriculture and cognate subjects. This matter had been considered by the Agricultural Committee and it was agreed to ask certain gentlemen to contribute papers, which he expected would be satisfactory and useful to the Society. It had also been agreed to hold an Horticultural Exhibition in the Botanic Gardens about August which might include fruit, vegetables and poultry. He would also mention that the Agricultural Committee had considered the section of the Bye-Laws referring to premiums, and decided to apply to the Government for the sum of \$1,000 to be devoted to that purpose. There could be no doubt that money justly applied to the agricultural and other objects mentioned in Chapter XIV, would be well expended. With regard to the World's Columbian Exposition, he had to say that the exhibits were in a forward

state and would be despatched in a few days. They could rest assured that the Society had arranged for a very satisfactory show of the productions of the colony. It was his pleasant duty to announce also that Mr. Quelch had been appointed sole Commissioner for the colony. He was quite sure they could not get a better man for the place, and if energy and foresight were required those qualities were certainly possessed by Mr. Quelch. In regard to the Imperial Institute, for which a Committee had been appointed some time ago, he thought the colony should not be behind-hand if it wanted to become known.

Having concluded the first section of his address, he proceeded to review the present position of the Society in reference to the objects for which it was incorporated, with suggestions for extending its usefulness. He hoped his few suggestions would be taken in the friendly spirit in which they were intended. They were made with the earnest belief that if carried out they would tend to promote the usefulness of the Society. Having been established in 1844, it was now approaching its jubilee. It was incorporated as early as 1853, but on account of the Ordinance giving no limit to its acquirement of real property it was not confirmed. In 1866 this flaw was rectified and the present limit of £10,000 imposed. The Society had now reached middle age, and he thought everyone acquainted with its history would admit that it still showed signs of life and vigour. But, at the same time, he would venture to say that if any intelligent stranger were to ask for information as to its work, they could only point to the Reading Room, Library, Exchange Room, and doubtfully at the Museum. They could

say the Society maintained a large semi-public library, and a good museum, and might add, took an intermittent interest in agriculture and kindred subjects, and published a journal called *Timehri*. If they were asked whether the Society was fully and adequately discharging the functions entrusted to it by the Ordinance of Incorporation could they say, yes? He would suggest that, before answering they should turn to the Ordinance of Incorporation and see what were the objects of the Society. It was there stated that these were "to promote as far as possible the improvement and encouragement of the agriculture of the colony, and of every branch of industry whereby the resources of the colony are likely to be developed and increased," as also the collecting and disseminating of useful information on such subjects. He would also refer them to bye-law 2, Chapter IX, which said that the Book Committee should purchase more especially works relating to agriculture, commerce, and the staple productions of the colony. There was nothing about entertaining works of travel and fiction.

He had clearly laid down before them the principal objects for which the Society was established, and he put it to them whether the time had not come for them to fairly ask themselves whether they were in spirit carrying them out. They were charged by the Ordinance and bye-laws with the fostering of all colonial industries. They must admit that, so far, they had failed to satisfy two or three of these. One had been taken away from them—Commerce—which occupied the second place in the title as well as the bye-laws. It had not been put forward so prominently as agriculture, with

the result that it had virtually fallen away with the establishment of a Chamber of Commerce in 1890. Many of the gentlemen on the Council of that body were also on the Commercial Committee of the Society, and on the face of it he could not see that this was reasonable, as the same question might be considered by the same persons in both. Two other local industries were in the same plight. When their Ordinance of Incorporation was passed there was no mining industry, but still he thought this was covered by the terms of the Ordinance and bye-laws. This and the timber industry had virtually fallen away from their charge and protection, and those interested had the Institute of Mines and Forests to look after their special enterests. He thought the Society should leave commercial questions to the Chamber of Commerce, and confine themselves to the very important and essential questions connected with agriculture. In regard to the Society's library, it discharged the function of a semi-public library and no doubt attracted members, not one in ten or fifteen of whom cared for agriculture. When he came to the colony nothing struck him so much as the absence of a public library. It was a reflection on the colony. He considered it a disgrace to the colony, and that it did not speak much for the wealth and importance of a city like Georgetown, and was an insult to intelligent men with literary tastes. Undoubtedly the want had been partly supplied by the Society's library, but he would put it to them whether they had not entrenched upon the functions for which the Society had been started. This was not a public library. In England such institutions were established in every important town, and power

was given to the local authorities to levy rates for their support. He would not say whether the same should be done here, or whether the Government should do it. He thought the colony should have a public library, and he would suggest that the nucleus might be found within the walls of that room. The Society might confine itself to maintaining what it was specially charged with—a collection of agricultural and other books bearing on its objects. Results might be achieved if these suggestions were carried out, that might be useful both to the Society and the colony at large. In regard to the Museum—no doubt it was a kind of public Museum and model room, which admirably discharged the functions of such an institution. He would ask whether the Society should be charged with work of a public nature like this, or whether it ought not rather to fall on the Government. As a matter of fact, all they had to do with it was to give it house-room and it was really maintained by the annual vote of the Combined Court of \$4,500. Really and truly it might be regarded as a public Museum, and only nominally that of the Society. He felt that the people of the colony would still derive benefit from the maintenance of the Museum if it were separate, while the Society would be relieved from the duty of giving it house-room.

He had thrown out these suggestions as bearing on the welfare of the Society, and although some there might not agree with him, yet he thought they would expect the President to speak frankly, and, even if they did not agree with him, he thought they would give him credit for earnestness and a strong desire to further the welfare of the Society. He looked on the question in this way :

They were charged by their ordinance of incorporation with the furtherance and development of agriculture and other industries. If their agricultural friends became dissatisfied they might break away and form an agricultural board. In what position would they be then? They had already lost one arm, and then the other would be gone. If such a state of things came about, the Society would be nothing more than the Georgetown Library. That would be the long and short of it. They ought to deprecate such a thing and devote themselves to agriculture and other matters connected with it. He would suggest certain things that might be carried out in the immediate future. First, there were general and local exhibitions, which if well-managed must result in good to the agricultural industries. He was told that within the last few years an attempt for the benefit, especially, of the villagers had failed. This he thought was the result of apathy, ignorance, and distrust on the part of those for whom it was intended. They could only regret that such apathy and distrust existed. But should they desist from their efforts because of this? He put it to them whether or not their duty lay in carrying on the work and sparing no effort to discharge the trust laid upon them. If they did not do this, they were not acting in the spirit of the ordinance.

In regard to an agricultural paper, they must remember that the Society was charged with the dissemination and furtherance of all matters coming within its scope. At present they possessed an admirable periodical, *Timehri*, which was not only interesting to people here but others abroad as well. But, after all, it only appeared once in six months, and could hardly to any great extent pro-

mote the interests of agriculture. They wanted a paper coming out at short intervals so that people might be kept posted in what was going on. He put it to them whether the time had not arrived for the Society to have its own agricultural paper. Information on agricultural matters, papers on scientific subjects, and reports from agricultural centres could be circulated through this medium. He was quite certain that such a paper would interest the planting community and others. This was a direction in which the Society should expend some of its energy. He knew of such papers in colonies less important than this. He also thought they should do everything to further the great sugar industry. It might be said that this could look after itself, and no doubt there were men of ability connected with it fully competent to carry it on as successfully as known skill could do. But they could not but recognise the fact that it was struggling under great difficulties. He was not one of those who despaired, for he believed that better times were in store, and that it would always rest on a sound basis and be the mainstay of the colony. What he wished to say was this. Mutual co-operation was wanting and if they made their society a living and real organisation—one dealing actively and intelligently with the matters he had mentioned,—was it not certain that good results would follow? In the same way that the farmers in England looked on their Royal Agricultural Society, so the leading agriculturists of this colony would come and join this Society and take counsel together. In a lesser degree, also, the smaller industries such as cattle-farming, cocoa, coffee, provision and fruit-growing could be fostered by the Society. All these were matters in

which a little energetic assistance and co-operation must necessarily result in good. At present they were more or less wandering at large, and if a more lively interest was shown in them, it would be better for them as well as the Society. There could be no doubt that they were not doing all they might do, or that the result was entirely satisfactory. He put it to them whether they could get a good piece of beef or mutton for dinner. He supposed good meat could be produced, and at a moderate price. In regard to other things. In 1891 rice was imported to the extent of 47,648,564 lbs. value £192,354 6 3, tobacco 747,475 lbs. value £14,890 13 10, and coffee 228,335 lbs. value £7,975 16 9. These were considerable quantities, costing large sums, and he had no doubt that all of them could be raised by the people of the Colony. Let them take the case of ground provisions. The supply was limited and large quantities had to be imported from Barbados. Was there any reason why they should not be grown here if agriculture were improved in the villages. If they had such a system as prevailed in France and other countries, they could keep a great deal of money in the colony, and this would tend to the welfare of the people. With regard to fruit culture, there was no system in the colony. Much better results ought to be obtained. In dealing with this point he would refer to the Banana Commission of which he was a member, and for some time, Chairman. Captain White was enthusiastic on the matter, and his enthusiasm gave a strong impetus to the feeling that something should be done to organise a fruit trade with the United States. Captain Baker had come here in connection with the Boston Fruit Company, and they had all hoped

something good would have come out of it. His impression was that with the present system of communication they were a little handicapped. They could not compete with Jamaica, Cuba, and Honduras, which were nearer and could supply as many bananas as the United States required in the immediate future. He hardly thought any good could be achieved by the revival of the Commission. The view he now expressed was formed while the Commission was sitting, and he would be glad if any one could demonstrate it to be unsound. In regard to agriculture in the villages no one could fail to see that there was a want of interest. It had occurred to him that something might be done if a competent person should give lectures to the villagers on the cultivating of their small lots. He thought something might be done in that way, and although they might not see immediate results he felt sure that some good would come in the future. Such lectures might also be printed and distributed so that they could be read at home. With regard to the cottages and buildings, if they went to the villages they would see these stood in need of great improvements and Chapter XIV of their bye-laws provided for the granting of premiums to this end.

He did not despair of the Society. They had an Agricultural Committee composed of eighteen gentlemen of standing in the community—gentlemen quite competent, if they took an interest in the matter, to deal with such problems as presented themselves in the interests of the colony. The Committee included Mr. B. Howell Jones and Professor Harrison, who were conversant with agriculture from a practical as well as a scientific point of view. Mr. Jones had assured him that he

did not mean to allow the Agricultural Committee to lie dormant, but would call the members together from time to time and place matters of interest to the colony before them. He (the President) hoped the Committee would carry on good and useful work.

In conclusion, he was quite certain that if all took an interest in its operations the Society would accomplish good and useful results during the year, and they would be able to show the people that they were far from being unaware of their duties, but on the contrary were anxiously endeavouring to discharge them satisfactorily. As he said before they must rise to the occasion, and endeavour to discharge to the full satisfaction of themselves and the community those duties which were imposed upon them by the Ordinance of Incorporation and the bye-laws.

Mr. Bellairs said he was the only sugar planter in the meeting, and he had listened with pleasure to the President's address. He might mention that the Society had not only allowed commerce to break away but sugar planting also, which was represented by the Planters' Association.

Mr. F. A. R. Winter, while approving generally of the President's views, represented that the greater part of the income of the Society came through the library.

Mr. Hargreaves stated that he did not consider that the fact of there being a Chamber of Commerce and Institute of Mines and Forests was in any way derogatory to the Society. These institutions carried on their work, which might be considered as political, on different lines, leaving the Society at liberty to deal with similar matters on a much wider basis.

On the motion of the Revd. W. B. Ritchie seconded by Mr. Jacob Conrad, a hearty vote of thanks was unanimously accorded to the President for his address.

The Secretary reported that the Commercial Committee had elected: Hon. W. H. Sherlock, Chairman; Hon. A. Barr, Vice-Chairman; W. Cunningham, Secretary—and the Committee of Correspondence: Hon. N. Darnell Davis, Chairman; S. M. Bellairs, Vice-Chairman.

The Secretary also read the following report of the Agricultural Committee:—

Georgetown, January 11th, 1892.

To the President and Members
of the R. A. & C. Society.

Gentlemen,—By direction of the Agricultural Committee of the Society, I have the honour to report as follows:—1. That at their meeting of January 10th, the office-bearers for 1893 were elected, these being, Chairman, Mr. B. Howell Jones; Vice-Chairman, Prof. J. B. Harrison, M.A., F.C.S.; Secretary, Mr. S. R. Cochran.

2. That at the same meeting attention was called to the Bye-Laws, Chapter 14, which provide for Premiums being offered for improvements in Agriculture, &c., and after consideration it was decided that the Committee recommend to the Society, that application be made to the Government for the sum of a thousand dollars for the purpose of carrying out the objects stated in the said Bye-Laws.

I have, &c.,

LUKE M. HILL,

Hon. Secretary R. A. & C. Society.

The President called attention to the recommendation that the Society apply to Government for a thousand dollars to be offered in premiums in accordance with bye-laws Chapter XIV.

On the motion of Mr. Æneas D. Mackay the report was adopted, and the Secretary was directed to apply accordingly.

The Secretary read the following report of the Columbian Exposition Committee :—

Georgetown, January 12th, 1893.

To the President and Members
of the R. A. & C. Society.

Gentlemen,—On behalf of the Columbian Exposition Committee, I have the honour to report that His Excellency the Governor has been pleased to appoint Mr. John Joseph Quelch, B.Sc., to be sole Commissioner to represent the Colony at the Columbian Exposition, and also that his Commission has been received.

I have further to report that the Exhibits are in course of being packed, and will be sent by the Canadian Steamer "Taymouth Castle" on or about the 21st of this month. A few small things will probably be sent on later, but the bulk of the exhibits will go by this opportunity. The party of Indians will go in the care of the Revd. Joseph Keelan about June, as it will be too cold for them at an earlier date. Materials for their dwellings will however be taken, and erected by the time the Exposition opens.

I have, &c.,

J. RODWAY, Secretary,
Columbian Exposition Committee.

The Treasurer laid over the annexed annual statement of accounts for 1892, consideration of which was postponed until the following meeting, when they would have been audited.

Mr. Thos. Watt brought forward a motion for a Committee to consider the desirability of amending the Constitution of the Society.

Mr. Watt said that since giving notice he had found that on the statement that an essential principle of the constitution was the total exclusion of political questions depended the fact that Her Majesty the Queen became Patroness and the word "Royal" was incorporated with the name of the Society. He would therefore ask to

be allowed to amend his motion. This having been permitted he moved as follows ;—

Whereas by Section 6 of the Society's Ordinance of Incorporation the discussion at its meetings of political questions is prohibited, and doubts having from time to time arisen as to the scope and meaning of the terms of exclusion, it is desirable to appoint a special committee to consider and report on the necessity and feasibility of defining the terms referred to by the adoption of an interpretation by-law or otherwise.

This having been seconded by Mr. Jacob Conrad, a discussion took place in the course of which attention was drawn to the fact that some Chairmen had ruled that certain questions were political that others allowed.

Mr. Watt withdrew the motion.

Mr. Conrad's motion was postponed with consent.

Mr. Æneas D. Mackay gave notice of motion as follows :—

“ That the Directorate be recommended to increase the salary of the Assistant Secretary and Librarian by the sum of fifty pounds per annum.”

Mr. T. S. Hargreaves gave notice of motion as follows :—

“ That the Directors report progress to the general meeting with respect to arrangements to be made for the representation of the colony at the Imperial Institute.”

Mr. C. G. Parnell gave notice of motion as follows :—

“ That the Directors be recommended to increase the vote to the Book Committee.”

The Secretary read a letter from the Government Secretary informing him that the resolution of the Society in regard to the provisions of the Adulteration Act had been laid before the Governor.

The Royal Agricultural and Commercial Society of British

RECEIPTS.

To Society's Funds, 31 Decem-ber, 1891.			\$	1,783	15
„ Subscriptions—					
Lady Members	\$	100	00		
Ordinary Members		1,742	50		
Country Members		430	00		
Associates		1,046	25		
Arrear Subscriptions		35	75	\$	3,354 50
„ Rents				2,556	00
„ Catalogues				14	40
„ Interest on Hand-in-Hand Scrip		56	40		
„ Profit from Hand-in-Hand on Insurances		185	98		
„ From sale of Hand-in-Hand Scrip \$239 89 at \$102½ o/o		245	87	488	25
					6,413 15
				\$	8,196 30
„ From the Govt. towards Columbian Exposition		10,000	00		
„ Advertisements in Hand-book to be sold at the Columbian Exposition		166	25		10,166 25
„ Government Vote in Aid of the Museum, amount in hand 31st December, 1891			252	82	
„ From the Government during the year 1892		4,500	00		4,752 82
„ At Credit of the Account for New Fittings for Museum at 31 December, 1891					465 89

 \$ 23,581 26

Guliana.—Receipts and Expenditure for the Year 1892.

EXPENDITURE.

By Salaries... ..		\$ 2,605 00
„ Periodicals and Magazines	\$ 540 11	
„ Less Sales of Papers, &c.	19 96	520 15
	<hr/>	
„ New Books added to Library		956 34
„ Binding		97 76
„ Advertising, Stationery, and Sub'tion to Local Papers...		359 14
„ Cost of Timehri, 2 Parts to 30th June, 1892... ..	619 81	
Less Sales by Publisher in the Colony	\$ 251 43	
Less Sales by Stanford in London	17 14	268 57
	<hr/>	<hr/>
„ Cost of Gallery in Museum \$679 49, and Repairs to Building \$63 90		743 39
„ Cost of New Furniture and Repairs		429 46
„ Insurance with Hand-in- Hand \$50,000 at 1½ o/o ...		875 00
„ Postage, Petty, Reading Room & Exchange Room Expenses		358 91
„ Sale of Hand-in-Hand Scrip per contra		239 89
		<hr/>
Society's Funds per Bal- ance Sheet		7,536 28
		<hr/>
		\$ 8,196 30
Paid out from Columbian Exposition Fund per sep- arate statement	4,580 75	
At Cr. of the A/ct per Balance Sheet	5,585 50	10,166 25
	<hr/>	
Paid for maintenance of Museum per separate state- ment	4,687 17	
At Cr. of the A/ct per Bal- ance Sheet	65 65	4,752 82
	<hr/>	
Paid for new fittings for Museum	455 00	
At Cr. of the A/ct per Bal- ance Sheet	10 89	465 89
	<hr/>	<hr/>
		\$ 23,581 26

Meeting held on the 9th February.—Hon. Dr. Car-
rington, C.M.G., President in the chair.

There were 18 members present.

Election.—*Member* : Revd. John Highwood.

Associates : Messrs. A. L. Clough, G. O.
Lambert, A. E. Lord, R. J. Neary, E. A. W. Samp-
son, A. P. G. Austin, Jas. Robertson, W. Arthur,
T. Hiscocks, Tom Smith, and H. H. Bratt.

Mr. B. Howell Jones, with consent of the meeting, said he would like to say a few words in regard to the President's address at the previous meeting, from which he was unfortunately absent. The President had referred to the Society allowing other bodies to take its place, and the Planters' Association had been mentioned. He (Mr. Jones) had been Chairman of both Societies, and would like to point out that the Planters' Association was formed with a view to protecting the interests of the members, and he could not remember that any question relating to practical agriculture had ever been discussed at its meetings. He thought it necessary to explain this so that there should be no misunderstanding. The agricultural department of the Society had ample scope for its operations without trenching on the lines laid down by the Planters' Association.

The Honorary Treasurer laid over his annual statement, showing a balance in favour of the Society of \$660 02 and moved that it be adopted, which motion was seconded by Mr. B. Howell Jones.

Mr. Æneas D. Mackay asked if the Book Committee were bound to spend a limited sum on new books, as appeared from Mr. Parnell's notice of motion.

Hon. W. S. Turner in reply said that there was no hard

and fixed rule. The Directors might be safely left to manage the funds of the Society, and he did not agree with the meeting essaying to instruct them what to do.

Hon. N. Darnell Davis spoke of the amount at command of the Book Committee.

The Chairman thought they could not infringe on Mr. Parnell's motion, as that gentleman had asked to have it postponed to the next meeting.

Hon. N. D. Davis proposed, and Mr. Watt seconded, as an amendment to the motion, that the Treasurer's statement be received and considered, but after some further discussion this was withdrawn and the original motion carried.

The Secretary reported that as the Hon. N. Darnell Davis had declined the office of Chairman of the Committee of Correspondence, Mr. S. M. Bellairs had been elected to that office by the Committee and the Revd. W. B. Ritchie as Vice-Chairman.

The Secretary read the following report of the Agricultural Committee :—

Georgetown, February 8th, 1893.

To the President and Members
of the R. A. & C. Society.

Gentlemen,—By direction of the Agricultural Committee of the Society, I have the honour to report for the information of the members as follows:—

1. That the Committee propose to hold regular meetings on the first Tuesday of every month at four o'clock in the afternoon, and as they think it desirable to interest the members generally, and especially those connected with agriculture, in these meetings, they have decided to open them to all members of the Society. The first of these will be held on Tuesday the 7th of March.

2. That at the meeting of the 7th inst., the Chairman called attention to the fact that a cattle disease, probably a recurrence of Anthrax, was then raging in Mahaicony, and he feared that if something were not

done to prevent cattle passing over the Mahaica bridge, it would spread over the East Coast. It was thought that by bringing up the matter before the General Meeting public attention might be aroused and some action taken, as at present nothing whatever has been done.

I have, &c.,

J. RODWAY,
Assistant Secretary.

Mr. Howell Jones, in reference to this report, said the disease had been reported to him as very serious, one gentleman losing three or four head a day. Then there was an epidemic among horses and dogs, taking the form of a severe cold and affecting the lungs. He thought some investigation should be made, and would be glad if Dr. Ferguson could be spared by the Government to pay a visit to the Mahaicony District.

The Secretary was directed to forward a copy of the report to the Government, and request that Dr. Ferguson might be allowed to investigate the disease.

Mr. Jacob Conrad's motion in the matter of the Agricultural School was again allowed to stand over, at his request.

Mr. Hargreaves then brought forward his motion, of which due notice had been given, and, with permission of the meeting, amended it to read as follows:—

“That the Society should respectfully ask the Government to give the Society information as to what steps are being taken to secure the representation of the Colony at the Imperial Institute.”

Mr. Hargreaves said that although he was a Fellow of the Imperial Institute he wished it to be clearly understood that it was not on that account that he made his motion, but in the interest of the colony. It was their bounden duty to support the Institute, and he hoped that some definite effort would be made to have the colony represented.

Mr. Luke M. Hill stated that after a public meeting at which Mr. Nevile Lubbock explained the objects of the Institute a mixed Committee had been formed of Officers of the Society and others. This Committee met and applied to Government for a grant, which was promised to be put on the estimate, but as this had never been done, no action could be taken. He thought that if they again approached the Government a grant might be made.

The motion having been seconded by Mr. Mackay, it was put to the vote and carried.

Mr. Æneas D. Mackay brought forward his motion to recommend to the Directors that the salary of the Assistant Secretary be increased, and by permission of the meeting amended it to read as follows:—

“ That the Directorate be recommended to increase the salary of the Assistant Secretary and Librarian by the sum of £50 per annum, or by such sum as the Directors may see fit.”

He was sure that those present would agree with him that during the six years that the present Assistant Secretary and Librarian had filled the post, the management of the Reading Rooms had materially improved. They were also aware that Mr. Rodway had taken the deepest interest in the affairs of the Society. The Society's revenue had been maintained, and he thought that some mark of approval of his services should be given him.

Mr. F. A. Winter seconded the motion.

Hon. W. S. Turner thought that Mr. Mackay, in moving the resolution, should have proved his case or given reason for the proposed increase of salary. There had been no other reason put forward than that the Assistant Secretary

had done his work well. This he did not question, but that was expected of every man. If the meeting recommended the increase the Directors would be put in an invidious position. They wanted to administer the funds of the Society fairly and economically and do justice to all. He should therefore oppose the motion.

Mr. S. M. Bellairs said he was a Director of the Society when the appointment was made. He did not wish to enter into the merits of the case, but was opposed to the motion.

Mr. T. S. Hargreaves spoke in favour of the object of motion, but thought it should not have been brought forward at a General Meeting. He did not think it should be put to the vote.

The President thought the motion should not be formally passed. He felt sure the Directors would not overlook the matter. It was a matter requiring consideration, and he thought the fact of there having been a discussion was sufficient.

Mr. Mackay then withdrew the motion.

Mr. Parnell's motion was allowed to stand over on account of his inability to be present from ill-health.

Mr. W. T. Binnie mentioned the danger of allowing the carcasses of cattle that had died of Anthrax to remain on the ground, and on the recommendation of the President promised to give notice of motion on the matter.

Mr. Howell Jones said he had not moved for any definite action in this matter, simply because it was a difficult matter to provide kilns to consume the carcasses, which was the only way of safely disposing of them.

The President announced that Mr. G. B. Steele would

lecture on "The Nile, Pyramids and Sphinx" on the 23rd inst., and that Mr. A. E. Messer would follow in March with an account of the "British Cabinet." The Revd. J. Millar had been unable to give his promised lecture on account of ill-health.

The meeting then terminated.

Meeting held on the 9th March.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 16 members present.

Elections—*Associates*: Messrs. B. Humphreys, Jos. Speed, J. van Sertima, Robt. S. S. Hödgon, John Kemlo, and J. M. Texeira.

Mr. Jacob Conrad having given notice that he would call for the reading of the plans laid before the late Agricultural School Committee, asked that this be now done

No member dissenting, the Secretary read the plans and estimates furnished to the Committee by Messrs. Jacob Conrad, R. G. Duncan, and Jas. Gillespie.

Mr. Conrad then said that the matter of an Agricultural School, which he considered as still lying on the table, was a very important one. The motion under which it had been considered was introduced by the Hon. A. Weber and referred to a Committee who had reported on it. He hoped Mr. Weber would now move his original motion and let it be put to the vote.

Hon. A. Weber, while agreeing with Mr. Conrad that the matter was a very important one, considered it rather irregular to call upon him to again bring forward a motion which had been disposed of by the adoption of the report of the Committee.

The Chairman said that it appeared from the minutes that the motion in question had been referred to a special

committee, who had reported to a general meeting. This report had been adopted, and therefore there was no motion now before the meeting. If Mr. Conrad wished to have the matter reconsidered he must give notice of a new motion.

Mr. Conrad promised to give the required notice.

In the matter of Mr. Parnell's motion that the Directors be requested to increase the vote to the Book Committee, the Secretary informed the meeting that the mover thought it would be better to let it be dealt with by the Book Committee. The motion was therefore cancelled.

Mr. Binnie brought forward his motion that the Government be asked to take measures to prevent the spread of infectious diseases among cattle by destroying the carcasses of those dying of such diseases.

Mr. Binnie said it was well known that anthrax and other diseases had been disseminated by the pollution of streams and pastures from the putrid bodies lying on the land, and even when these had been buried. The only effectual destroyer of the bacillus was corrosive sublimate, and he thought the dead bodies should be boiled down in a solution of this powerful antiseptic and buried deep in the ground.

Mr. Binnie read extracts from the Journal of the Royal Agricultural Society of England, and U.S. Department of Agriculture Reports, to show the difficulty of destroying the infection of Anthrax.

Mr. S. M. Bellairs said he would second the motion for the sake of discussion. The disease on the East Coast attacked horses, mules, donkeys and cattle, but as far as he knew not a single case had occurred among

sheep. At Chateau Margot the dead carcasses had been carried down to low water mark, and left to be carried off by the tide,

Mr. Luke M. Hill said he took exception to the method of disposing of the bodies in the sea, as they got stranded near town in front of the Sea Wall, when the city authorities had to have them removed and buried.

The motion was carried.

A letter from the Government Secretary was read, informing the Society, in reply to its communication *in re* the Imperial Institute, that provision had been made in the draft estimate for the next financial year for the sum of \$1,000 for the representation of the colony at the Institute.

A second letter from the Government Secretary informed the Society that the Government had no objection to Dr. Ferguson visiting the district infected with the cattle disease.

The Secretary stated that since forwarding the Society's resolution to the Government he had heard that Dr. Ferguson was removed from town to the Anna Regina district, and also that the disease appeared to be dying out.

It was agreed to allow the matter to remain in abeyance for the present.

Mr. T. S. Hargreaves gave notice of motion as follows:—

“That smoking be permitted in the west gallery attached to the Reading Room.”

Mr. W. T. Binnie gave notice of motion as follows:—

I will move at the next meeting of this Society—that with the view of working a system of half times in Primary Schools, divided between ordinary studies and agricultural technical education, the managers

of Schools throughout this Colony be approached by circular requesting replies to the following queries:—

1st. Is it practicable to teach primary lessons on agriculture to children attending the schools under your charge?

2nd. Is there a Primer detailing the methods of and time for tilling the soil, for planting and weeding, and for reaping the various provision crops in general cultivation?

3rd. Is it practicable for children to attend school on three days of the week, and to work under the charge of a pupil teacher on a provision or sugar estate, during two days of the week, say Thursday and Friday?

Also in the furtherance of this object, I move that a committee be appointed to ask the Inspector of Schools, to give this Society the benefit of his experience, and his views on all the foregoing queries; also to issue the circulars, collate replies and report progress within a specified time.

W. T. BINNIE.

The Secretary read a letter from the Government, which had been referred to the General Meeting by the Chairman of the Exposition Committee. This covered a Circular from the U.S. Department of State, referring to the World's Congresses at Chicago, and asking that persons might be delegated by the Colony to attend these.

The representatives of the newspapers were asked to publish the information.

The President stated that in speaking of papers at the meeting of the Agricultural Committee on Tuesday previous, he said that a letter had been written to Mr. Robert Allan asking him for a paper on sugar engineering. Mr. Allan had written to say that no such application had been made to him, so he (the President) presumed it was mislaid, for which he was sorry.

The meeting then terminated.

Meeting held on the 9th April.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 9 members present.

Elections.—*Member*: Mr. W. H. Parratt.

Associates: Messrs S. K. Williams, S. A. Morgan, H. A. Niles, T. Boucher Reid, Frank A. Le Gall, Matthias De Souza, W. H. Grimshaw, C. H. Moore, Michael Farrahar, H. C. Bayley and F. Burke.

Mr. W. T. Binnie brought forward his motion of which due notice had been given, that a Committee be appointed to enquire into the possibility of introducing agricultural education into primary schools. He believed that education in practical agriculture was essential to the well-being of the present cultivator. By its means he would be able to get the largest possible return from his land, and help to supply the colony with cheaper provisions.

Mr. Blair laid over a copy of Nicholl's "Tropical Agriculture" which he said was in use as a text-book.

As the motion was not seconded, it therefore fell through.

Mr. Hargreaves asked that his motion to have smoking allowed in a part of the Reading Room be postponed to a fuller meeting, to which no objection was made.

The following letter from Mr. Quelch, Commissioner to the Columbian Exposition was read, as also a similar letter to the Government giving an account of his progress to March 7th, in preparing for the exhibits, which had not then arrived. These were taken for notification.

British Guiana Commission,

World's Columbian Exposition,

Chicago, March 7th, 1893.

L. M. Hill, Esq., Secretary,
R. A. and C. Society.

Dear Sir,—It may have seemed curious to the Society that I have not written earlier, but it appeared to me wiser to wait until my arrival

in Chicago, and after I had seen somewhat of things in general, so as to have something definite to communicate. I wanted also to be able to state that our exhibits had arrived: but as up to the present they have not come to hand, and as time slips away very quickly, it seems better after all to send if only a short letter to let you know how matters have been arranged, and what is going on. Another matter that delayed my writing to you officially was that Prof. Putnam, the Chief of the Department of Ethnology, has from day to day promised to let me have a line stating that the Exposition authorities would bear all expenses in connection with the board and lodging of whatever Indians were sent up during the time that they were on Exhibition in Chicago. I have his definite verbal statement before many witnesses to that effect, but I told him I should like to have a written statement, so that our people in British Guiana might feel safe in the matter. He is however so busy that he has not yet written, tho' he has shewn me a draft of the letter, which no doubt, will reach me in a day or two.

In order that the Society and the Exhibition Committee may be in possession of the whole, I had perhaps better recapitulate my movements from the beginning—I may state that I have already written to report to the Government the substance of what I am here stating.

On arriving in Trinidad, I found the s.s. Alps starting within a few days for New York, and as by telegram to Barbados, I found that it was uncertain what steamers there would be there even after the time fixed for the departure of the Alps, I took passage from Trinidad, and reached New York two days before the Taymouth Castle with our exhibits was due at St. John's.

In New York, I made arrangements with Maitland and Phelps & Co., as to the charge of our funds so that I could draw on them by cheque, as Commissioner for British Guiana, wherever I might be: saw Messrs. Seibreicht and Wadley, the New York and Trinidad Florists, and made preliminary arrangements for some plants for decorative purposes; and spent some time in purchasing a few items of clothing, etc., for the Indian with me, rendered necessary by the very severe weather which prevailed when we landed. As an instance of the care to be exercised I might state that in Chicago when we arrived, the temperature was 52 degs. below freezing point, and that three days after there was the heaviest fall of snow which had been known since 1885.

From New York, I went to Boston where a good deal of our taxidermic work is being done by the Frank Blake Webster Company and I

examined the work at the workshop a little way out of Boston and made a preliminary payment in terms of our previous agreement. I also saw Messrs. Rockwell and Churchill and made arrangements that they should publish our catalogue, in a similar style to the handbook which they had issued for us already.

Returning to New York, I started for Chicago, via Washington, where Mr. W. E. Curtis, the Chief of our section, the Latin-American Department, was then located; and through his kindness, my work in Chicago has been considerably simplified, since Mr. Welles, who had visited the Colony in the interests of the Fair, was told off to take me round and put me in touch with the various officers of the Exhibition.

So far everything has gone all right; and the Exhibition authorities have done all that could be desired to help in every way possible. Considerable pressure was brought to bear on me to split up our exhibits, and to place the mining and forestry exhibits in their appropriate buildings; but I pointed out that this would be against all our previous efforts and would destroy whatever interest there would be in our small show. There was of course every courtesy in the requests made; though the authorities are of opinion that as regards the advertisement of the Colony, it was a decided mistake on our part not to make a show, however small, in all the great buildings. From this point of view, no doubt it would have been wiser to concentrate our efforts in making a good show in sugars, rum, and molasses in the Agricultural Building, gold in the Mining, woods, etc., in the Forestry, and Indian things in the Ethnological: but it is too late now to correct it. Our main exhibit will of course be in our space in the Agricultural Building, which I have got increased in the façade from 48 to 50½ feet. The native Indian huts will be built on the shores of the lake, and will be inhabited by the natives themselves when they come—the ethnological collection will be shown (space 39 x 16) in the special building close to the native peoples, the whole being not far from the Agricultural Building. It was quite out of the question to have these close to our main court: there was no place that could thus be utilised. The gold digging bateau and one corial and woodskin I have placed in the Transportation Building in a space 45 x 10, in a very favourable location granted for the purpose; so that these will serve as an advertisement in this main building. I am extremely sorry that we cannot put in an appearance in the Mining and Forestry Buildings, for as the authorities say, since these buildings are specially devoted to such

exhibits from all parts of the world, the people who are interested in these matters will go to them to see what opportunities there are for development and trade in these special departments ; and we are thus depriving ourselves of the most powerful chances of advertising both our mineral industry and our timbers. As I have stated, our things have not yet come to hand, though the Exhibition authorities are advised by Messrs. Schofield & Co., that the exhibits were sent off on the 18th ult., from St. John's, N.B. No doubt these have been delayed by the blocking of the line by snow. There have been very heavy falls of snow, which has had a very destructive effect on the glass roofs of the enormous Fair buildings, breaking the glass through in many places in the depressed parts. I am wondering what effect the frost, severe as it has been, will have had on our things in glass bottles—the more so that the entire shipment of wine, some hundreds of bottles, from New South Wales, were ruined by the heavy frost, owing to the breaking up of the bottles. As our things will be meeting in Canada even more severe weather than has obtained down here, I am afraid the result will be very disastrous.

The Fair buildings and grounds are in an utter state of unpreparedness ; and owing to the most unfavourable weather, but little can be done rapidly. Still so much has been accomplished since the inception of the scheme, that there is little doubt that the remaining seven weeks will put things in a state of readiness for the 1st of May. Though fit for opening by that date, it is certain the Fair will not be completely ready, and many weeks' work will have to be done ere that is settled. Added to the unfavourable weather which has prevailed and still hampers all work, there is an impending strike in the railway service which seems hardly likely to be averted, and this will be the most serious calamity, since exhibits from all parts of the world are just coming in. Added to this is the contemplated strike among carpenters, which again will paralyze all installation of exhibits.

The long delay in the arrival of our exhibits has considerably bothered one. An enormous amount of work has to be done, in fact, all the work has yet to be done, on our timbers and logs. Nothing sent to the ground is allowed to go out, so that many things left to be done in Chicago like rice-cleaning, etc., will have to be left undone. Nearly every exhibitor is putting up a pavilion in the several large buildings ; and I am planning our logs of timber to be arranged round the Court so as to form a sort of skeleton pavilion. This will require a lot of planing and polishing, and time is getting short. More than

this, these large logs present a very difficult problem for installation. The floor of the building is 8 feet above the ground, and the logs will have to be run through the floor and blocked on the ground leaving 12 feet projecting. The upper 6 feet of this I shall have to get polished to make some sort of show against the elaborate structures being put up around. There are 26 logs and 5 palm stems and the letter wood logs to be treated like this; while just where a line of them must go, two pipes run under the floor which will cause additional sawing of the logs to avoid them. The delay also is very awkward in view of the catalogue. I have only very incomplete lists from Mr. Rodway, and I was trusting to having the things out soon, so as to be able to put the catalogue together; and meantime the Fair authorities are asking for Official lists. Other things which were to be sent on, I cannot of course do anything about—so that my task is neither pleasant nor easy. Have any other things been sent on? I should like lists soon for cataloguing. Nothing can come in after April 10th; and if things are left till then they cannot be included in the catalogue—at any rate not in the Official Catalogue.

Meantime, I have laid down the platform which by regulations must be made in the Court; and I have workmen cutting spaces in the floor to take the logs after they have been dressed, and they are also strengthening the floor where main supports have to be cut through.

About the Indians, I will write again soon in more detail. Anyhow, Prof. Putnam wishes to get men and women of different tribes if possible, who will consent to appear in their native costumes—not the dressed and semi-civilised examples, and also those who are able to carry out some trade such as hammock-making, pottery, baskets, etc. He would thus like them to come provided with cotton, mucra, bamboo and reeds for arrows, bow sticks, and the special clay in barrels as used for pots and goglets, so that they might have material to work with. Their board and lodging will be provided by the authorities.

The weather has been simply awful—constant changes from intense cold to milder, with rain, sleet and snow alternating; while underfoot slush and mud appal one along the lines of traffic. Just outside the Fair grounds and inside, it is terrible walking; and cabbings has to be very frequently resorted to to get along. I have not been ill, but upset, and not feeling "fit," still I am better than I was, and considering the kind of weather, that is something. The Indian also is fairly well.

Very faithfully yours,—J. J. QUELCH.

The thanks of the Society were accorded to Mr. C. Bromley for a copy of the Royal Kalendar for 1810.

The meeting then terminated,

Meeting held on the 18th May.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 24 members present.

Electi^ons.—*Member*: Mr. Jorge Camacho.

Associates: Messrs. H. L. Bayrho^fffer, Cecil Farrar, Harry Moore, B. M. Chatterjee and T. H. Greathead.

The Honorary Treasurer laid over the list of Members and Associates whose names had been struck off for non-payment of subscriptions, and asked that it be posted in the Reading Room in accordance with the Bye-law.

The President then said that before proceeding farther with the order of business he would mention the death of the Honourable William Samuel Turner, a valued member and Director of the Society. Without any formal notice of motion he would ask leave to move the following resolution:—

“The Royal Agricultural and Commercial Society of British Guiana in general meeting assembled, desire to place on record their sense of the great loss which the Society has sustained by the death of the Hon. William Samuel Turner, Chief Commissary and lately acting Auditor-General of the colony. As a member of the Society, Mr. Turner for many years took a deep interest in its welfare, and as a Managing Director for several years, he cheerfully rendered it services which, with all his services to the Government, to public bodies and to private persons, were characterised in an uncommon degree, by single-heartedness, energy, ability and practical sagacity.

That the Society direct a copy of this resolution be forwarded to Mrs. Turner.”

The President continuing, said that in moving this resolution he did not think it necessary to say very many words. Tributes to Mr. Turner's worth had been paid on every hand. These had special reference to his great efficiency and zeal as a public servant. He made bold to say that the colony had never had—and probably never would have—a more capable public servant than Mr. Turner. His Excellency the Lieutenant-Governor paid a very feeling tribute to his worth at a recent sitting of the Court of Policy. Mr. Turner was of opinion that in his position he was obliged to advance the interests of the colony. He thought they as a Society were bound to recognise his very efficient and valuable services as a useful member as well as a Managing Director. It would be many a day before they got a man of such integrity and great ability with such entire devotion to duty and the interest of the colony. He thought the resolution would meet with the approval of every member of the Society.

Revd. W. B. Ritchie seconded, speaking also of the great loss of the colony and the Society by the death of Mr. Turner. The resolution was carried unanimously.

Hon. N. Darnell Davis called attention to the following telegram, published in the colony the day previous:—

“Further despatches from Washington state that the Supreme Court has declared valid the law deporting the Chinese from the United States. The number that will come under the law is estimated at 100,000.”

The reason why he mentioned this matter was the possibility of these people being induced to come here. Some were men of considerable means, others were

miners or workers on railroads. They were an industrious class of people and generally knew something of the English language. He would ask whether in the interest of the colony the Directors of the Society might not consider what steps could be taken to draw the attention of the Chinese, through the regular channels—the Government here and the Chinese Minister at Washington—to the fact that there was room for them in British Guiana. He did not think it necessary to make a formal motion but would simply suggest the matter to the Directors.

The President said the Directors would take it into consideration.

Mr. T. S. Hargreaves brought forward his motion, of which due notice had been given, "That smoking be permitted in the west gallery attached to the Reading Room."

Mr. J. Wood Davis said he rose to a point of order. He did not see in the Act of Incorporation of the Society that there was any provision for a smoking room, although mention was made of an exchange room, reading room, museum, model room and library. Again, he thought that in accordance with the Bye-laws it would be necessary to rescind Rule 8, Schedule B, before bringing a motion of this description. He asked for a ruling on these points.

The President said it appeared to him that the rule against smoking was one of those formulated by the Directors. There was no special mode of procedure set down in regard to these, but he presumed they came under the same regulation as Bye-laws, which by Sec. 1. Chap. XV required that when an alteration was pro-

posed "the Bye-law to be altered, the proposed alteration and the exact words of any proposed Bye-law shall be clearly specified in the notice of any such motion." He thought it would be necessary to bring in a motion to rescind rule 8 as far as to allow smoking in the gallery. The result, if such a motion were passed would be to make it incumbent on the Board of Directors to give effect to it. He must hold with Mr. Davis's point of order, and rule that the present motion did not formally comply with the requirements relating to the alteration of the Rules of the Society. Mr. Hargreaves could give notice of motion in accordance with this ruling if he thought fit.

Mr. Hargreaves said he had already come to two meetings in connection with this matter, at considerable inconvenience to himself. He had been asked by other members to bring it forward; it was not selfishness on his part. He did not want to have all his trouble over again.

The Secretary read the following letter from Mr. Quelch, Commissioner to the World's Columbian Exposition.

Chicago, April 10th, 1893.

L. M. HILL, Esq., Hon. Sec.,
R. A. and C. Society.

Dear Sir,—I have waited to write till I had a fairly good budget to send you. Our exhibits, the first lot I refer to, did not come to hand till about the 22nd of March, and it was not till some days after that I was able to get hold of them to start work. Those great logs of timber have given me an enormous amount of trouble—how much I can hardly explain. They were most awkward to handle owing to the location of our space, and they blocked up the entire gang-way. Relying on the measurements given for them, I had had the flooring cut to size to let them drop down vertically to the ground, which is 8 feet

below the floor of the building, and I had had carpenters at work securing and blocking the parts of the floor cut through. When the logs came to be measured, scarcely one agreed with the list, and the floor had in nearly every case to be re-cut. I had to get them cut to uniform lengths; and as they had travelled from New Brunswick on the open cars, and had been practically covered with snow for more than a month, they were sodden, and the sap wood as black as could be. This necessitated a considerable amount of planing and adzing—and labour of this kind is very dear here, costing as much as from 43 to 50 cents per hour. However, it is all over now; and I have them in place, projecting 12 feet above the floor, and well secured by pitch pine blocks. All the larger countries were building elaborate pavilions in the different sections, and as our neighbours in the Agricultural were doing this, I judged it wiser to place our logs around the borders of our space and thus make a sort of log wall. I have connected the tops of them by boarding and to this I am hanging the views of Guiana. The logs have been touched over with oil and they thus show out fairly well. The vat I have put on the top of four of them in a square. The panels are in place, and are arranged on the blank wall of the building 8 feet from the ground, where they can be seen from good distances away. The colony arms and flags are placed above these; and the space below will be utilised for photographs and pictures and flat tanned skins of mammals. The animals I sent to Boston to be prepared are finished, and they look extremely nice and will form a very attractive feature. The second lot of things sent have come to hand; but I am afraid there is a good deal of breakage as there was in the first lot—judging by the sound inside and the appearance of the outside of the boxes sticky with syrup in many cases. The views of Guiana from the Museum were awful. Nearly every frame was broken, several of the glasses smashed and most of the glasses and paintings broken away from the frames. The worst of it is that nothing can be sent out of the grounds, so that it is awkward repairing many things. I have show-cases already sent in, and am just seeing about their being put up and counters, etc., made. Few things are yet unpacked owing to the fact that until the big timbers were put up, it was hardly possible to do anything else, and besides it is not long ago that the roof was repaired so as to be secure. Now, however, all being well, things can be hurried on very rapidly. In the Agricultural Building we shall have everything in place by May 1st;

though as the Ethnological building is not yet finished, that part of our collection will have to wait. Very few of the sections will be ready for the opening. Spain, Cuba, Brazil, etc., around us, have not yet finished putting up their pavilions, in fact, have only just begun; and they cannot possibly be ready until well into June. The worst of it is that dust and dirt from their building operations will flood our space while we are in shape. The Fair people have had terrible weather to contend with; strikes have also troubled them; while many foreign exhibitors have not yet got their things here. Nothing of the Russian exhibits has yet come, so the Exhibition authorities can hardly be blamed for things being behind. Still there will be lots to be seen on the opening day.

I am glad to see the bitters sent by Max & Coronel, but surprised that Gaskin has not sent any chocolate exhibit. After what was promised it is rather shabby.

I have been very surprised to find that nothing will be allowed to be sold during the exhibition of things brought up for that purpose. I brought some of our bright birds, thinking that I should be able to sell the surplus advantageously during the Fair—but it is not allowed. The regulations are stringent even on the sale of section catalogues. If any foreign Commission sells their catalogue or hand book, 50 per cent. of the gross receipts must be paid to the Fair management. Conkey & Co. have offered to all countries, and their terms have been generally accepted, to sell such catalogues on the exhibition and to distribute them broadcast, and to give to each Commission 25 per cent. of the gross receipts, they take 25 per cent. and the Fair 50 per cent. We shall thus realise but little on the expenditure over the handbook of the colony, got up for the exhibition.

As regards the native Indians, their board will be provided, but they are expected to bring barrels of clay for making pottery; cotton for making hammocks; bamboos and reeds for making arrows; and mucro, etc., for baskets. Prof. Putnam says the Indians will be allowed to sell all such things, and this would cover their board. He wants a representative pottery-maker, hammock-maker, basket-maker, and arrow-maker, etc., and they must bring plenty of material with them besides their ordinary living things—and things they carry about with them from place to place. As long as there are about two distinct tribes represented, he does not mind how many there are of each—the more of one or two tribes the better, since they would thus be better able to

illustrate native games, etc. A group of Macusis would be particularly desirable. One condition he makes is that they must be willing to appear in the grounds in their *native costume*, lap or queyu and necklace only. I will write again soon. The Indian is well, and useful to me. Since the first three weeks here I have been suffering from severe coughs and colds, ague and fever, and now from a swollen neck—swollen glands. It makes one feel very unfit for work, and considerably handicaps one when the weather is bad; but I combine cabs with train and have been progressing at any rate as well as at any other place. The result I trust will be quite satisfactory.

I am, very truly yours,

J. J. QUELCH.

The Secretary stated that in a private letter to Mr. Conyers, Mr. Quelch said the British Guiana Court would be one of the few that would be finished at the opening of the Exposition.

The meeting then terminated.

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Meeting held on June 15.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 11 members present.

Elections.—*Members:* Messrs. A. Evelyn and H. W. Sconce.

Associates: Messrs. Walter Weber, J. A. Rogers, Edward Hall, John Mansfield, and F. H. Collier.

The Secretary read the following letter from Mrs. Turner.

Lamaha House,
Georgetown, 24th May, 1893.

Dear Sir,—I have received your letter of the 19th inst., enclosing a resolution from the Royal Agricultural and Commercial Society on the great loss I have sustained by the death of my dear husband, for which I beg to tender my sincere and heartfelt thanks.

It is a great comfort to me in my sad distress to know that my

husband's services have been appreciated by the Royal Agricultural and Commercial Society.

I remain, Dear Sir,
Yours truly,

EDITH TURNER.

L. M. HILL, Esq.,
Hony. Secretary.

The President informed the meeting that to fill the vacancy in the Managing Directorate caused by the lamented death of the Hon. W. S. Turner, Mr. George Garnett had been elected, and that the place left vacant by the removal of Mr. Garnett had been filled by the Hon. E. C. Luard.

The President also reported that the Government had granted the sum of \$250, and the Directors an equal amount, for the purpose of holding an Horticultural Show, for which the Mayor and Town Council had given to the Society permission to use the Promenade Gardens.

The following report from the Committee of Correspondence was read :—

Georgetown, June 15th, 1893.

To the President and Members
of the R. A. and C. Society.

Gentlemen,—By direction of the Committee of Correspondence I have the honour to report as follows :—

Having been informed by the Directors of the Society that the Government had granted \$250 for an Horticultural Show, that the Society had guaranteed an equal sum, and that the Mayor and Town Council had given permission to use the Promenade Gardens for the purpose, the Committee met on the 12th inst., to make arrangements for carrying out the proposed work. Certain preliminaries having been gone through the meeting adjourned to the 15th, when a Prize List was agreed to and a hand-bill drawn up, of which I lay over a proof. As will be seen from this the Show is to be held on Friday, 25th August, between the hours of 12.30 and 6.30 in the afternoon and 7.30 to 10 in the evening. Three hundred dollars are offered in prizes and they

hope by this and the adjuncts of a band of music and illuminations in the evening to make it a success.

I have, &c.,

J. RODWAY,

Acting Secretary.

The Secretary also read the following report from the Columbian Exposition Committee:—

Georgetown, June 15th, 1893.

To the President and Members
of the R. A. and C. Society.

Gentlemen,—By direction of Columbian Exposition General Committee, I have the honour to report that at a meeting held on the 24th of May, they decided not to send a party of Indians to Chicago, as at first proposed. The Revd. Jos. Keelan, who it was understood would be at liberty in June, had written to say he would not be able to procure them in time nor did he anticipate being able to accompany them. After deliberation it was agreed, “that it would not be desirable, under the circumstances, to send the Indians, as, what with the difficulty of bringing them together, in procuring a suitable person to take charge of them, and the expense, the result could hardly be satisfactory.”

I have, &c.,

J. RODWAY,

Secretary, Exposition Committee.

An extract from a letter of Mr. J. L. Ohlson, Secretary of the West India Committee, London, forwarded through Mr. A. Summerson, was also read. He called attention to the unsatisfactory state of the British Guiana Exhibit at the Imperial Institute.

The President stated, in regard to this matter, that the Assistant Secretary had called his attention to the Government vote for the Imperial Institute and suggested that he should move the Governor (who was Chairman of the Committee) in the matter. Owing to pressure of business this had not been done, but since Mr. Ohlson had also drawn attention to the matter, he would speak to

the Governor and arrange for a meeting of the Institute Committee.

Revd. W. B. Ritchie said that when at home last year he had spent some time in different Museums and took especial care to note whether British Guiana was well represented. In the Scottish Industrial Exhibition, and even the British Museum, the colony was very poorly shown, and he was of opinion that something better should be done at the Imperial Institute.

The Secretary was directed to thank Mr. Ohlson for his letter and state that the matter would receive attention.

The thanks of the Society were presented to His Honor N. Atkinson for a copy of Bryant's Account of the Slave Insurrection on the East Coast in 1823.

Mr. Vyle suggested that fuller intimation of the business of the general meetings should be published in the newspapers, as it might have the effect of drawing together larger meetings.

The President stated that the matter was connected with the cost of advertisements, and the Secretary stated the full agenda could not always be known until the day of meeting.

Mr. Vyle said the papers were always glad to get paragraphs, which need not cost anything, and the President said they would see if Mr. Vyle's suggestion could be carried out.

The meeting then terminated,

Popular Lectures.

"THE NILE, PYRAMIDS, AND SPHINX."

*Delivered on Friday, March 3rd, 1893, by George Bagot Steele,
Civil Engineer.*



HE lecturer gave an interesting account of some of his experiences in Egypt. By comparing the size of the pyramids with other well-known structures here and in other parts of the world he brought their immensity home to the minds of his audience.

"THE BRITISH CABINET: ITS HISTORY, CONSTRUCTION AND FUNCTIONS."

Delivered on Tuesday, March 28th, 1893, by Allan E. Messer, B.A.

The lecturer gave a full account of the origin of the Cabinet in Privy Council, commencing with the *Witan* of the Saxons, connecting this with the "Great Council" of the Normans and bringing it down to the present day. Special attention was paid to the Colonial Office and the Secretary of State for the Colonies, which the lecturer considered were developments of the "Council for Trade and Plantations" of the time of Charles II.

The First Two Years of the "Society."

By the Editor.

N view of the fact that the 18th of March, 1894, will be the fiftieth anniversary of the formation of the Royal Agricultural and Commercial Society, a short account of its establishment may be appropriately presented in this issue of the Society's Journal. That it has at least tried to do something for the colony, its records and the newspapers of the last half century show indubitably, while many experiments which have been tried without good results make their repetition needless for the future. Unfortunately, however, the records of the early years only exist in a form which is virtually inaccessible except to very few, and consequently people are apt to think that the Society has been sleeping rather than wide awake. It is quite true that more might have been done to develop the agricultural resources and commercial interests of the colony, but, taken as a whole, the Society can look back with pride on its work of the past, and with hope for that of the future.

By its exertions the colony has been provided with a good museum and library, a reading room with such a collection of newspapers and magazines as is rarely seen even in places of greater importance than Georgetown, a journal which records the Society's proceedings as well as matters of interest connected with the development and resources of the country and its history, and which occupies a place which is to some extent at least a scientific and literary centre. That the Society is not *altogether* an agri-

cultural or commercial association is a matter for congratulation, as from its comprehension of virtually everything that makes for the welfare of the colony it is a public rather than a particular benefit. It was projected on those lines, and it may be confidently stated that there is no department of its work inconsistent with the objects of Mr. W. H. CAMPBELL and the other gentlemen who took such a great interest in its projection. There is, however, plenty of room for development in all its departments, but not of one at the expense of the others.

On the 1st of February, 1844, a "Prospectus and Proposed Laws and Regulations of the Agricultural and Commercial Society of British Guiana" was published in the colony and posted to most of the influential gentlemen in England connected with Demerara. The Prospectus ran as follows:—"Several gentlemen conceiving that a favourable opportunity is presented for establishing a Society under the above name, having for its object the advancement of the Agricultural and Commercial interests of this colony—and being satisfied that such an Institution, if based on sound principles and well-conducted, would meet with the cordial support of the Planters, Merchants, and other inhabitants of the Colony, it is proposed with a view to the formation of such a Society:—

1. That persons desirous of becoming members of the Society shall give their names as Subscribers to Messrs. WILLIAM BRAND and W. H. CAMPBELL, who have consented to act as Interim Secretaries.

2. That when fifty or more subscribers of twenty dollars each shall have been obtained, the Interim Secretaries shall call a meeting of such subscribers in order to

constitute the Society, adopt or frame a code of Laws and Regulations, and elect Office-bearers.

3. That each of the said Subscribers shall be furnished with a printed copy of the "Proposed Laws and Regulations" of the Society, with a view to his approving of the same, or suggesting amendments thereon or additions thereto at a meeting to be called for that purpose.

The "Proposed Laws," of which the Society possesses the original draft, are in the handwriting of Mr. CAMPBELL, and appear to have been framed on those of the Botanical Society of Edinburgh, in the establishment of which Mr. CAMPBELL took an active part.

The prospectus was well received, and on the 9th of March, 1844, an advertisement appeared in the *Royal Gazette* requesting the subscribers to the proposed Agricultural and Commercial Society to meet on Monday, the 18th, at the Old Court House, at two o'clock in the afternoon, to adopt the necessary measures for constituting the Society. Accordingly about forty "highly respectable" persons, under the chairmanship of Sir MICHAEL M'TURK, met and passed a series of resolutions, constituting those present and the other subscribers to the prospectus as original members—appointing a committee of ten to frame and arrange the rules—agreeing to an application to the Legislature for a grant of the Old Colonial Hospital building—and fixing the 12th of April for another meeting. The Governor of the colony for the time being was nominated as Patron, and the Committee consisted of :—the Hons. Sir M. MCTURK and WM. ARRINDELL, Messrs. D. M'DONALD, A. MACRAE, (Dr.) WM. RANKEN, CHAS. BENJAMIN, W. BRUCE

FERGUSON, (Dr.) D. BLAIR, CHAS. CONYERS, and GEORGE H. LOXDALE.

At the first general meeting on the 12th of April, the first election of Office-bearers took place, Sir MICHAEL M'TURK being chosen President, Hon. WILLIAM ARRINDELL and Mr. CHARLES CONYERS, Vice-Presidents, Mr. W. H. CAMPBELL, Secretary, and Mr. WM. BRAND, Treasurer. Among the first arrangements made by the General Committee (answering to the present Board of Directors) were those for a Reading Room, and it will be interesting to note some of the papers ordered for the tables. Comparatively few of them are in existence now, and many of the remainder have been given up, so that with the exception of the *Times*, *Athenæum*, *Spectator*, *Punch*, and the *New York Herald*, none of them are to be seen in the Reading Room to-day. The list was fairly comprehensive, including the *Gazettes* of London, Dublin, Edinburgh, and Amsterdam, the *Evening Mail*, *Evening Chronicle*, *St. James's Chronicle*, *English Chronicle*, *Liverpool Mail*, *Dublin Evening Mail*, *Bombay Mail*, *Nation*, *John Bull*, *Glasgow Courier*, and a great many others. The *European Mail* of to-day was represented by the *Colonial Gazette* and *Willmer and Smith's European Times*, while agriculture received such attention that the list included the *Mark Lane Express*, *Farmers' Journal*, *New Farmers' Journal*, and the Proceedings of the English and Highland Agricultural Societies. Among the Magazines were *Blackwood's*, *Fraser's*, *Colburn's*, *Ainsworth's*, *Chambers' Journal* and *Bentley's Miscellany*, besides a few others that are still in existence and many which have long been discontinued. It will thus be seen that the Reading Room

was well provided for from the very first. Several donations from the Governor and others in the first few months of its existence went to form the nucleus of a Library and Museum. Among the first of these were SCHOMBURGK'S "Views" and "Description," from the author, together with his collection of native woods.

The Society's labours during the first year of its existence were perhaps of more importance than those of any single year afterwards. Its officers were very energetic and its able Secretary must have done an enormous amount of work. Among the Agricultural matters considered were ; ploughing, covered drains, applying the power of savannah water to effectuate drainage, steam cultivation, soils, manufacturing of sugar, hydraulic and other presses, steam engines, second pressing of megass, maceration, and boiling by steam. Commerce was assisted by registers detailing imports and exports, and arrivals and departures of vessels, with their cargoes, which statistics had hitherto not been available by the public. Then there were local matters such as the journal of the Postholder of Essequibo in an excursion to the source of the Macouria creek to discover a means of communication between Demerara and Essequibo, communications in regard to pasture grasses, and a paper on the *Spigelia* or Pink Root by Dr. BONYUN.

In the report laid over at the first anniversary meeting, the General Committee said that the Society had been such a short time in active operation that it was scarcely to be expected that they could give much information as to the practical results of the several experiments then in progress. The Society might, however, take some credit for having given a stimulus to

exertion for these desirable ends. Many of its members and associates, prompted by a laudable desire to see the colony flourish, and by the aid of science to compensate in some degree for the scarcity of manual labour, had turned their attention to the nature of our soils and improved methods of drainage. To overcome the obstacles to a free exit of the surface water several plantations on the East and West Coast of Demerara had been obliged to have recourse to machinery. It frequently happened that a great deal of labour, which in many cases it was very difficult or almost impossible to procure, was required to keep open the drainage on the coasts, and from the want of such labour serious injury was often caused to the cultivation. On those estates where steam engines had been erected drainage had been successfully accomplished and the proprietors of other plantations were then taking measures for securing to themselves like advantages. It appeared to the Committee that if several adjoining estates were to unite in paying for draining engines of greater power, better results could be obtained at less cost and the increased wash of the large stream of water be more effectual in removing obstructions.

The great advantages derived from underground drainage in the Mother Country were not likely to be obtained in this colony, for besides the want of a sufficient fall of the land, it was doubtful whether the water would percolate quickly enough to prevent the canes being chilled. The experiment was however being tried and would be duly reported on.* They were aware of

* This was done at La Penitence and proved a failure on account of the water flowing back into the pipes and depositing until they were obstructed. Even with a pumping engine these could not be kept clear, as the water never ran off as fast as it fell.

the difference of opinion on this matter and conceived it to be better "for the present" to retain the system of open drainage and to endeavour to procure by steam power some means of ploughing across the beds without injury to the small drains. They had had a communication from Mr. A. MACRAE who proposed to make the beds level by draining with tiles or brushwood so that the plough could be used. They were, however, of opinion that it would be better to devise a plan of working the fields as they were.* The Rev. Mr. FORBES, (a Scotch Church minister) of Berbice, suggested a method of draining by means of savannah water, but the General Committee could not report favourably on this for want of plans and diagrams.

It was represented as a mistake on the part of friends in the Mother Country to suppose that our planters here were wedded to the system of turning up the land by manual labour, and that they voluntarily discarded the plough. Our soils generally, were of too tenacious and stiff a nature to admit of the use of the plough except by the aid of steam, and our unavoidable system of open drains presented also a great impediment. Attempts hitherto made were shown not to have been attended with much success, although it was to be hoped machinery to work the plough might be obtained through the means which some of the scientific members were devising and the encouragement of the Legislature. They had received a communication from Mr. JOSEPH NORTON, of Berbice, giving the results of his use

* It may be well to note that the present system, which is the same as that of fifty years ago, raises the plants to a higher level, while tile drainage would make the surface at least a foot lower and be sure to injure them in very wet weather.

of the plough by means of horse power on Pln. *Philadelphia*. There could be no doubt that the most beneficial effects would be produced by this method of turning up the land, but the expense of horse power operated as a barrier, as Mr. NORTON confessed that in his short experiments he killed no fewer than nine horses, whose deaths were, no doubt, occasioned by the stiff nature of the soil, notwithstanding that this was of a lighter description than that of the generality of estates in the colony. The plough, impelled by steam power, and the grape or spade were, in their opinion, the most likely implements to be applied successfully.

From the analyses of our soils it appeared that good drainage was indispensable to insure the productiveness of the land. This object the Committee recommended in the strongest manner to be kept steadily in view. The application of any description of manure could not be expected to have the effects desired unless this grand object were rendered as perfect as the local circumstances of plantations would admit. It would be seen also from analyses that these contained but a very small portion of lime, which was considered an essential requisite on all lands subjected as ours were to systematic cropping for a series of years without the advantage of a return of the megass to renovate them. Lime, vegetable ashes and shells, were therefore strongly recommended as manures in accordance with the suggestions of the analysts. These had been acted upon by several planters during the previous year, who would no doubt, in due time, reap benefit from their enterprise, and this would be a subject for congratulation on the part of the Society at the next anniversary meeting.

Guano had been imported to a considerable extent and applied to fields on several plantations, but they were not yet aware of the results although report spoke favourably of the green and luxuriant appearance of the canes. It was much to be feared however that unless the desideratum of good drainage had been kept in view the canes would prove deficient in richness, and therefore the manure could not be said to have had a fair trial. There were divers opinions as to the proper mode of application; some parties contended that it ought to be worked into the soil when turned up, others that the ground should be merely scratched at the roots of the canes and the manure applied in very small quantities when the plants had attained the age of four to six months, a third class contended that it should be mixed with ashes in the proportion of one to three, while lastly, some were of opinion that it should be mixed with water and sprinkled on the roots. Time alone could prove which was the proper method, and it was to be hoped that the Society would be favoured with information as to the result. The Society had been favoured with a communication from Dr. BLAIR on the *Metayer* system as introduced on Pln. *Schoon Ord*; it had also been partly applied on *Greenwich Park, Glasgow* and other estates. It was a remarkable fact however that on the first of these properties the farmers were not the labourers who had been on the plantation at the end of the apprenticeship but people from the East Coast. Time alone would show whether the system could be permanently relied upon. So far it was proceeding so satisfactorily to both landlord and tenant as to afford great hopes.

The most important object to the planter, next to increasing the produce of his land was improvement in the manufacture of sugar, and it was gratifying to them to be able to report that most of the planters were keeping this object in view. Recent events would, it was expected, stimulate them to greater exertions, and those estates which had already erected or were then erecting vacuum pans would no doubt find it to their advantage to persevere in manufacturing sugar by this method. The application of steam to the evaporation of cane juice was understood beyond a doubt to be attended with success, and by this means a great deal of the megass then used for fuel under the coppers might be returned to the fields and used to renovate the land and make it more productive. The excellent, but rather expensive apparatus of DEROSNE & CAIL, they understood was about to be introduced on one or two large estates, whose proprietors were in a position to bear the outlay.

They recommended an examination of the merits of RONALD'S (of Glasgow) Steam Chest at Pln. *Profit* which appeared to be very moderate in cost. It was only used as an auxiliary to enable an estate to make a larger quantity of sugar per day than could be produced by coppers alone, but there was little doubt that by its use a considerable saving of sugar and labour might be effected at a small cost, and the sugar was said to be improved in quality. The Society had been favoured with several communications from Mr. OSBORNE on the subject of hydraulic pressure for expressing cane juice, but they understand that this method had proved inefficient in some of the neighbouring colonies, and no one here was likely to venture on the experiment. Mr.

OSBORNE was also directing his attention to plans for ploughing and draining by steam power. Through such enterprising individuals, aided by the Consulting Engineer of the Society, Mr. JOSIAH PARKES, they might shortly expect to have this great desideratum effected by proper machinery.

It was highly gratifying to them to have to state that the weather for the past year had been most favourable, and that the crop of the colony for the year 1844 had increased by more than 3,000 hogsheads over that of the previous year, notwithstanding the great scarcity and difficulty of procuring labour. This increase, it was to be observed, had been obtained by a rise in the labour market in particular localities, but it could not be disguised that the agriculturalists were merely struggling for existence, and, making allowance for labour-saving contrivances, their distresses would continue until the void in the labour market was filled to a great extent by the introduction of immigrants, or the increase, by natural means, of the labouring population of the colony.

Among the publications received was a pamphlet by Baron VON GRIESHEIM. They deemed it necessary to say that they could not admit the correctness of most of his statements and conclusions. His condemnation of the planters was based on the supposition that labourers might have been induced immediately after the Apprenticeship to purchase land and adopt the *Metayer* system on the same estates where they were located. The extent, however, to which labourers had become freeholders was by no means a positive or certain indication that they could have been persuaded, with advantage

either to themselves or their employers, to purchase or lease land in any particular spot suggested by others and not of their own free will and judgment. Notwithstanding the probability which the subsequent conduct of the labourers would seem to throw round the contrary opinion, it might be affirmed that every practical resident in the colony at the end of the Apprenticeship was then and still satisfied that the attempt to sway the conduct of the labourer as to his home and the disposal of his labour would have proved worse than abortive, and that the subsequent time when he betook himself to the condition of a freeholder or tenant was the only time when such a change was practicable. There was another branch of the agriculture of the colony which they could not omit to mention—the cultivation of the plantain. It was with pain they had to notice the rapid spread of a disease which had hitherto baffled every attempt to arrest its progress. Whether it was attributable to some property in the soil becoming exhausted, to blight, a grub, or some inherent gangrene or disease, remained yet a problem to be solved. The Society meant to take measures by the importation of suckers from Cuba or elsewhere, where the disease was unknown, to find out whether it came from any defect in the soil or degeneracy of the plant. In the meantime it had been suggested by Dr. BLAIR and others that lime and sea shells with a dressing of salt, together with turning up of the soil, might check the spread of the disease, and they recommended these matters to the attention of growers. They could not too earnestly impress upon all the good that might result to the colony at large by rendering it as independent of farinaceous

food from foreign markets as it was formerly when plantation cultivation was in a flourishing state.

They could not report favourably on the cattle farms, for notwithstanding the vast extent and excellence of the pasture lands between Mahaica and Abary the number of tame cattle had greatly diminished as compared with that of a few years before. This had arisen in a great measure from the scarcity of labour and the difficulty in procuring cattle-minders, as well as the impoverished circumstances of many of the cattle farmers. The consequence had been that the greater portion of the herds had run wild in the savannahs aback, and even these had become reduced to a very small number by the indiscriminate system of catching and slaughtering which had been practised for some time. The difficulty in procuring cattle-minders induced many to sell their herds *en masse* to the more opulent of the butchers whose immediate interest lay in slaughtering and turning them into money, thus destroying all chance of natural increase on those farms. From information they had received it appeared that in the year 1843 fifteen per cent more cows than bulls had been slaughtered in Georgetown, while during the past year the market had to a great extent been supplied from foreign countries. Many of the cattle slaughtered in 1843, and even up to the time of the report, were procured from wild herds, and as there was great trouble in catching them with the *lasso*, no discrimination was used and young and old were alike secured as opportunity served, the result being that the younger were most frequently captured. This system appeared to them likely at no distant period to lead to the entire destruction of the

wild cattle on the savannahs, and therefore they recommended farmers to increase their tame herds and choose better locations for the pens. They were of opinion that every encouragement should be given to the introduction of cows and heifers from other countries and that only bulls and oxen should be liable to import duty. It was with much satisfaction they had seen some fine cows and heifers lately introduced from the Orinoque, a herd of which had been purchased by a gentleman connected with some cattle farms, to improve the breed and increase the number. If this were done by others as well, as they trusted would be the case, it was possible that the markets of the colony might again be well supplied by colonial graziers, otherwise it was to be feared they would long continue to be dependent on foreign supplies.

The breeding of sheep was another branch of the farmer's business which had been neglected for some time past. The necessity for dry pasturage for this description of stock, and the difficulty of procuring that since the drainage of estates converted into cattle farms had been abandoned, had occasioned the almost total neglect of sheep breeding, but if the land in the immediate neighbourhood of the projected new line of road between the Mahaica and Mahaicony rivers was cleared and pens constructed, they confidently expected that the cattle farmers would find it to their interest to recur to this once important source of revenue, and again be able to supply the markets with that description of mutton which was not surpassed in any other country in the world.

It was the wish of the Society to hold forth every encouragement consistent with its means towards improv-

ing the breed of both cattle and sheep, and they trusted that its efforts to awaken a desire for emulation would produce results beneficial to the cattle farmers as well as the colony.

As a matter of the greatest importance they had to notice that an Agricultural Chemist might soon be expected to arrive in the colony, the Legislature having placed a salary for such an officer on the estimate, together with the requisite funds for fitting up a laboratory and procuring apparatus. It was confidently expected that much benefit would be derived from the knowledge which an experienced Chemist would impart to their practical planters to aid them in their labours. They had further to notice that the Society had submitted to the Legislature a list of Premiums which it was desirous to award for improvements in agriculture, manufactures, machinery, breeding of stock and other purposes, and from the disposition manifested in furtherance of the Society's desire to be useful as a medium for the attainment of these objects, there was every reason to believe that the necessary aid would be procured.

In December previous the Society had been requested by the Governor to give answers to certain queries as to the results of Emancipation, which had been secretly circulated throughout the colony without his sanction or authority. The circulation of these queries coming to His Excellency's knowledge this was met by courting the information in an open manner so as to elicit the truth on every point. The Society gave in its replies which no doubt in time would be published. Some of these queries trenched upon matter of rather a political nature, but the Society in its replies studiously avoided all

political controversy. In the statistics necessarily involved in the answers the Society resorted to the best authorities in the colony to render them perfect in regard to the real state of British Guiana and its inhabitants of all denominations. In January the Society was requested to lend its rooms for a meeting in connection with the establishment of a railway on the East Coast, and accordingly a meeting was held on the 22nd of the following month. The proceedings of the meeting and the prospectus had been published and the subscription in the colony was in progress. Measures had at the same time been taken to obtain the co-operation of those gentlemen in Europe who were immediately connected with the prosperity of the colony. Should that desirable undertaking be carried into effect, the benefit that would result from railways must prove incalculable. A new light would dawn upon this fertile land—its ample resources would be made apparent—its natural advantages be turned to account—and it would be proved to the world at large that no bounds need be set to immigration.

To the commercial portion of the Society the monthly reports of imports had been very valuable and would become more so as the Society grew older, from their easily affording comparisons with previous years. As an appendix there would be found a table shewing as far as could be ascertained, the exports and imports of the previous ten years, which they trusted would also be found valuable. It was the intention of the Society to publish such tables annually.

They would observe that the Society's reading room was likely to afford a rational and profitable place of recreation after business hours to the numerous young men employed

in offices and stores, whose occupations engrossed their time during the day. The number of Associates on the subscription list shewed how many were anxious to avail themselves of this advantage. The attraction of the reading room would soon be increased by the formation of a library, and, as soon as funds could be raised, an Exchange immediately contiguous to Water Street.

The benefits to be derived from a regular supply of newspapers and periodicals would be much enhanced by the rule allowing a Committee formed for the purpose to distribute them to members in the country as well as in town under certain restrictions. From that regulation they confidently expected not only increased satisfaction to the members, but likewise a considerable increase in the subscription list. To facilitate the distribution of papers committees had been formed which it was hoped would prove of much benefit.

At a recent meeting it had been resolved that parties acquainted with Botany, Chemistry, and other subjects connected with Agriculture, should be invited to give lectures. The Society was greatly indebted to Dr. BONYUN, for taking the lead in this useful measure, he having already prepared several lectures on elementary Botany which he intended to bring before the Society as early as possible. It was hoped that others would also come forward in a similar manner, and that before the next anniversary meeting much valuable information would have been disseminated by this means on various subjects of general interest to the members and colonists at large.

A correspondence with kindred societies in Europe and the West Indies had been established, from which an

interchange of "Proceedings," a more extended publication of papers of general interest, and other important advantages were expected. They would request the attention of the members to the following extract from the celebrated Professor LIEBIG'S letter to the Society :—

"There cannot be a more beautiful and striking exemplification of the genuine British spirit than the disposition shewn by the most distinguished and best-informed men in the remotest parts of the great empire to form themselves into Societies, which have for their object the extension, promotion and application, for the public good, of scientific principles."

The Committee expressed their hope that this high though well-founded opinion of the genius of the nation to which they had the honour and good fortune to belong, and which had been elicited by their proceedings, would be more fully substantiated by future energy and continued stability of purpose.

Such were the main points dealt with in the first annual report, and the second showed that a lively interest in the Society's objects had been still retained. We can do no more than glance at this, as we have probably tried the patience of our readers with the first report.

The Committee said that since the first anniversary no occurrence had taken place more worthy of notice or more deserving of being esteemed as a harbinger of good, than the activity and increased energy with which everything bearing on the improvement of the agriculture, manufactures, and commerce of the colony was entertained and discussed. In producing that change the Society might with justice pride itself on having been to a considerable extent instrumental, and

the Committee hoped that this spirit of enterprise and unanimity would spread until measures of great and decided improvement should be worked out and the resources of the colony largely developed.

In regard to drainage, they said their preparations for the experiment at Pln. La Penitence were in a forward state and that the laying of tiles would commence as soon as the draining engine was erected. They attached the greatest importance to this experiment as the first step towards improved tillage, the introduction of efficient implements and cattle labour, the use of manures, and the other essentials of high cultivation and economical labour. They had received two reports on the results of different manures but could give no decided opinion in favour of guano, as a general opinion was entertained that sea-shells or lime would be better. They reported the *Metayer* system as continuing to prosper, that new machinery had been imported, that 4,859 immigrants had arrived, that there had been a drought and that it was proposed to sink a deep artesian well as an experiment. The Combined Court had not yet voted the sum for premiums, but they had hopes that this would still be done. Mr. RETEMEYER had offered, on his own account, a liberal sum for an essay on the best system of managing a plantation, and Mr. CHARLES OLIPHANT, of Edinburgh, a medal for the neatest and cleanest cottage in one district. They suggested that premiums should be offered for improved methods of making hay and keeping up pasture lands, as there was no doubt that the price of provender would thus be reduced. They had received a report on the plantain disease from Dr. BONYUN, by which it appeared

that no remedy could be found, as the seat of it was in the spiral vessels. The expected Agricultural Chemist, Dr. JOHN SHIER, had arrived and was already at work. At the request of the Governor he had delivered four lectures on thorough draining and sub-soiling, which were well attended by planters and others. The scheme for establishing a railway had considerably advanced, and they looked forward with the greatest interest to the completion of this undertaking. Progress had been made in the formation of a library, donations of a considerable number of books having been made and a further order to the extent of a hundred pounds transmitted.

There was a large gathering at the second anniversary dinner on the 18th of March, 1846. In replying to the toast of "The Governor," His Excellency HENRY LIGHT said he had always lamented, from the time of his arrival in the colony, that there was no Agricultural and Commercial Society, and it was with the greatest satisfaction he now saw one established. The Society had already done its duty, it had given useful information, and disposed the agriculturalists to turn their attention to the soil of this rich province to make it yield more. He then proposed "The success and prosperity of the Society," to which the Hon. WM. ARRINDELL, the President, replied, instancing of the Governor's assistance both pecuniary and otherwise. The Hon. H. E. F. YOUNG, Government Secretary, from whom Young Street, Kingston, derives its name, gave "the resources of British Guiana, and may they be successfully developed." After speaking of the work of the Society and the Agricultural Chemist he wound up by saying:—

"Gentlemen! from these circumstances alone I think

we may augur favourably of the development of the resources of the colony, and I trust I am using no hyperbolic language when I say that I believe we shall cast our old prejudices into the cauldron of the laboratory and that thence, Medea-like, they will emerge in new forms of youth, beauty, strength and profit, which will make this colony, like a giant refreshed and strong, prepared to run its course rejoicingly before the eyes of the world. (Cheers.) From the union of science with practice, which have been too long divorced, there must be, I predict, an issue prolific of benefit to agriculture."

Dr. SHIER, in giving "The Vice-President and Office-bearers of the Society," spoke of agriculture generally and the scarcity of labour, winding up with an eulogy on that "most deserving officer, the Secretary, a man well-known to be devoted to science." Mr. CAMPBELL and himself had been fellow-members of the Botanical Society of Edinburgh, and he had had therefore opportunities of learning his value as a man of business.

To review the fifty years' work of the Society here would of course be impossible. Its history is identified with that of the colony. It has been concerned more or less with every progressive measure. There have been times of great distress in the colony when its work seemed sinking to nothingness, but with the improvement of things the Society has over and over again resumed its activity. That it is not so distinctly agricultural or commercial now as it was in its early years, is simply the result of circumstances. No doubt more could have been done if the planters and merchants took more active parts in its administration. To blame the Society for not doing this

or that, as some members have done, is simply absurd and useless, as an essential principle of every association is that it is composed of members, who can, if they will, mould it to a great extent according to their wishes. In this case we may presume, as in everything else, the fittest has survived and the weakest gone to the wall.

“A Tramp with Redskins.”

By Everard F. in Thurn, M.A., C.M.G.

(NOTE.—It almost seems that I owe an apology for inserting the following paper in a Guiana Journal. It was written at home, although it has never been used at home; and there is much in it which will perhaps be but a twice told tale to our colonial readers. But I am under an old promise to contribute to this number of *Timehri*, and I have no leisure to write anything specially for the occasion.)

T is possible, though by no means certain, that COLUMBUS, four centuries ago, was the first white man who ever sailed along the “Wild Coast,” as Guiana was once called, and first saw the long line of mangrove trees, perfectly level and unbroken, which was, and it might almost be said is, all that is visible of that land from the sea. It is certain, however, that, just a century later, Sir WALTER RALEIGH, in his adventurous search for the “Golden City of Manoa,” otherwise called “El Dorado,” saw this same mangrove fringe, and believed that the object of his search lay behind it. During the three centuries which have elapsed since Sir WALTER’S day, many men, of various nationalities, have seen this mangrove fringe; and some, having cut down some of the trees, have even established themselves on the coast-lands, and have there been very busy and successful in producing the household article known to all as Demerara crystals.

But, from the time of the discovery of Guiana even to this day, few indeed have penetrated very far within the mangrove fringe; none, at any rate until the last year or

two and subsequent to the events of my tale, have established themselves at any great distance from the sea. The country therefore remains, except along part of the coast-line and at one or two isolated spots near this, much as it was at the time of its discovery.

Of the few travellers who have penetrated into the mountainous country which lies in the interior, on the borders of Brazil, by far the most important were the two brothers SCHOMBURGK, who, about half a century ago, spent some years in exploring those parts. But, though these two brothers published voluminous accounts of their journeyings, these, probably because they were either chiefly published in German or in the transactions of learned societies, are not intimately known. It thus happens that there are few people, even of those who live on the coast of Guiana itself, who have any adequate idea of the nature, or indeed of the very existence, of the mountainous country which lies beyond the forest-covered coast-tract, where RALEIGH hoped to find his golden city.

Partly because, being one of the few whose fortune it has been to penetrate into those parts, I know these to be full of a certain kind of romance, and partly because the recent and rapid rise in Guiana of a gold industry, which is quickly spreading into the interior, lends practical importance to any description of this unknown land, I purpose here to sketch the incidents of one of my journeys into the far interior, both as an exhibition of the natural state of the country and as an indication of the obstacles with which the approaching gold-digger will there have to contend.

The object of this particular journey, which began in one of the first few days of 1888, is entirely unimportant

for the present purpose. It is sufficient to say that, by way of the great Essequibo river and the lower part of the tributary Rupununi, it led through the dense tropical forest, some two hundred miles or so in width, which everywhere within the limits of British Guiana lies between the mangrove fringe of the coast and the high treeless lands of the interior ; that it then brought me to a point on that high land—locally called savannah—which is a little more than three degrees north of the equator ; that from there, after some weeks' walking across the savannah, chiefly in a northerly direction, it brought me out on to the Potaro river, another tributary of the Essequibo, but much nearer the sea than is the Rupununi ; and that it then took me down the Potaro, back to the Essequibo, and so once more back to the coast region and civilization. It is with the walking part of this journey, across the savannah, that I propose to deal.

Our boat journey, of three weeks' duration, through the forest region had not been fortunate. For one reason, the party itself was not fortunately constituted. It included, in addition to a friend newly arrived from England and to my own customary following of Redskins from the coast, of a party of about a dozen black policemen under a European Inspector. Now my own Redskins, most of whom had been with me for years, and had grown as accustomed to my ways as I to theirs, had during this journey found themselves subjected to circumstances entirely new and trying to them, in coming so far through a country so different to that in which they had been born and bred ; but, good and plucky fellows as they are, they had met this trial fairly

well. But most of the black men had proved themselves so entirely helpless, under circumstances certainly entirely new to them, and had bewailed themselves so unceasingly as, in more ways than one, to try my endurance to the utmost. Moreover, the drought, which had so long prevailed, had so dried up the rivers—making the passing up of the boats a matter of really great difficulty—that the strength of all had been much tried. And, by the time we reached the furthest point on the savannah to which it seemed possible to drag the boats, almost every one of us, red, white, and black, alike, was so pulled down with fever and dysentery that affairs looked very gloomy.

A few days' rest—the effects of which would probably have been better had we not been reduced to getting our supply of drinking water—and even that was heavy with felspathic clay and white as milk—from holes scraped in the parched savannah, wherever a few rushes seemed to indicate former moisture—pulled us together to a certain extent. But it seemed hopeless to expect the black men, or even my two white companions, neither of whom had had practice in travel of that sort, to undertake the long walk across the unknown country which then lay before me. I therefore had to make up my mind to send them back, with the greater number of my own Redskins, and keeping only three of the latter, to trust to these and to my own resources to carry out the remaining and more arduous part of the journey.

I will here make confession that never in my life have I felt more miserable than when, the morning after I had come to this resolution, those who had come with me so far beyond the range of civilization got into the boats and left me with my three remaining red companions, sitting,

disconsolate and still miserably weak from illness, on the high clay bank to watch them finally disappear. To be thus left for an indefinite time alone, with an arduous and uncertain task, for which one has little strength, before one, and to have to pretend to like all this, is, as I now remember it, as wretched a condition as one could wish for one's worst enemy.

But, whether it was the relief of having thrown off my black cares or whether from some other cause, from the moment I left that clay bank, to return across the savannah to the settlement where my hammock was slung, strength and pleasure in life seemed to come back to me and to my three companions.

It may be well here to explain that these three companions were Redskins of the tribes inhabiting the sea coast, who had been for years, and are yet, in my service. One of these, GABRIEL, is not a pure Redman, but is of a red mother, belonging to one of the coast tribes, and a black father, the result of the cross, at any rate in his case, and of the fact that his whole life had been spent among redfolk, being a blending of great physical strength, derived from his father, with, and much improved by, the suppleness of limb, kindness, and pleasant habit of thought, of his maternal red-skinned ancestors. It should also be noted that the coast tribes, who have for centuries inhabited the unbroken tropical forest, and have there been brought into more or less close contact with the white and black folk who inhabit those parts, are very different, in appearance and habit, and even in some small physical characters, from those other red-skinned tribes who have for centuries inhabited the open mountainous country of the far interior, where they have till

now remained almost completely secluded. Among these savannah Redskins my three coast Redskins were hardly less strangers in a strange land than I was myself.

For our further advance, by walking across the very mountainous and untraversed country which lay between us and the Potaro, the great want now was of savannah Redmen, and Redwomen—for these are better than the men in this respect—as porters. Rapidity in making arrangements for this sort of travel is quite out of the question. The red-skinned folk live scattered far and wide over the savannah, each settlement often at the distance of a day, or more, from the next. Messengers having been sent out to call the people together, there was nothing to be done but to wait patiently for some days for the results. However, in this case, a few days' rest to recover from the extraordinary weakness which is one of the most marked features of such fever, the rapidity of recovery from this being another, were both useful and welcome.

In certain parts of the savannah the settlements are more numerous and less widely scattered; and in such places there is a well understood code of signals by which the people may be brought together without the trouble and delay of sending special messengers—it is impossible ever to persuade one Redman to go alone—to each settlement. Once, years before, on my first journey into the interior, I had come late one evening to a place regularly used for such purposes, from which we were to begin the walking journey the next day. Before daylight the next morning, I was wakened by a series of loud reports, as of explosions. I had only been a few months in the colony, and had been greedily devouring every

book I could find on the subject. Some of the writers had mentioned certain remarkable and loud detonating noises which are said to be occasionally produced by some unexplained natural causes among the adjacent mountain range. Happy in my supposed opportunity for studying a most interesting natural phenomenon, I lay in the hammock making eager mental notes of the frequency, direction, and other aspects of these mysterious sounds. It was a little disappointing when I had mentally put together an interesting record of the phenomenon, and when daylight came, to see that the real explanation was that my Redskinned friends had been firing guns close to my ear, with a view of attracting their friends to help them in the carrying of the loads. I may as well incidentally add that never since, in all my journeys, have I heard any sounds which in any way answer to the description given by SCHOMBURGK and BARRINGTON BROWN of these supposed natural cannonings among the mountains of Guiana.

But on the occasion of which I am now telling, I had to wait patiently for some days, until, in family parties of three or four, rarely more, the summoned Redmen began to drop in. Would that I could give some idea of the picturesqueness of these arrivals. Sometimes the first thing to attract attention was the thin piping of a flute—made of jaguar bone or perhaps human—more and more distinctly heard as its player approached. At other times it was the sound, not of the flute but the characteristic monotonous beat of a drum, made of skin stretched across a hollow piece of palm trunk, that heralded the arrivals. At last the new-comers appeared in sight in single file, approaching along one of the

narrow paths which, foot-worn, through the grass and fern, the abundant bright red *Amaryllis* lilies and the pine-apples, break through the low surrounding scrub into the little field of bare white sand, in which stood the two or three houses of the settlement where we had taken up our temporary quarters. At the head of the line was probably the father of the family. His lithe and beautifully supple body was trammelled only by a narrow waist cloth of deep indigo-blue, by a glistening white necklace of perfectly even wild-hog's teeth which hung from his shoulders well down over his chest, and by a broad and even band of white beads on each wrist and ankle; while his coal-black hair, cut straight round his neck and across his forehead, was crowned by a great tiara of artistically blended jewel-like parrot's feathers, from the back of which rose erect three hugely long crimson feathers from the tail of a macaw. His cinnamon-coloured skin, as bright as extraordinarily frequent washing could make it, was adorned just where such touches were most effective—for instance, just at the highest point of the arch of the forehead—with a pigment of a deep red which both contrasted and harmonized with the natural colour of the skin. His only burdens were a bow and arrow. One by one behind him came the rest of his party, a younger brother perhaps and a son or two, and a wife—or two, one old and one young—and a daughter or two. The men and boys came first, according to ages, each as little and as artistically dressed as the leader, except that they probably could not boast so many and such beautiful ornaments. Each, too, was as lightly burdened as the leader, except that—one and another of them, especially the younger

boys, carried a living parrot or macaw or toucan, or perhaps some small animal. Last in the line came the women and the girls, clothed each with a small apron of beads instead of cloth, and with wrist-thick ropes of red beads, worn as girdles and necklaces, as their sole ornaments. But unlike the men, each of these was burdened with a vast pile, towering over the head, of hammocks, their own and the men's, of domestic utensils and food, with perhaps a few more birds and animals, and with a baby or two. As they approach, and even when close at hand, the new-comers evince no hurry of excitement and no such surprise as might well be expected at the coming of such children of the wilds into the unaccustomed presence of such strange objects as I and my paraphernalia must have presented to their unaccustomed eyes. I might have been non-existent. The procession moves steadily toward the red-skinned master of the settlement. As it passes a couple of shady trees which stand out by themselves on the sandy field, the women and girls of the party turn towards these and, silently but in the most business-like manner, proceed to hang the hammocks of their male kind and then their own on convenient boughs. But the men pass on until the leader stands close to where the head-man of the settlement lolls in his hammock, there evincing just as little interest in his guests as these up to now have done in him. But now the chief of the new-comers drops out a remark in a low monotonous tone. The remark, rigidly prescribed by etiquette, is only "I have come." The master keeps silence for a few seconds, as if deeply pondering as to the fittest answer to this proposition; then he slowly and quietly lets fall the answer "you

come?" The discussion between the new-comer, who continues to stand perfectly erect and perfectly still, and the reclining master of the house is continued something after this fashion, each brief proposition and its equally brief answer separated from the next by an appreciable number of seconds, each dropped out as though it were part of an exercise in the art of expression without emotion.

" I come with my people."

" Ugh."

" We slept three nights on the way."

" Ugh. Three nights?"

" Ugh. Three nights, yes. (Here follows so long a pause that the conversation seems ended ; but at last the new-comer adds), You sent for me?"

" I sent for you. Ugh ! Ugh !"

" You want me?"

" The white man wants you."

" Ugh ! Ugh : Ugh !"

" Ugh ! Ugh ! Ugh !"

And then the discussion drifts for several minutes into a very occasional interchange of these ugh's. At last the host intimates, in the same leisurely unemotional fashion, that I am the same man who once came into those parts before. The reply, surprising enough to me when I remember that it is fully six years since that previous visit--is " yes, but the white man had no beard then." It takes a long time to discuss two or three equally true but equally unimportant facts about me in this leisurely fashion. Then at last, in the same way, it is gradually intimated that I want people to carry for me ; and that I have all sorts of treasure to pay for these

wants. This at once gives a splendid opportunity for conversation, which now takes the form of an antiphonic enumeration by the one of my various properties, such as beads, white beads, red beads, blue beads, not good-coloured blue beads, powder, shot, caps, knives and so on; by the other of a ticking of each of these items by one, two, or three ughs, according as the item is appreciated or not.

Meantime the other men and boys of the new-comers have stood behind their leader, in unbroken silence, occasionally stealing a furtive glance at the other redfolk belonging to the settlement (who, by the way do not seem to reciprocate even this amount of interest with the new-comers) but never by any chance forgetting to overlook me.

Just as one is beginning to wonder when all this will come to an end, the master of the house stands up for a minute, and says a word to his wife, who immediately produces a pepper-pot, and cake of cassava bread on a fan, which she puts down on the ground near the newly arrived menfolk. These latter, as though by rigid etiquette, overlook the proffered hospitality for a minute or two. Then, but as though it were rather a bore to them to eat, they gather round the food—break off pieces of bread, dip these into the pepper-pot, and convey the morsels to their mouths, all the time carefully keeping as watchful an eye as possible on the menfolk of the settlement, as though expecting an attack from them.

Now at least the etiquette of redskin politeness seems to have been fulfilled. The new-comers—the men I still mean—begin to converse freely with the menfolk of the settlement. And it is at this point that the leader

of the arrivals seems suddenly to become aware of my actual presence. He comes up to me, shakes my hand—for he has unfortunately heard that this is the proper thing among white men—and begins to repeat to me all that he has heard of me from his host.

All this time the newly arrived women have, apparently entirely unnoticed by any of the people of the settlement, men or women, hung the hammocks, unpacked and spread about their cooking utensils, and then thrown themselves into their hammocks. Only after the men have broken bread and made friends, does it appear to dawn upon the women of the settlement that some guests of their own sex have appeared among them. The fact once admitted, they carry the remainder of the men's feast to the newly arrived women. But from the first, and throughout the stay, the men of the settlement never seem to observe the presence of their guests of the softer sex.

To prevent a common misapprehension, it is as well here to say that the burdening and overlooking of the women by the men which has just been described, though not in accordance with the ideas of civilized societies, does not prevent a tolerably equitable distribution of rights between these redskinned men and women. It is only that the method of distribution differs from that to which we are accustomed. In this red society it seems to be considered almost indelicate for men to take any open notice of women, even though these be their own wives. Yet, on the rare occasions on which a white man, unobserved, obtains a glimpse of the bearing toward each other of a young redman and red-woman, it is abundantly evident that this is of an affec-

tionate and even caressing nature. If the older men are not so often seen to give outward signs of affection for their women-kind, this is, after all, not unlike what may be seen in more civilized societies; nor does this reticence indicate that the affection does not survive youth. Moreover, among these redfolk it is certainly the case that the older women, or at any rate those of them who have developed most character, often exercise what would appear to us an even undue influence, in deciding what their menfolk, their family, or the members of their settlement, are to do. A very curious and extreme case came under my notice some years ago among the Caribs, who are supposed to be the most manly of the tribes. In that case, the men being for some reason unwilling to earn pay for some assistance which I wanted them to give me, these were brought to look at the matter in another light, and to give me the required help, by the vigorous use by their womenfolk not of argument but of well applied sticks. Again, just as there is thus an explanation of the neglect with which these redmen seem to the casual white-skinned observer to treat their women, so there is an explanation of the other and analogous fact that these same redmen seem to leave what appears to us an undue proportion of the domestic labour to the women. As a matter of fact, the division of labour between the two sexes is exactly that which best adapts the society to exist among the circumstances which surround it. The women cook when at home, and do the planting in the fields, and carry the impedimenta on the journeys, in order that the men may be free to devote their greater physical strength and aptitude to the harder work of

cutting down the trees where the fields are to be made, and to the more technical work of hunting and fishing.

For several days such arrivals as that above described continued. Each little party as it arrived camped by itself under one of the trees surrounding our small settlement, till the place seemed at last quite crowded. Perhaps it may be wondered why such a large number of carriers was required. The explanation is that on such a journey as I was then contemplating into the unknown and for an indefinite period, it is absolutely necessary to carry with one large stores. By bitter experience on a previous occasion I had learned the rashness of trusting entirely to the food which might be picked up on the way. On that previous occasion I had for thirteen days had to satisfy the cravings of hunger only with a supply of unripe bananas, taken from the Redmen's fields which we passed. There had been a long drought over the savannah; and the Redmen had wandered away in search of food for themselves—as had also the wild game which is under general circumstances fairly abundant in those parts. Moreover, on this later journey on which I was now about to start certain scientific apparatus which I had to carry with me largely added to the bulk of the impedimenta. Still I thought that about enough had now come in. Moreover, with that marvellous instinct which serves in place of a telegraph to convey news from a far distance, my redskinned hosts told me that no more carriers were coming. I made up my mind therefore to start the next morning as early as possible.

The start was to be made as early as possible in the morning. On these long walking journeys across treeless mountainous country but little north of the

Equator it is as well to get through as much as possible of the work before the sun acquires its mid-day force. A hasty meal an hour before dawn, which is, there, between five and six in the morning, and a start in the morning twilight enables one to get over a long distance in the course of the day. But on the first morning it is always impossible to make as early a start as this. It is very rarely that you can get a redman to say beforehand, even the night before the journey begins, whether he will come with you or not or whether he will allow his followers to come with you. One wakes up in the morning with complete uncertainty therefore as to how many companions one is to have on the march. On this particular occasion it happened that there was no great difficulty in getting enough people to start, though there was quite the usual difficulty in apportioning each person's load. Men, women and children are all willing to carry, each in proportion to his or her strength, a fair, even a heavy burden; but a sort of etiquette seems to proscribe what each is to carry. For instance, the men have the greatest objection to carrying cooking utensils; and that a woman should carry a gun, or even the bows and arrows of her own husband, would be almost indecent.

But though it was comparatively easy to make the start that morning, I can tell of a typical instance which I experienced on another occasion of the difficulty of these starts. From the settlements where I then was every man woman and child was carrying willingly for me, with the exceptions of three very old crones and one fine young fellow who had the night before been foremost in games but who now suddenly declared that he was ill. Probably I had offended him in some

way. At any rate, no persuasion on my part, no threats, and I spent at least a couple of hours in the attempt, would induce him to get out of his hammock. I was in despair ; for there was one heavy load left, and, trusting too confidently to my powers of persuasion, I had sent on ahead all the other people, among some of whom it might have been possible to distribute this extra load. To carry it myself was unfortunately beyond my physical power. To abandon it was equally impossible. The three old crones had really done their best to induce the young fellow to think better of his determination ; but in vain. At last, just when I had reached that painful state of feeling in which one recognizes that one is in a difficulty from out of which there is no way, one of the old women seemed to have an idea. I can see vividly now the group of these three old witches, as they stood chattering and hatching the idea. It must be confessed that though the simple fashions of these redfolk, when one's eye is once accustomed, are not unsightly in the case of the younger people, yet in the case of the older people, and especially of the old women, they are not becoming. The three old hags standing chattering there make a picture admirable only for its characteristic ugliness ; and an effort was needed to see through the physical ugliness to the good intentions. At last a course of action to meet the emergency was evidently hit upon. The three retired into a perfectly dark corner of one of the houses, and soon returned with the most pitiable little baby that ever was seen, too ill evidently to have been carried away, as all the other children had been, by its mother. The recalcitrant young fellow, who had all the time been lying entirely wrapped up in his hammock,

but had probably been peeping through the bars and had overheard the conversation of his three grandmothers, now turned uneasily in his hammock and seemed to have an inkling that his fate was sealed. The poor baby was triumphantly presented to me as a *deus ex machina*. I was utterly puzzled. Then I was made to understand that I was to cure the baby by blowing on it three times, and that if I would only do that its grandmothers would, by hook or by crook—but chiefly, as will presently appear by the latter—find a way of inducing the malingerer to do the porter's work required of him. I did not then stop mentally to argue out the matter, but the thought has often since occurred to me when thinking of that pathetic little baby, and hoping that I at least did it no harm, that I then lost a splendid opportunity for carefully weighing the morality of, before committing, an expedient action. A casuist, might well ask whether I was justified in gaining my end by complying with the wish of these old women. Not being a casuist, I immediately blew three times on the forehead of the poor little child. The delighted old women picked up the crooked sticks which supported their rather feeble steps and retired triumphantly. After depositing the baby in its dark corner, they drew the palm-leaf door across the entrance to the house, leaving me outside. As in a Greek tragedy, the climax was enacted behind the scenes. Soon I heard sounds from within as of all the old women talking, persuading, threatening, at once; but never an answer was heard from the young man. Then followed other sounds, as of carpet-beating; and an answer, a sort of inarticulate answer, was at last heard from the young

man. The door was pushed open. The strapping young fellow came out, followed by the old women, one of whom, as attentively as is the custom of the women of these simple folk, was carrying and folding up the man's hammock. Without a word, he strode up to the package which had been the cause of all the trouble, and on which I happened to be disconsolately sitting, pushed me gently off it, lifted it on to his back, stooped down for a moment while the woman fastened his hammock on to the pack, and then strode off silently in the direction of the journey. It is only fair to add that this young fellow thenceforward accompanied me for some weeks, during which he was as helpful, good-tempered and friendly as any travelling companion I ever had.

It is time to return to the story of the journey with which we are now specially concerned. On that occasion there was luckily no very great difficulty in getting off the first morning; and by eight o'clock a noisy group of between fifty and sixty redfolk, men, women and children, all duly burdened, stood on the white sand ready for a start. Generally it is my practise to start first, with one or two of the most active men, and to leave the others to follow behind in long straggling line. On this first morning, however, by way of holding a sort of review, I stood aside while the party filed off. When the last had passed, I started, and it was not long before I was in my proper place at the head of the line. My comparatively light burden, for, according to my experience it is impossible for an ordinary European to carry much under that tropical sun, naturally gave me an advantage over the others. But I have always found that a European in average condition can easily beat even the best of the redmen in

the matter of time on a long walk ; and this holds true even when both are unburdened. On the other hand, the Redman has an immense advantage in being able to carry such enormous weights. This weight-carrying capacity in the case of the men is somewhat remarkable, as they are not accustomed to endure this on their own account. That the women carry well may be regarded merely as a matter of practise.

Such a walk as I now undertook—it lasted about four weeks—at the head of a long single file of most gentle, willing, and pleasant savages is a curious enough experience, especially if one happens to be the only European of the party. Trudging ahead, over those bare swelling plains, from dawn to a couple of hours before dark at night, with only brief intervals of rest, snatched now and again when one sits down for a quarter of an hour, to eat the breakfast from one's pocket or to smoke a meditative pipe, as one watches the line of followers, which line when one first sits down extends often from beyond the range of sight right across the plain to one's feet, till at last even the hindmost laggard has come up and it is time to make a start again, one has plenty of time for thought. My own personal state of feeling at such times is that of curious absorption in the circumstances of the moment and forgetfulness of the totally different circumstances under which one once lived, far away in civilization. The novelty and unexpectedness of each little incident in this perfectly new life seem to take up the whole attention and to impress it upon the mind with a vividness far greater than would attend the events of a journey among more ordinary surroundings. Though that four weeks' journey was taken a good many years

ago, I can—indulging myself in a rather favourite exercise of testing my memory—recall to my mind the scenery of almost each hour of the time. I could tell in detail in what order of time we crossed certain huge, perfectly flat, gray coloured, plains, stony and painful to the feet, owing to a vast number of a little hard-stemmed plant, only three or four inches high but with an upstanding stem as tough and unyielding to the feet as a hard piece of wood ; I could tell where these plains were crossed by deep-gullied rivers ; where we passed for a time through low scrub ; and where we ascended and descended steep mountains. But I must confine myself to certain scenes which stand especially prominent in my memory.

One morning, passing through one of a series of considerable coppices through which the track lay, a familiar sound, deep but low, was heard, which might have been either that of a jaguar or of the trumpet bird which so curiously imitates the purr of the big cat. Now jaguars are harmless enough to human beings, and especially to human beings in a party as numerous as we then were ; and trumpet-birds, these being good to eat, would have been much more interesting. But the cause of the sound was never explained ; for the whole party was so burdened that no one was able immediately to get a gun ready for pursuit and investigation. To miss a chance of getting meat is one of the cheerfully constituted Redman's most mournful experiences. Not to miss the next chance, one fine young athlete added his burden to that of his already burdened and rather weakly wife. Each pack was one of the customary baskets, adapted to the shape of the back, and, as then loaded, extended from the loins upward to considerably above the head of

its porter. Each weighed probably between 50 and 60 pounds. In some mysterious way the woman managed to get both packs fitted on behind her, and carried both for the rest of the day ; while her emancipated husband joyfully bounded about among the rocks and trees, now on one side of the line of march, now on the other, rejoicing as a strong man in sport.

It may here be explained that the idea of sport as consisting in the overcoming of the greatest possible number of difficulties in killing the quarry, is totally alien to the Redman's way of thought. His desire is to get meat ; and he never shoots at a flying bird, or fires at any animal until the point of his drawn arrow or pointed gun is within a marvellously short distance of the quarry. Yet, after all, the wonderful skill with which the Redman contrives to steal up to within almost touching distance of a wild animal is itself a worthy exercise of the sporting instinct.

By the time that the change of burdens had been effected, jaguar or trumpet bird, whichever it was, had vanished ; but our newly self-appointed huntsman held himself in readiness for whatever else might turn up.

While, in the course of his rambles, he had disappeared for a moment among the trees clothing the side of a hill by which our line of march was passing, suddenly all the others of my party, who had been chattering vigorously a minute before, became silent as dead men and as motionless. The eyes of all were glued to one point in the wood, where nothing particular was to be seen by my eyes, whence nothing unusual was to be heard by my ears. At last the silence was broken by the crack of a gun, immediately followed by the thud of a heavy body

falling. In an instant every burden was hurled down and the whole party rushed with gleeful shouts up the hill, and disappeared into the wood, to re-appear in a few moments dragging out the body of a deer.

The delight and glee of the whole party now became quite indescribable, chiefly manifesting itself by every man present shouting out, with roars of laughter and flashing eyes, the most minute details as to how cleverly he himself had on some previous occasion shot a deer very like this one. Carried away by the contagion of enthusiasm, I felt almost ashamed that I had myself only on one occasion shot a deer and that under most prosaic circumstances. Possibly it was envy which made me the first to recognize the seamy side of our recent good luck. We had got a deer ; but we were not hungry, and we had plenty of food with us ; and every man, woman, and child of the party was already burdened beyond the stage of willingness to carry on the carcase. My companions proposed quite equally to distribute the burden, by eating it there and then. But, hearing that in the course of an hour we should come to a big river the crossing of which would delay us for some time, I effected a compromise in accordance with which, some more of the men's packs having been imposed on the ever receptive women, the men thus freed carried the deer as far as the ford. So we went on ; and the impression which had all along lurked in my mind that I was taking part in some picturesque but unreal operatic procession was intensified by this new addition to our line, of a dead deer swinging by its gathered legs from a stout pole resting on the shoulders of two men.

The point at which we had to cross the Ireng river—

part of the course of which forms the boundary between British Guiana and Brazil—was soon reached. It was one of the recognized places at which the Redmen cross the few large rivers which intercept their paths on those savannahs. Just at this point begins a series of rapids, extending for some distance down the river, and caused, not by any narrowing of the river bed, but by the outcrop of many boulders and by a slight but long continued fall of the ground. The river, which is at this point some two hundred yards wide, is very deep up to the point at which it breaks into the rapids. The Redmen of the savannah, where large sheets of water are rare, are, unlike their kindred in the abundantly watered forest region, not good swimmers. A canoe is therefore kept concealed somewhere at this and similar points, in which the people ferry themselves across the stream. The craft is made of a hollow tree, but differs from the similarly made craft of the forest regions in that after it has been hollowed out its sides are not stretched apart from each other. It is in fact merely the the trunk of a small tree—timber grows to no large size on the savannah—with a straight sided shallow groove along what is its upper surface as it floats on the water. Such a boat will take two, or at most three, people at a time; and is about as cranky a craft as can well be imagined.

Unfortunately on this occasion we failed to find even this indifferent means of crossing the water. The canoe had either been removed by its owners, whoever these may be—for I have never been able to ascertain the ownership of such craft—or had been so effectually hidden that even the acute eyes of my redskinned companions failed to find it. Once more we were in a quandary. For the

whole party, constituted and loaded as it was, to cross without a boat was impossible in the deep still part of the river above the rapids, and seemed almost equally impossible where the river surged down these rapids. The delay necessitated by the cleaning, cooking and packing—by eating—of the deer was a not unwelcome opportunity for considering the position and for a couple of my coast Redmen, excellent swimmers, to swim up the river in search of the missing boat.

The sandy, scantily wooded banks of the Ireng river, especially at this part of its course, are infested, to a degree which can only be conceived after experience, by clouds of a minute fly, locally called "lunke," each bite of which causes an immediate irritation of the skin worse than that of any mosquito and raises a small circular black blister. For this reason the very scantily clothed Redmen keep away from the rivers as much as possible; and when, as on the present occasion, they are obliged to remain near one for a time how they keep their tempers under the attacks of the myriads of these venomous little beasts on their almost completely exposed skins had always been a source of wonder to me. That couple of hours of enforced delay while we eat our deer meat was largely occupied by me in frantic attempts to ward off these insect attacks from my face and hands, my only vulnerable points, and in noting how soon it became almost impossible to detect an unblistered inch of skin on the considerable skin surface presented by my half hundred companions—and this despite much use of tobacco and of great volumes of wood-smoke raised by making large fires of damp wood, and despite constant rushes to and plunges in and out of the river. Pitying my mates as I

then did, little did I then realize the heroic extent of their good tempered endurance, and little did I anticipate the further enlightenment which the immediate future had in store for me.

At last the quest of the boat was given up in despair ; and it became necessary to decide between turning back, seeking another crossing place, or fording the nasty looking rapids. The latter proceeding, the Redmen said, was possible for the men and for myself, and might even be just possible for the women. Whether the children and the baggage could be got across seemed to be considered a more open question. All seemed, however, willing to make the attempt.

I do not mind confessing that my heart was, as the saying is, in my mouth. But, mentally capping this with that other saying as to the fate of one who hesitates, I gave the signal for the onward journey by hastily stripping, and, instantly spurred by innumerable stabs from triumphant " lunkes," as hastily plunged in to the rapid. A shout to the athletic GABRIEL, a first rate swimmer, was sufficient to make him pick up my clothes and plunge in with these after me. Through that great turmoil of water, which was sometimes waist-deep, sometimes only ankle-deep, sometimes over my head, my feet slipping about in the most agonizing way among the jagged rocks of the river bed, my whole body now and again taken completely out of my control by sudden and unexpected rushes of water, I contrived by and by to reach a projecting rock in mid-stream. GABRIEL, good-natured and capable as usual, was still being tumbled about in the water close behind me ; yet he was evidently keeping his eye on me and, much more won-

derful, was contriving to keep the bundle of my clothes fairly above the water. The black heads of the other Redmen were bobbing about, like so many fishing floats, in various parts of the rapids. When sometimes one of these men, having rested for a moment, as I was myself doing, on some rock in midstream, and when he plunged back into the flood I saw my most cherished possessions—photographic apparatus included—dragged relentlessly under water. But, just as GABRIEL reached me and climbed up beside me, I saw a far worse sight. For, looking back on the bank we had left, I saw most of the women sitting philosophically on their packs at the river's edge, watching the frantic efforts of a few of their more adventurous sisters who had already plunged in, had already been separated from their packs, and were now, women and packs alike, being rolled helter skelter down the rapids. Shouting to be heard above the roar of the water, I begged the men, and especially GABRIEL, to go back to the help of the women, and of my property. GABRIEL went—and in my anxiety I did not notice what he took with him. Then I plunged in again, and, after as painful a passage as before, contrived to reach the further bank.

The first thought as I got out of the water was that all the "lunkes" from miles up and down the river had gathered to meet me, defenceless as I then was; the next, which was as an electric shock, was that GABRIEL had taken my clothes back with him. Shouting was useless; for he could not hear across the river. Fate was upon me, and, with not even tobacco smoke to clothe me, I had to sit for an hour on the hot sand at the river side, without the shelter of bush or tree,

and to learn by experience what the Redskin has to endure when his whole skin is riddled by these vile black, blister-raising, beasts.

My temper certainly did not pass through the ordeal as satisfactorily as does that of the ordinary Redman; and when GABRIEL at last brought my clothes he uncomplainingly received reproaches from which he certainly ought to have been saved by the good work which he had by that time accomplished, by his own efforts and by compelling the assistance of the other men, in safely getting across the whole party, women, children and baggage included. How this feat was accomplished, I never knew; for my eyes were closed by my own small woes.

One of the most fertile subjects of wonder which much travel has suggested to me is the extraordinary rapidity with which one may pass from what seems a hopeless and endless state of discomfort to one of supreme and quite unreasonable comfort. Often the mere cessation of discomfort, if this has only been acute enough, is sufficient to cause quite extraordinary comfort. For instance, many a time, throughout a day passed under full exposure to soaking tropical rain, and to that intense tropical cold which, under these conditions, is consistent with a high state of the thermometer, one's spirits sink lower and lower, under the influence both of the discomfort one is actually suffering at the moment and also of the creeping thought of the difficulty presently to be met in making a dry camp for the night. Yet, evening having come, one's Redskinned companions manipulate a small square of tarpaulin in such a way that one's hammock is slung up dry under it; then these same good friends,

having picked suitable sticks from the sodden ground, scrape off the damp outside wood and make a fire of the dry pith. Then, still under shelter of the exiguous tarpaulin, one manages to warm some such blessing for travellers as a tin of soup, and to change your wet clothes—by the way, it is an art in itself to learn to dress and undress without putting foot out of hammock—and then one tumbles back into the hammock, and, having lighted a pipe, falls at the same instant into a more perfect state of physical comfort and mental rest than anyone who has not had some such equivalent experience can imagine.

Just as the bitter discomfort of a day's exposure to tropical rainfall heavy enough to wash out from one all hope of relief is thus a small price to pay for entrance into the realm of intense physical bliss which a scrap of tarpaulin may separate from the limitless desolateness of those nights throughout which the flood of tropical rain continues to thunder on the roof of the primeval forest, so now the purgatory of flies, and bruises and saturating discomfort left behind, as we continued our walk over the savannah, under a bright sun, the real heat of which, welcome to dry us and ours, was tempered by a strong breeze, Redskins and white man alike carelessly experienced the philosophical truth, that pleasure is but the cessation of pain. As our sufferings had been acute so now our spirits were proportionately high; and, we gladly raced along a path which led through an appropriately beautiful country of narrow grass valleys, the floors of which were whitened by innumerable white lily-like flowers*, lying between high broken mountains.

No one of all the party had been in those parts before.

* *Hippeastrum Solandriiflorum*.

Each set of Redmen—not only each tribe but each set of families of one tribe—keeps very much to its own small district. Some of the men, and fewer of the women, on rare occasions wander down to one of the main rivers of the country at the point nearest to their homes, where they probably keep a large canoe or two, and thence, trusting themselves to the stream, find their way to the sea and to the habitations of white men. But they rarely wander across the savannah into parts inhabited by other Redmen not allied to them in blood. It is so comparatively recently that the many small tribes of Guiana lived in a state of passive hostility, the one to the other, which state became active whenever a meeting occurred, that, though this state of hostility has almost ceased to blaze, I have been invited by the members of one settlement to lend the weight of the one or two fowling pieces which I had with me to an attack which it would then be worth their while to make against a not distant settlement of Redfolk of another tribe. It is, therefore, not uncommon that Redmen, consenting to accompany white travellers on considerable walking journeys, have to find their way through a country quite unknown to them. The instinct with which under such circumstances the guides find the way is quite wonderful. No European courier called upon to break into ground fresh to him, and having provided himself with the completest apparatus of maps and guide books, could follow the right road in more unerring fashion. Doubtless the place of guide-books is largely supplied to the Redmen by the long conversations with which they while away all but a very few hours of the equinoctial night, which conversation chiefly consists in the recount by each in turn not only of

what he has himself done and seen but what he has heard of the doings and experiences of others. These conversations the Redman, whose memory is taxed but by few subjects, recollects in astounding detail, and turns to account when occasion arises. And the place of maps is largely supplied to the same people by the wonderful training of their minds in observing the natural features of their country. A Redman on first seeing a map, and having its nature explained to him, grasps the idea of the thing; and, often, picking up a stick, he can trace on the sand a very fairly accurate diagram of neighbouring parts into which he has never been but of which he has heard. "Tunamanuksa" "a picture of the rivers"—he says he has made. After all literature and the arts are not as essential to a well rounded human life as we are apt to imagine.

It was once my fortune to wander on a mountain on which, owing partly to its isolation and partly to its peculiar physical characters, almost each point was new to science. Having from childhood taken delight in searching for each English plant new to me but certainly not to science, I had been fitly prepared to experience on that mountain, in a degree which can not fall to the lot of most men, the greatness of the increase of delight of moving for a time among surroundings entirely new and unexpected. Some such feeling makes another of the unspeakable delights of travel through a new and unknown country. And of that delight, I drank deeply that afternoon after crossing the Ireng river. The country was as has been said unusually beautiful; and each of its beauties unfolded itself to us in all the greater glory because of its unexpectedness. This feeling

to judge by their high spirits, was certainly shared by my Redskinned friends, who knew the country only as we know a country which we have seen only on a map.

Early that afternoon, having just crossed the brow of a hill, we came upon a small plain, almost shut in by mountains, in the centre of which stood a large mud-walled leaf-thatched house. The sight was entirely unexpected; for none of our party had ever heard that there were people living in those parts, though, a quarter of an hour before, one of our party had fancied that he had seen a human figure just rise over the brow of the hill which we were at the moment approaching and then disappear. The house was however welcome; for we had expected no better luck than to camp that night on the open savannah, over which so cold a wind almost continuously blows, especially at night, that sleep, even for me, with plenty of wraps, was difficult, and was impossible for the naked Red folk. Not only was the shelter promised by this unexpected house welcome to us, but, it being still early in the afternoon, we should there have an opportunity of drying any of the baggage into which the water of the Ireng might have penetrated.

We were surprised to find no people or living thing of any kind about the house, though the fires were burning as usual and fresh food was being cooked; nor while we busied ourselves during the remaining hours of daylight in unpacking and drying our goods was there any sign of the return of the inhabitants. It was as though in some of the old fairy tales we had lighted in some most unexpected place on a house furnished with all necessary comforts and all luxuries that the heart could desire but without a sign of an owner.

Fortunately we found that the contents of our packs had suffered very little damage from the water. All had been packed, after the most ingenious manner of the Redman, in certain leaves which, when applied *secundem artem*, make a quite waterproof covering. Once more the skill with which the Redfolk with their simple appliances succeed in satisfying their wants as effectively as civilized folk, with all their elaborate appliances, endeavour to satisfy theirs, suggested food for thought.

Houses such as that which now afforded me welcome shelter as, in contented leisure, I thus lightly thought on the merits and demerits of civilization, do not after all come up in all respects to the standard of the fairy palaces. There being no windows in the substantial walls, and no chimnies in the thick thatch, and it being rigorous Redskin etiquette to close the one aperture, the door, at night, I began to remember that the atmosphere within these houses is trying to the unaccustomed constitution of the European, especially if, as on this occasion, he has to share his quarters with a large party of Redfolk each of whom insists on having a private fire under his or her hammock. As night came on, I therefore slung my hammock outside the door in a sort of porch, which, together with my wraps, afforded promise of sufficient shelter and not more than sufficient.

Lying in the hammock, in full view of the opposite mountain side, watching the splendid lights and the growing shades on the rocks which were at the moment bathed in the rays of the setting sun, my eye was attracted by a rock absurdly like a squatting human figure. Presently, as though increasing the illusion, this rock seemed to quiver, almost to move, in the intense and dazzling light.

I called the attention of GABRIEL to the strange natural phenomenon ; and, he having pointed it out to the others, an admiring group of my people soon gathered round my hammock. The quite unexpected effect of this focussing of attention was to make the rock at which we were looking jump up and disappear behind an adjacent boulder. Instantly my people were on the alert, and pointed out several other red figures hastening to conceal themselves among the real red rocks. It was evident that the people of the house, having been frightened away by our approach, were now cautiously watching us from the surrounding heights. Among the early travellers in Guiana the brothers SCHOMBURGK mention the habit of the Redmen of suspecting and flying from all white strangers ; but it was the first time that an instance of this had come under my own notice.

It was too late to do anything that evening ; and we passed a very quiet night, my companions inside, I outside, while the real owners of the house watched us from the hills. The incident serves to show the harmlessness of these gentle savages, who, had they been so inclined, might have revenged themselves on us, during our sleep, in most unpleasant fashion for the unintended eviction which we had executed on them. And yet this happened close to the district through which certain recent commissioners of the Brazilians and Venezuelans who not long ago busied themselves in delimiting the frontiers of their respective countries declared themselves unable to pass on account of the notorious hostility of the Redmen.

Early the next morning we sent out messengers of peace and apology ; and these, after some trouble, contrived to get within speaking distance of the fugitives,

and persuaded them to come down to us. Our newly found hosts proved to be of the same tribe as my companions, and declared that they had been frightened away by my quite harmless self, mistaking me for a Brazilian who had come to take them and make soldiers of them. It is surprising how often this story crops up among the Redmen of those parts, although it must be quite half a century since any of them from our territory were thus forced into the Brazilian service. It is said that this sort of conscription goes on even now across the border; and the rumour of this, spreading, as all news does far and wide over the savannah, probably keeps the tradition alive. On this occasion our new found hosts were soon comforted and delighted by a few very trifling presents; and some of them, unasked, even added themselves to our train, for the mere pleasure of "taking a walk"—of a week's duration—in our company. This is a local custom which often tends to swell a party travelling through those parts on business, and turns it into a merry picnic.

On every other occasion throughout our march, on the rare occasions when we came to the widely scattered houses, we met with an immediate and most hearty welcome from the inhabitants. The etiquette of the visit had always to be fulfilled, but this was accompanied by a friendliness on the part of our hosts which softened those formalities of the best redskinned society. One such reception may be recounted as a type of all.

The particular instance selected for description is impressed on my mind by the fact that the settlement in question, consisting of three or four large houses, each inhabited by a group of families, stood on the lofty summit

of one of the steepest hills that it was ever my lot to ascend, and that we had to climb this treeless ascent one day at noon, when there was not a cloud in the sky to veil the rays of the tropical sun, when the breeze had, for once, died out, and when since our start at dawn we had not passed one place where the long drought had left any water to quench our thirst. Such positions as this are generally chosen for the more permanent settlements of the savannah Redfolk, on account of the splendidly wide view afforded. It is not that the Redfolk have any sense of the magnificence of the landscape—a sense in which these primitive folk are entirely deficient. The choice is due to a desire—surviving doubtless from a time when hostile attacks were more frequent—to have timely warning of all persons approaching. Even now, though actual warfare between the tribes has practically completely died out, a kind of "vendetta," which, in default of any other system of law, survives as a useful check on personal aggression, justifies the selection of these points of observation for the settlements; for the "kenaima," the avenger of wrong, has comparatively little chance of approaching such places unobserved.

It might perhaps be thought that the advantage of such situations might perhaps be outweighed by the fact that, on them, the settlement is raised so far above the water supply, especially as these Redfolk are the most persistent persons in "washing their skins" that could easily be found. The toil involved to the women in carrying up the household supply of water, and to men and women alike in running down and up half a dozen times a day to bathe is just of the sort to which the muscles of these people have been

adapted by long practice. As has been said, any European of average physique should be able to surpass a Redman in mere walking; but when the continuous carriage of weight is in question, or sudden but short strenuous calls on the muscles, the superiority is markedly the other way. When I at last reached the village in question, called Quonga, I was too weary even to much regret that there was not a drop of water there to quench my terrific thirst; but two or three lads of my company, who had climbed up the same heights, and had so climbed heavily laden, did not even wait to be asked but ran merrily down and up, bringing me calabashes of water.

Meantime the ordinary reception was going on. Some cassava bread and pepper-pot, the latter consisting, as usual, of little but red peppers (capsicums) boiled down, had been placed on the ground, and my men were eagerly breaking off pieces of the bread, dipping these in the concentrated essence of meat which filled the pot, and eating them. I also had to eat a morsel or two for form's sake.

This hospitality of the pepper-pot is for me always associated with the memory of an absurd incident in a previous journey into these parts. The pepper-pot had been produced, and had been enjoyed by us all more than usual—for it was the best mess of its kind that I ever tasted, and I had withdrawn a short distance from the others into a patch of shade, to smoke a meditative pipe. Presently I noticed a consultation going on over the pepper-pot between the white men who were with me on that occasion and our Redmen. There was a comical look of disgust on all their faces; and presently, in more than one case, this expression of disgust deepened

into actual nausea. I was so far off that the whole scene was but a pantomime to me; but, on enquiry, I was amused to find that the cause of it was the discovery by one of the party, whose too enquiring mind had led him to stir up the dregs of the pepper-pot, that it was made, so far as it was not made of capsicum, of large and fat grasshoppers. It was in fact a curious instance of the physical effect exercised by the mind on the stomach; for I still maintain—as the others maintained before the discovery—that the best pepper-pot ever tasted by any one of us was that confection of grasshoppers.

But no such catastrophe happened at Quonga; and the pepper-pot was satisfactorily washed down with great draughts of paiwari—the native beer. This is among Guiana Redmen the liquor of hospitality; and the guest who refuses a drink of it has small chance of recovering favour with his hosts. It is not very nasty to the taste—indeed the better made samples of it are decidedly nice—but it would be far nicer if one did not know how it is made. It consists of chewed cassava bread mixed with water and then allowed slightly to ferment. Yet the most squeamish European traveller in those parts, if he wishes really to mix his own life for the time with that of the Redmen, must forget his squeamishness and drink.

But a special trial in this matter of paiwari hospitality overtook me at Quonga. I was evidently to be treated with the highest possible honours; and my hosts, instead of offering me some of the ordinary paiwari, with which they were refreshing my companions, produced a tiny calabash—holding, it may be, as much as a teacup—of the special black paiwari, which is to the ordinary kind as the finest and rarest liquor is to every day brandy. I

had never yet been called upon to taste this, and had no suspicion of its being very different from the ordinary kind. But, having heroically gulped down this most precious black fluid, I was nearly shocked out of existence by its quite indescribably awful bitterness. Whether it is a personal idiosyncrasy or not I do not know, but the taste of bitterness in any considerable degree is as nearly absolutely unbearable as possible. For instance, though I can take quinine, if its taste is obscured, with excellent effect in quantities metaphorically to make the hairs of medical men of no tropical experience stand on end, the unconcealed taste of the same drug is quite unendurable to me. But the bitterness of this black paiwari, totally unexpected as it was, was to the bitterness of quinine as far removed as heaven is popularly supposed to be from hell.

So really overcome was I that I not unwillingly acceded to the request, in which both my own people and those of the settlement joined, that I would stay at Quonga till the next morning, in order that the combined parties might have an opportunity of indulging in an impromptu feast and consuming the large quantities of paiwari which happened to be in the place. To stumble on a place where a paiwari feast is going on, or can be, as here, immediately got up, is generally a misfortune to one travelling as I then was. For though the liquor is only slightly fermented it is consumed in such quantities that it stupifies the drinkers; and, when these happen to be one's carriers, makes them for a day or more incapable of doing their work. But I had passed the stage of caring much about possible delay, and gladly closed with any suggestion which would afford me rest.

As regards the quantity of paiwari which a Redman—or for that matter, a Redwoman or child—can take, I am almost afraid to speak for fear of not being believed. It happened that I was once present when a Judge was trying a charge against a Redman of the Coast, of murder committed under the influence of this horrible drink. Whether from curiosity or from some other cause, the Judge insisted on himself cross-examining such of the witnesses as were likely to know as to the amount of paiwari which would suffice to bring an ordinary Redman into the initial stage of drunkenness. Everyone of these witnesses I knew personally ; and I was, therefore, in a position to estimate, perhaps better than the Judge did, the weight of their evidence on this point. The net result was an agreement that thirteen calabashes of paiwari were sufficient for the purpose. Now a calabash—which is a vessel formed of the rind of the fruit of a tree—is an uncertain measure. But taking the average size of those used by the Redman in paiwari drinking, the capacity may be taken at about two pints. Therefore it may be assumed that twenty-six pints of paiwari is sufficient to begin to make an average Redman drunk. Unfortunately, especially at the big feasts the average Redman goes considerably beyond this initial stage. Therefore the estimate of twenty-six pints must be very considerably increased if one wishes to get at the actual quantity of this liquor outside of which, in the Yankee phrase, these Redmen can put themselves. The explanation, of course, is that in large quantities it acts as an emetic.

On the whole the effects of the paiwari drinking at Quonga were not as bad as might have been expected.

When, the following morning, quite refreshed from the effects of fatigue and black draught, I was again ready for the start, all but two of my carriers were in fairly good condition and had evidently kept the promise of moderation which they had made to me. And even the two defaulters were a man and his wife who had never from the first held out hopes of coming the whole distance with me, and it is quite possible that they felt themselves absolved by this fact from the moderation of the others.

But two new porters had to be found for the abandoned loads. One of the Quonga men at once volunteered; but it seemed for a few minutes that it might be difficult to get a second volunteer. There was a magnificently built young giant there—on measuring him afterward I found that his height was only five feet nine inches; but that is gigantic for a Redman—whom I was very anxious to take with me. From the well-cared-for look of his scrap of cloth, his few patches of paint, and of his beads and necklace of teeth, it was evident that he thought highly of himself; and, to judge from the bearing of his fellows toward him this self respect did not seem unwarranted. At first he laughingly declined my invitation, saying that the load was too heavy for him; then, to my horror, and for the only time that this special trial ever befell me, he quietly took the pipe from between my lips, put it in his own mouth, smoked it in meditative fashion for a minute or two, put it back into my mouth, unslung his hammock, put this and my bundle on his back, and, without a word to his family or a word of bargain with me, he ran merrily down the hill and so began a journey with me which lasted for some weeks. Such instances help to give an idea of the happy freedom from care and

business in which these folk pass their lives before they are touched by outside influence.

During the days immediately following, the incident most vividly impressed on my mind is of a morning when, in walking across a stoney plain, and resting in a tiny haven of shade made by an isolated obelisk-like rock in the glare of the sun-baked white plain, I most painfully realized that my last pair of shoes was worn out. This may seem a trifle too ridiculous for mention. As a matter of fact, I found that this trifle was serious enough absolutely to prevent a further extension of the journey to which I had looked forward. The Redfolk of these stoney plains, though the soles of their feet are hardened to a quite extraordinary degree, are unable to walk long distances barefoot, and make for themselves sandals of part of the leaf stalk of a palm. These sandals however have to be tied on in a way which involves the passing of a small cord between the great toe and the next ; and, though in the natives of these parts the skin between these toes has acquired the hardness of horn, neither the coast Redmen nor I, not having been adapted for this fashion were able to bear the strain with which, in walking, this cord cut into our too soft flesh. So that these sandals were useless to us. The pain of continuing barefoot, as I then practically was, was saved me by the faithful GABRIEL, to whom, because, having been brought up in the swamps, his feet were unaccustomed to the hard ground, I had given a pair of cricket shoes, which he now insisted on giving up to me again.

The main object of the journey had, however, been accomplished, and there was no reason why we should not make in as straight a line as the nature of the country

allowed to the point on the Potaro river to which one of the boats had been sent to await our arrival.

A few days later we came to the Macusi village of Konkarmo, one of the largest and most finely placed settlements of these parts. Here I re-entered a country known to me; for I had been here some years before when on the way to solve the problem of how to ascend Roraima, the huge, pillar-like mountain, the flat top of which had long seemed to be for ever cut off from the rest of the world by the unbroken abruptness of the cliff of two thousand feet which everywhere forms its sides. On that previous occasion, as has been told elsewhere, we contrived to creep up at one point in this cliff and to reach the top; but circumstances had then prevented any thorough exploration of the top, on which many interesting scientific problems still lie unsolved. Now, as I stood once more at Konkarmo, and in the evening was just able to discern Roraima standing like a huge wave about to break, far away in the West in the strong light of the setting sun, the longing came over me to go there once more, and to contrive to spend a longer time among the wonders of that strangely lifted mountain top. But this the trifle of the condition of my shoes, or rather of GABRIEL'S shoes, absolutely forbade. Nor have I since ever had a chance of re-entering the strange land of romance which lies on the cliffs of Roraima.

It was at Konkarmo too that on the occasion of the previous visit, I had entered for a time into one of the strangest nightmares that even unbridled religious enthusiasm ever produced.

Before our arrival no white men had ever been in the place and very few of the inhabitants had ever been away

into the white man's country. A few had however so travelled, and had returned with a wondrous tale of how, at a place in the forest, ten or fourteen nights away, they had found a great gathering of Redfolk, of various tribes, come together to hear a story which a couple of white men were telling who had suddenly come into those parts. The white men had talked and talked, and had taught the Redfolk to talk in the same way. Then the white men had taken the Redmen—as many of them as all the fingers and all the toes of all the people in Konkarmo—had taken them down to the river side, had put white dresses, like the dresses that the white women wear in the town, on these Redmen, had pushed them down into the water, and had then sent them away to their homes to be like white people. The returned travellers who had brought this wondrous tale to Konkarmo, had been obliged to confess that their skins were still red, not white—but perhaps that change took some time to bring about. And at any rate they showed that they had become like the two white men in the matter of talking.

The result was that when I came to Konkarmo, I found a very large building, a curiously good imitation of a church, in which the people of the village sat all day chattering in the new tongue which they had learned from the two white men, and only occasionally stopping to listen to one of their own folk who chattered away for a long time by himself. Where, if the building had really been what it seemed to be, the altar would have been, was an altar-like platform of plain stems, and over this were stuck up a portrait, from the *Illustrated London*

News,* of Mr. GLADSTONE, and the first of a cheap American edition of one of Mr. JAMES PAYN'S novels. So busy were these simple folk in cultivating this new fashion of the white people that they had neglected their fields and had forgotten to fish or hunt ; and, throughout the many wakeful hours of the night, instead of any longer telling each other the old stories of the strange animals and things that they themselves had seen and heard and that other Redfolk had seen and heard, they repeated to each other the strings of new syllables which they had so lately been taught to pronounce. Unfortunately for me they frequently insisted on coming to me as I lay in my hammock vainly trying to sleep in the midst of the school-like din, and, despite all remonstrances on my part, repeating proudly to me long strings of sounds which I had reason to believe represented in more or less accurate fashion the English Church catechism in the vulgar tongue of a neighbouring tribe of Redfolk.

Probably the enthusiasm of this newly established church did not long continue in its first intensity. At any rate by the time of my second visit it had assumed a very much milder and less unreasonable form, partly perhaps because, in the interval a white man had come and lived among them for a short time and had done something to teach them in more practical manner.

* The Jubilee Number of the *Illustrated London News*, published on the 14th of May, 1892, opens with a poem by no less a poet than Mr. Andrew Lang, in which occurs the verse :

Through every land goes forth her hand,
 The *Illustrated News*
 In temples of Roraima stand
 Framed fragments of her views.

Quite lately, it may be added, I have heard news from my Red-skinned friends at Konkarmo that the one of their number who had been the most prominent in first bringing the new fashion to the village, and had in consequence ever since usurped the leadership of the villagers, had been found dead under the raised floor of the church, killed, it was said, by Kenaimas. It may have been Kenaimas who did the deed, but there seems a chance that it was the work of some of the villagers who were at last thoroughly wearied out by the pretensions of their shamanistic leader.

It must not be thought that this story of how the church came to Konkarmo has been told in any spirit of depreciation of missionary efforts. The touching of the essentially admirable and happy original state of red-skinned societies by the hand of the white man is, as the world goes on, inevitable; and, as things now go on in Guiana, is there immediately inevitable. But it is certainly sad that the very first touch, however delicately contrived, leaves marks as of the finger on the bloom of fruit; and it is still sadder that these first touches however excellent in intention, are not always, or even generally, wisely contrived. To anyone knowing these Redfolk in something like their natural state, it is one of the saddest of sad thoughts that the tide of industry ever advancing into the secluded parts of the world must either annihilate or vulgarize the Nature-folk over whom it sweeps. To be a true missionary, the essence of which must be the finding of ways of softening this rough contact of advanced with primitive civilization, must be to aspire to one of the most heroic and least commonplace of heroic lives. The pity of it is that the

aspiration, together with the ability to give suitable scope to this aspiration, are among the rarest of rare qualities.

During our four days walk from Konkarmo to the Potaro we entered and passed for the greater part of the way through the forest tract which lies between the mountains of the interior and the sea. We came out on the Potaro at a distance of about a day and a half's boat journey above the great Kaieteur fall, which interrupts the navigation of that river, and just below which we expected to find our boat awaiting us. Where we joined the Potaro we expected to find a settlement, which had existed at the time of my last visit, and to get woodskins—the strips of natural tree-bark used by certain tribes of Redmen as boats. But we found the settlement abandoned, and could get no woodskins. It was from this point that my redskinned companions who had come with me so far were to leave me to return to the distant homes from which I had brought them; and as the next part of the journey to the Kaieteur, had, in the absence of any track through the forest, to be accomplished somehow by river, the sadness of parting from those pleasant folks was to some extent mitigated by the thought that, there being at the moment no obvious way of providing craft to take even my own three more immediate companions and myself, it would at least be impossible to take the Macusis farther. A distribution of calico, knives, beads, powder, and other such treasures, satisfied my late assistants; and these, apparently, with the exception of one or two of them, just as happy to leave us as to be with us, disappeared into the forest with the merriment of a party of children. And I was once more left with my three companions from the coast

on the brink of a river, and with many cares as to what was to come next.

Having decided to cut down trees and build a raft, we set to work at once ; and, though none of us had ever built a raft before or knew anything about it, by the evening of the third day we launched surely the clumsiest looking craft that ever was seen. On this we proposed the next morning to trust ourselves and our baggage, and to pass down the many miles of river which lay between us and the Kaieteur fall. Ever since we had entered the forest region seven days before, rain had continuously fallen, though not a drop had fallen on us during our long walk across the savannah. Now, life in a tropical forest into which the sun never penetrates, is at all times depressing ; but when, night and day, and day after day, each of the myriad leaves overhead drips rain into the gloom, the sense of depression is almost infinitely deepened. Moreover, our supply of food was by this time very nearly exhausted, ; nor had we time during the previous few days to replenish it by hunting. We were all, therefore, eager to be off in the morning.

The morning came ; and as we carefully packed all our belongings on the craft our anxiety became deeper as it sank lower and lower into the water. At last, just as the last pack was put on, but before any of us had embarked ourselves, the whole thing sank. First, we fished our property out of the water ; and then we began to devise some new plan.

My three boys made their way through the trackless forest up stream in search of the remnants of a settlement which was supposed to exist there. That whole day I sat watching in the rain ; but towards evening

one woodskin came rushing down the stream, heavily loaded, with its redskinned owner and my three boys. This woodskin we bought, at the price of one cutlass ; and once more we fell asleep in hopes of getting off in the morning.

If ever there was a load just wanting the last straw, that woodskin had such a load when GABRIEL and I with half our baggage in it, started on the downward journey. The other two boys and the rest of the luggage we necessarily left behind for a second journey. For a day and a half, in an overloaded piece of bark, we floated down the smooth reaches or rushed down the rapids till we came to the fall. There GABRIEL left me, and, with the rest of the party, rejoined me in three days' time.

On several previous occasions I had spent some days, under varying circumstances, at the place at which I spent these three lonely days, just where the Potaro river, four hundred feet wide, drops suddenly down a perpendicular cliff of 750 feet, into a great hole, from which it escapes through a narrow ravine in a series of rapids. The scene is magnificent beyond description. But on this occasion, the rain falling throughout the three days and nights, I lived in a dense mist through which it was rarely possible to see more than a few feet in front of one. The cold was intense—though probably the thermometer was never actually below 50. Wrapped in flannel clothes, an ulster of frieze, and often a rug, I found full occupation in trying to keep up a fire, and, from time to time, in cooking a little of the only food remaining to me—a few handfuls of flour and a couple of tins of oysters.

Once more the relaxation of pain itself proved a great pleasure when, rejoined by the rest of the party, we climbed down the cliff, having to make a great detour to do so, and found awaiting us at the foot one of the boats which left us many weeks before on the banks of the Rupununi. And when, in this boat we shot, at a most exhilaratingly tremendous rate, down the many cataracts and rapids which still lay between us and the sea, and once more came into civilization.

The story of the journey has now been told just as the memory of it remains in my mind, and without any intention of drawing a moral from it. Yet, at last, it seems that there are two morals to be drawn: one that a pleasure so great as to be conceivable only by experience, is to be had, even in this world of growing commonplace, from travel in places where the way has not yet been smoothed; the other is that there still exist human beings—and very lovable and in their way admirable human beings—who, entirely without the spectacles of civilization, see life in very bright colours but from an entirely different standpoint from that on which we look at it.

The Early Years of the Lamaha Canal.

By Henry Kirke, M.A.



ON the 29th Nov. 1892, Viscountess GORMANSTON unveiled the monument which had just been erected to the memory of Mr. WILLIAM RUSSELL in the open space to the west of the Public Buildings. Before the ceremony, speeches were made by Sir D. CHALMERS and Mr. HOWELL JONES, in which, whilst acknowledging his great eminence as a planter, special reference was made to the enormous benefit which Mr. RUSSELL had conferred upon the Colony by the inception of the various water schemes which now supply so many important centres of industry and population with one of the chief necessities of life. Although the East and West Coast Water Schemes, as well as that on the Berbice E. Coast will be for ever identified with his name, it was the Lamaha Canal to which Mr. RUSSELL'S attention was first directed, and to its development he devoted time and money which were never repaid, and expended an amount of energy which if it had been less recklessly squandered might have preserved his life to us for many years longer. Those of us who are old enough to recollect the Lamaha Canal as it was twenty years ago and who can compare it with the magnificent water scheme which now supplies a façade of estates thirty miles long with an abundant supply of water, can alone do justice to our great leader. From the time of CHALMERS'S Survey in 1865, various schemes had been propounded, angry feelings were aroused, one cure after another was

tried and failed, but the streams which were pouring into the Mahaica obstinately refused to come down the Canal, and any prolonged drought found both estates and town suffering from a water famine.

Now that we can look back and calmly consider the whole matter there can be no doubt that for years we were working on false data or rather false premisses. The area to be operated on consisted of a rectangular portion of land, bounded on the north by the Atlantic Ocean, on the East by the Mahaica Creek on the south by the Madiwini Creek and its tributaries, and on the west by the Demerara River. Looking at the district on an unshaded map, it seemed at first sight probable that the watershed of the district would be somewhere in the centre, and that the eastern part would drain into the Mahaica Creek, and the western into the Demerara River, either directly or through the Madiwini Creek. It was with this idea that the late Mr. ROBERT SMITH of Ogle persuaded the Government to let him cut a trench from Annandale to the Lamaha Canal to bring down water to Georgetown, but when the cut was made all the water ran in the opposite direction.

According to the old maps there were at one time two or three small creeks, of which the Courabanna was the most important, between the Demerara and Mahaica Rivers, which drained the E. Coast directly into the Atlantic ; but these creeks have long ago been stopped up and their streams diverted into water paths which supplied for some time the E. Coast estates with fresh water. The old surveys made by CHALMERS, SHANKS, and ALCORN were unreliable, as they were never carried far enough aback and their levels appear not to have been quite

trustworthy owing to the difficulty of surveying over a bottomless morass.* Mr. RUSSELL however, was not a man to be daunted by difficulties; day after day and night after night he toiled through swamps, tramped over sand reefs, cleaned out forgotten creeks, taking his own levels and making his own observations, careless of food or shelter, until at last he had solved the problem and taught us how alone the water could be procured in sufficient quantities to place the estates and Georgetown beyond the reach of a water famine. Instead of draining in any degree into the Demerara River, the whole of the rain water which falls in the area bounded as described drains into the Atlantic by way of the Mahaica Creek. Along its whole course the Madiwini Creek is bounded on the north by a sand reef so that no tributaries join it on that side, and all the small streams such as the Hoorabea, the Badawina, and the Kykutikarra all trend northwards and swell the waters of the Madoonie and Lama, both tributaries of the Mahaica. Having personally ascertained these facts, Mr. RUSSELL saw at once that the only way to force the water to the East Bank and Georgetown was by damming up the Lama and Madoonie Creeks and connecting the stop-offs by wing dams with the back dams of the estates on the one side and the high sand reefs of the Madiwini on the other. This magnificent scheme, which was partially carried out during his lifetime, has been continued since his death with such success that a few years may see its

* There was an attempt made to obtain water from the Madiwini Creek and Baron Siccama was instructed to take levels. Whilst traversing the swamps one of his theodolites disappeared in the peat, where it lies to this day, and was nearly followed by the Baron and his staff.

completion. The Russell Lake, as it has appropriately been called, will then consist of an oval reservoir of nearly 400 square miles of water, which ought to be able to defy the worst drought that can ever visit the Colony.

The works in connection with the completion of the scheme are being carried out by a Joint Committee of the East Demerara Water Supply Association, and the Lamaha Committee. The North wing dam to Cane Grove has been completed, and the South wing dam as far as the Madoonie Creek only requires raising in a few places. This dam will be continued southwards to the sand reefs, and two large weirs will be built on the Lama and the Madoonie to relieve the pressure on the back dams of the estates when the water reaches a certain height.

This great water scheme had a very humble origin. In its early days Georgetown obtained its water from a few wells, and a precarious supply from Ward's Canal drawn through a koker near where Lodge Village now stands. The East Bank estates from No. 3 Canal northwards were joined aback by a trench called Ward's Canal, which apparently collected the rain water from the savannahs to the east. Who WARD was*, and when he dug this trench, we have been unable to ascertain. This supply of water was found to be so inadequate to the wants of the estates and the town, that the proprietors of estates interested were summoned, and a meeting was held at the Old Colony House on the 2nd Novr. 1825. A previous survey had been made by Mr. BAKER with a view of tapping the Lamaha Creek, and bringing its waters to town. The Governor and Court of Policy had

* In an old Local Guide for 1832, Joseph Ward is put down as proprietor of Pln. *Industry*.—*Ed.*

been approached and had promised every assistance. At the meeting the Hon'ble, MICHAEL MCTURK was in the chair, and the proprietors of the following estates expressed their readiness to undertake and complete a canal from the head of Canal No. 3 to Lamaha Creek:—

Ruimveld.—N. M. Manget, Stephen Cramer, *q. q.*

Rome and Houston.—R. M. Jones, *q. q.*

Cuming's Lodge.—A. Garnett, *q. q.*

Turkeyen.—C. Spencer, C. D. Ridley, *q. q.*

Peter's Hall.—J. L. Smith, *q. q.*

Vlissengen.—Stephen Cramer, *q. q.*

Kitty.—I. B. Eastern,

La Peniteuce.—I. H. Albuoy.

Thomas.—Thos. Bagot, *q. q.*

Sophia.—N. Hugenholst, *q. q.*

The canal was to be 14 feet wide on level, 8 feet at bottom, and 5 feet deep. Georgetown at that time had no Town Council—its affairs were managed by Commissioners called the Board of Police. At the same meeting this Board agreed to dig out at their own expense a trench 15 ft. broad, 5 ft. deep and 6 ft. wide at bottom from the town to Ward's trench, where it communicated with the back dam of *Cuming's Lodge*. The Government on their part agreed to give grants of ungranted Crown Lands at the back of the estates which kept up Ward's trench, on their agreeing to keep it open in future.

So the canal was fairly started and the actual work begun; but at the very outset it met with opposition. Each estate agreed to send a certain number of negro slaves to dig out the canal. If negroes were not sent, *f*2.10. (two guilders and ten stivers) was to be charged against the estate for each negro absent; but some estates refused either to send men or to pay the indemnity. *Vlissengen* and *Werk-en-Rust* were especially contu-

macious. The estates had all agreed to pay 10 stivers per head for each slave on their estates towards the Overseer's salary, but this they failed to do. As GEORGE BAKER, the Overseer could not get his money, he petitioned the Lamaha Committee for payment of the amount of his account for f2,200. The Committee acknowledged the correctness of his account but said that they had no money. They forwarded the account to the Government and requested the Governor to pay the amount out of the Colony Chest, as also a bill of ALEXANDER FRASER, as Manager of the Canal for f315. The Governor refused very properly to do anything of the kind and returned the account to the Committee. Pln. *Haagsbosch* opposed the new canal as it would divert the bush water which in the wet seasons swept out the canal of that estate and so kept it clean.

However, despite opposition and want of money the work went on. A Committee of Management was appointed, an Ordinance passed, meetings were regularly held and minutes taken. From these minutes which have been pretty regularly kept since 1827, the following extracts have been taken which it is hoped will be of interest to the readers of *Timhri*.

The earliest minutes in our possession date from January 1827, when His Honour CHAS. HERBERT, First Fiscal, was Chairman and the Committee consisted of Messrs. STEPHEN CRAMER, J. H. ALBUOY, A. H. WALSTAB and RICHARD GRAY. The meetings were held at the Colony House and were fixed for the first Tuesday in January, April, July and October in each year. The shares in the canal were awarded to the different estates according to the number of working slaves which

each possessed ; thus *Rome* and *Houston* had 837 slaves and *Sophia* only 80, so their shares were proportioned accordingly.

A special meeting was held on 11th November 1828, to consider the state of affairs. The estates were represented as follows :—

Haagsbosch.—Messrs. Frankland and Nielson.

Peter's Hall.—Mr. Taylor.

Velserhoofd (Eccles).—Messrs. Cramer and Koert.

Rome and Houston.—Messrs. Cramer and Koert.

Ruimveld.—Mr. Cramer.

La Penitence, La Repentir, Liliendaal.—Mr. Croal.

Vlissengen.—Mr. Boom.

Werk-en-Rust.

Thomas.

Sophia.—Mr. Le Clercq.

Turkeyen.—Mr. Spencer.

Cuming's Lodge—Mr. Mewburn.

In going over the labour account it was found that *Industry* owed f1,842.10, which was compromised by payment of f900, *Haagsbosch* owed f896, *Rome and Houston*, f2,057, *Werk-en-Rust* f154, *La Penitence, Le Repentir* and *Liliendaal*, f915, *Vlissengen* f785, *Turkeyen*, f159. At the same meeting Mr. J. LUCIE SMITH, Jnr., LL.D., was appointed Legal Adviser to the Committee. An account of SAYERS the Overseer for f69, which had been referred to the Court of Policy was referred back to the Committee.

On the 24th January, 1829, members of the Board of Police, were for the first time elected as members of the Committee. On that date STEPHEN CRAMER, THOS. MEWBURN and THOS. FRANKLAND were elected to represent the planters, and A. H. WALSTAB, WM. JEFFREY and THOS. BARRY the Board of Police. Mr. N. M.

MANGET, proprietor of Pln. *Kitty*, petitioned to be admitted to the Canal Scheme which petition was granted on payment of £1,766. From the remarks of the President at this meeting it is clear that the only water which came into the Town reservoirs was drawn through a sluice in the dam, Mr. HOPKINSON'S or BOOKER'S. On the 5th January, 1830, the Commissioners, Mr. ABRAHAM GARNETT and Mr. BARRY, sent in the following interesting report as to the progress of the Lamaha works. They had on the 19th October previous issued a requisition for labourers from all the estates interested in the canal, of three per cent of their respective gangs, to meet on the 26th October for the object of extending the canal to the Lamaha Creek. The estates concerned, with the exception of Plns. *Rome* and *Houston*, *Velzerhoofd*, *Haagsbosch* and *Perseverance*, which did not send any sent their required quota of labourers, and the number of negroes thus obtained was only 72. With this number the work was continued until the 19th of December, when it was suspended in consequence of the rainy season commencing, after the canal had been connected with the Creek at about 4,000 rods due S. of the head of Canal No. 3. The clearing of the line for the canal was as arduous an undertaking as the digging of the canal itself, owing to the roots and stumps of large trees and other obstructions long buried in the savannah. In consequence of the soft and spongy nature of the main savannah, now for the first time penetrated for the distance of 1,000 rods, the proper and necessary level of the canal could not be driven through that part of its course, but by the rapid drainage which was shown by the vast stream of water that continually flowed from it towards

the Town, the immediate consolidation of that part of the savannah similar to others previously cut through would enable the canal to be deepened from 2 to 3 feet for the distance above alluded to, when the waters of the Lamaha Creek would descend with an abundant and constant current, and supply both Georgetown and all the estates interested.

The Overseer in 1831 reported Mr. R. G. BUTLER, proprietor of Pln. *Thomas*, for planting the dams of the Lamaha Canal with bamboos and so creating a nuisance. The current expenses of the canal were met by a poll tax of $f3$ a head on the negro slaves on the estates benefiting by the conservancy, which produced $f10,290$. The Secretary was paid 20 joes per annum and 5 joes for stationery. Mr. J. C. CAMPBELL was appointed secretary.

On the 23rd April 1833, the Commissioners reported that the canal had been completed to the Lamaha Creek, but that the sum due for labour &c., amounted to $f45,209.16$. The negroes on the estates amounted to 3,564 which at $f12$ a head would produce $f46,332$.

An application was made at this time by the officer in command of His Majesty's Ordnance to bring the Lamaha water into Kingston for the use of the troops.

On November 29th 1837, His Honour GEO. BAGOT, High Sheriff, stated that it having been notified to him by the Hon'ble the Court of Policy that he had been appointed President of the Lamaha Committee he had in consequence called a meeting at the High Sheriff's Office. At the same meeting Mr. MATTHEWS, Curator, brought to the notice of the Committee that the Town Council of Georgetown had illegally cut through the

canal dam and put in a koker on government land between the Race Course and Pln. *Lodge* for conveying water to Georgetown.

February 12th, 1838, Dr. MCTURK, proprietor of Pln. *Profit* asked to join the Canal Scheme. The Cumingsburg Saw Mill applied for water by pipe and offered to pay the Committee 30 joes per annum. This was agreed to.

January 21st, 1839, an application from the Town Council to put in a koker to obtain water from the canal was taken into consideration and granted.

November 4th, 1841, Mr. GORDON, proprietor of *Bel Air* asked to be admitted to the Canal Scheme. Agreed to on payment of \$73 33.

N.B.—This is the first mention of dollars in the minutes, the accounts up to this date had been kept in guilders and stivers.

February 24th, 1845, the Town Council were impatient of the control which the Commissioners exercised over their water supply, and they endeavoured to obtain sole authority over the Town Sluices; but at a meeting of above date it was resolved—"That the sluices supplying the Town must remain as now under the charge of the Canal Overseer." In consequence of this, the Town Council refused to pay any part of the Overseer's salary although applied to several times. The Overseer was accordingly instructed by the Committee to sue the Town Council for his salary in the Law Courts.

February 12th, 1846, Plns. *Goedverwagting* and *Ogle* applied for permission to join the Canal Scheme but their applications were refused. The Town Council offered \$500 as their contribution towards the canal expenses, but this offer was refused.

July 9th, 1846, Mr. WM. ARRINDELL was appointed standing counsel to the Lamaha Committee. Some disputes arose at this time between members of the Committee as to the legality of placing tunnels under the canal to connect two estates. Mr. PETER ROSE took the opinion of Mr. ARRINDELL, who stated in writing that "Neither the Committee nor Curators possess any power to grant to any person permission to put in tunnels to carry water under the canal from one estate to another for the purpose of drainage or navigation." It will be interesting to modern lawyers to learn that Mr. ARRINDELL charged \$25 for this opinion. At this time the annual estimate of the expenses of the canal were as follows:—

Clearing Canal	...	...	...	...	\$1,000 00
Repairing Stop-off	...	...	...	...	250 00
Salaries ...	...	...	...	...	1,442 00
Law expenses ...	...	...	...	...	133 00
					\$2,825 00

So much mortality had attended the first introduction of Portuguese labourers into the colony from Madeira and the Azores that the medical authorities were at their wit's end to devise some remedy or preventive. Dr. BLAIR in a letter to the Committee advocated placing newly arrived Portuguese on the pegass land which bordered parts of the canal, as an experiment as to whether peat land is a preventive against intermittent fever. This strange proposal met with no favour from the Committee, notwithstanding that it was supported in a long speech by Mr. GORDON of *Bel Air*; and they refused to have anything to do with it.

February 27th 1849.—Mr. GEORGE ANDERSON, proprietor of *Pln. Ogle*, asked to join the canal. The Com-

mittee agreed to admit *Ogle* on payment of \$1,000 entrance fee.

July 8th, 1850.—Mr. GORDON proprietor of *Bel Air* asked for permission to make an aqueduct to carry spare water from the canal to the sea.

November 6th, 1851.—The Commissioners reported the death of Mr. J. J. KNIGHTS, Overseer of the canal. Mr. J. BEETE was appointed Overseer in his place.

January 13th 1851.—Mr. MCNULTY was appointed President of the Lamaha Committee in place of the Hon'ble. GEO. BAGOT.

May 1852.—Two new greenheart sluices were put into the reservoirs in East Street, Georgetown, and a brick back wall was built to them. The whole expense was \$664.10, of which half was paid by the Town Council of Georgetown.

January 1st, 1853.—The Commissioners reported "that the kokers in Georgetown have been put into thorough repair at the joint expense of the Town Council and the Committee."

N.B.—The City of Georgetown was only allowed to draw water by gravitation from the Lamaha Canal.

April 12th, 1854.—President MCNULTY announced the death of Mr. CAMPBELL, who had been for many years, Secretary to the Committee. A vote of condolence was passed to his widow and \$240 was presented to her in recognition of her husband's services.

October 6th, 1854.—Mr. J. BEETE resigned his post as Overseer and Secretary. Mr. B. MCGUSTY was elected in his place to fill the dual office.

May 31st 1856.—The first meeting in the Police Magistrate's Office was held on this date. The meetings of the

Committee have been held there ever since. The expense of the up-keep of the canal was at this time \$2,303.33. Mr. MCNULTY who was Police Magistrate and Sheriff of Demerara was made *ex officio*, President of the Committee.

May 11th, 1857.—At this meeting the following resolution was passed.—“ That the proprietors are of opinion that Pln. *Haagsbosch* is strictly excluded by Ord. 27 of 1847 from any right to the canal or to the waters thereof.”

September 19th, 1857.—BARRY MCGUSTY, Overseer and Secretary, having died, Mr. JAMES SHANKS was appointed Overseer.

In 1858, the Committee of the Canal was :

Honourable HENRY CLEMENTSON, JAMES STUART, and GEORGE LILLIE, for the Planters; Sir W. H. HOLMES, A. W. PEROT, and WM. KNOX, for the Town Council.

Mr. MCDONALD of *Ogle* and Mr. JONES of *Houston* complained that the Overseer did not give them the share of water to which they were entitled. On this complaint Mr. SHANKS wrote the following minute. “ Mr. JONES also complains that he had shared badly as to water, whereas I could prove that he or his Manager kept his sluice in a bad state of repair for months with water at the sides *on purpose to get more than his share*. I say I can prove this: what would Mr. MCDONALD say if I were to bring into Court the bolt with the false head by which *Ogle* drew water every night and all night from the canal, paying the *Haagsbosch* watchman \$10 or \$12 per month for opening the sluice at nightfall and shutting it in the morning before daylight. Verily these are *Honourable Men!!!* But how comes it that Mr.

MCDONALD voted at the meeting for Mr. SMITH. Can two Attorneys vote for one estate."

In 1859 there is bound up in the minutes an angry correspondence with Mr. EDMUND FIELD, Attorney of *Peter's Hall*, relating to the supply of water to that estate from the canal.

May 28th 1859.—Mr. JOHN BRUMELL signed the minutes for the first time as acting Police Magistrate and Sheriff. He was confirmed in this post soon afterwards and presided over the meetings of the Committee almost continuously until his death in Decr. 1881. It had been customary for all the members who were present to sign minutes when they were confirmed, but this was discontinued in 1861, from which date the Minutes have always been signed by the President for the Committee.

February 4th 1860.—Plns. *Haagsbosch* and *Henry* were admitted into the Canal Scheme on payment of \$111 per annum by the former and \$73 by the latter estate, but on the 11th of the same month at a special meeting called for the purpose of considering the question, the admission of these estates was declared illegal and was cancelled.

March 1861.—Mr. JAMES SHANKS, Overseer and Secretary having died, the Committee decided to separate the two offices and appointed Mr. SCHLOSSER, Overseer and Mr. WM. SEON, Secretary, the Overseer to receive \$1200 and the Secretary \$240 per annum.

January 25th, 1862.—Mr. GEORGE LILLIE petitioned that Plns. *Providence* and *Sage Pond* be admitted to the Canal Scheme. This was agreed to on payment of \$1,000 entrance fee.

The supply of water from the Lamaha Canal was found to be very inadequate to the growing wants of the city

and the estates, so it was decided to ascertain by what means it could be increased. In December 1864, the Town Council voted \$1,000 to assist the Lamaha Committee in improving the supply of water *via* the canal. In March 1865, the Committee resolved to petition the Government to order a survey to be made of the lands lying between the Demerara River and Mahaica Creek and a deputation was nominated to wait upon the Governor and present the petition. The Governor subsequently received the deputation and promised his cordial support. Mr. CATHCART CHALMERS, Crown Surveyor, was told off for the survey which was to cost \$1,000, half to be paid by the Town Council and half by the Lamaha Committee.

The survey was made in due course, the report and chart being laid before the Committee on 16th June 1865. Mr. CHALMERS sums up by saying that "it is impracticable to obtain a supply of water from the Lama Creek or any of its tributaries unless by very expensive artificial means." He recommended a pumping station to be established at the head of the canal. But his schemes were too costly to have been entertained by the Committee, and nothing seems to have been done beyond clearing and widening the existing canal until Mr. RUSSELL appeared upon the scene about ten years afterwards.

This brings us down close to our own times, and to events within the recollection of living colonists, so it seems undesirable to pursue these extracts from the minutes of the Lamaha Committee Meetings any further.

The following is a List of the Commissioners of the canal as far as they can be ascertained from the minutes from 1827 to 1865 :—

- 1827.—Mr. Stephen Cramer, Mr. A. H. Walstab.
 1828.—Mr. Thomas Mewburn, Mr. T. C. Bagot.
 1829.—Mr. Stephen Cramer, Mr. A. H. Walstab, Mr. Abraham Garnett, Mr. Barry.
 1830.—Mr. Abraham Garnett, Mr. Wm. Urquhart.
 1831.—Mr. W. Urquhart, Mr. R. Nielson.
 1832.—Mr. W. Urquhart, Mr. R. Nielson.
 1833-4.—Mr. Geo. Robertson, Mr. R. G. Butts.
 1835-6.—Mr. Jas. Matthews, Mr. R. G. Butts.
 1837.—Mr. Jas. Matthews, Mr. H. McCalmont.
 1838-9.—Mr. R. G. Butts, Mr. Bruce Ferguson.
 1840-1.—Mr. John Jones, Mr. S. H. Van Nooten.
 1842.—Mr. John Osborne, Mr. John Evans.
 1843.—Mr. John John Jones, Mr. John Christy.
 1844.—Mr. J. H. King, Mr. Wm. Lyng.
 1845.—Mr. J. H. King, Mr. H. W. Howes.
 1846.—Mr. John Gordon, Mr. Wm. Barford.
 1847-8.—Mr. John Gordon, Mr. Wm. Barford.
 1849.—Mr. J. H. King, Mr. Wm. Barford.
 1850.—Mr. J. H. King, Mr. Chas. Conyers.
 1851.—Mr. J. H. King, Mr. Robt. Hicks.
 1852.—Mr. J. H. King, Mr. Wm. McPherson.
 1853-4.—Mr. J. H. King, Mr. Wm. Hicks.
 1855.—Mr. J. H. King, Mr. Samuel Barber.
 1856.—Mr. J. H. King, Mr. John McAllister.
 1857-8.—Hon. Henry Clementson, Sir W. H. Holmes.
 1859.—Hon. Henry Clementson, Sir W. H. Holmes.
 1860.—Hon. John Jones, Sir W. H. Holmes.
 1861-2.—Hon. Geo. Lillie, Sir W. H. Holmes.
 1863.—Mr. J. H. King, Mr. R. W. Imlach.
 1864.—Hon. John Jones, Mr. R. W. Imlach, Hon. Henry Clementson.
 1865.—Hon. Henry Clementson, Mr. R. W. Imlach.
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The First Thirty Years of Schools and Schoolmasters in British Guiana.

By the Rev. W. B. Ritchie, M.A., President of the B. G. School Managers' Union.

OME of the first Colonial Blue Books have disappeared. If, indeed, there were any Blue Books during the first quarter of a century after 1804, they are no longer available. And such documents of the kind as we have access to are only blue in name, but more blank than blue in reality. Especially do the Demerarian officials of those days—clergy and schoolmasters and the rest—seem to have been very neglectful of their duty in the matter of furnishing the Government with their annual returns. The Berbicians did better. Berbice had of course a Blue Book of its own. And that book contains not only a great deal of carefully compiled information ; but many quaint and readable remarks.

For lack of the information which such documents might naturally be expected to furnish, the difficulty of giving anything like an accurate account of our first schools is considerable. So late as 1840, partly owing to political conditions which no longer obtain among our labouring population, and partly owing to the social circumstances of the Colony in general, education was at a very low ebb, and held a very secondary place. This is how the *Royal Gazette* takes a retrospect and describes the outlook in 1837. "Thirty five years ago, adventurers came to the Colony. They were strangers in a strange land, they never looked on it as their home. They were

all hurry and bustle to get a fortune or independence and be off again. Fortunes were more easily made then, besides the climate was more unhealthy. They did not go to much expense in building as they have latterly done, but erected temporary residences with as little outlay as possible. They were more like denizens of heaven than at present, for they neither married nor were given in marriage, but now they are becoming like the wicked antediluvians who took wives, and gave their daughters in marriage until NOAH went into the ark. Progress is now the order of the day. There are fine houses, respectable marriages, plans for improving the town, and arrangements for security and comfort. All these dispose us to think that many persons have begun to look upon the Colony as the future dwelling for their sons and daughters, and thus is it necessary to have a good Public School or College."

Here we ought to remark that just seven years later Queen's College, which has always been the High School of the city, was founded by the late venerable Bishop of the Anglican Church, assisted by some of the gentlemen of the Colony. The School was opened in the old Colony House, and was afterwards held in a house rented for the purpose till 1853. In that year the present building was erected at a cost of £5,000. The Association for the maintenance and management of the School was incorporated in 1848. The perpetual Governors were the Bishop, the Attorney General, the Mayor of Georgetown, and seven others. Towards the cost of the Building several colonists subscribed £2,200, the Society for the Propagation of the Gospel gave £1,000, and the Combined Court voted £1,800, balance

of slave compensation money claimed by two old persons who died before the dispute was settled, and left no heirs. The College was so far supported by an annual Colonial Grant varying from £300 at its commencement in 1849, to £829.11.8, upon condition that the Bishop should yearly contribute not less than £200, which he did till 1861. Queen's College was the only high class school in the Colony, until the Roman Catholic Grammar School was opened in 1866. The Head Masters until the Institution was taken over by the Government were always clergymen of the Church of England.*

The first mention I can find of any Primary School is in 1812. In a letter of that year, the Governor, General HUGH LYLE CARMICHAEL, asks the Rev. JOHN DAVIES of the London Missionary Society to take two orphan children into his school. The Governor also commends DAVIES for the good work in which he is engaged. It is probable that DAVIES' school was the only institution for the children of the poor in Georgetown at that early date.

In 1824 two free schools, one for boys and one for girls, under the patronage and chiefly through the influence of Sir BENJAMIN and Lady DURBAN, assisted by many of the citizens, were established in Georgetown.

By reference to a minute of St. Andrew's Kirk Session of August 10th, 1828, we find it recorded that the two

* For an interesting account of the de Saffon Institution which has been of so great benefit to so many orphan children, the reader is referred to the late Mr. Ten Broeke's paper in Vol. II of the West Indian Quarterly.

What has become of the Estate of Walter Mitchell who died in 1862, and left his property, 'In order to found a Church, College, or other Charitable Institution, in this Colony, similar to the Saffon Establishment, though not with the same exclusion, but under similar rules'?

free schools had fallen very low in the matter of funds, and that the Kirk Session resolved to make a collection on their behalf, which collection, amounting to 1155 guilders, the Reverend Moderator was ordered to divide equally between these charitable institutions. In 1830, and for some considerable time previous to that date, there were also two slave schools in Georgetown. In addition to the aid voluntarily given to the free schools by the Church, a sum of £150 was annually voted to them by the Colony. The Master and the Mistress of these schools received about £100 a year each for their services. In addition to the free public schools for the poorer children, there were several private ones in different parts of the Colony,—two in the parish of St. Mary, and one in each of the parishes of St. Matthew, St. John, and St. James, in 1830. From a pamphlet published by the late Mr. KETLEY we learn that a school was commenced by a Mrs. LEWIS at Providence Chapel in 1832. Thanks chiefly to the efforts of the London Missionary Society, the state of public education seems in those early times to have been more in advance in Berbice than in Demerara. JOHN and LYDIA FISHER had kept a public free school in New Amsterdam for several years. And every year in almost the same words they reported for the information of the Governor that the school was supported by voluntary contributions and conducted upon religious and Christian principles, that it was opened and closed with prayer, that Master JOHN taught the children reading and writing, while Mistress LYDIA imparted a knowledge of plain needlework, and that each of them received £107.3.4 for their pains. Times became rather hard

for them in 1833. When the school was established it received 6,000 guilders from the Colony, but no further grant had been made in its behalf. His Excellency Sir J. CARMICHAEL SMYTH, Baronet, promised some help, and two hundred pounds were voted to Master JOHN and Mistress LYDIA in the following year.

The Missionary Society had by this time a long list of chapels in Berbice, and a school attached to almost every chapel. The Society was from the first opposed to slavery, and the earnest, if not always the most prudent, advocate of emancipation. The Missionaries took every opportunity of teaching the slave population. Thus, in 1834 they reported that hundreds on the plantations were learning to read; although they were prevented by distance from attending any regular school. With evident glee the London Missionaries also reported that one THOMAS LEWIS, a negro, who had been freed by his friends in England, was keeping school at Union Chapel in the Parish of St. Catherine in 1836. Who THOMAS'S English friends were we are not informed. In the same year the first Church of England school was started in New Amsterdam, and maintained chiefly by the Society for the propagation of the Gospel. ALEXANDER WRIGHT was the first Church of England schoolmaster in New Amsterdam. In the following year there were two public free schools in the Parish of St. Michael, and two in the Parish of St. Catharine, all partly supported by the Colonial Government.

Some account of Lady MICO'S Charity, extracted chiefly from the Jamaica Handbook will probably be

interesting to general readers, as well as to those engaged in the work of education :—

The Institutions and Schools under this Charity were founded in the year 1834 by the late Sir Thomas Fowell Buxton. The idea was to afford the benefit of education and training to the black and coloured population of this and the other West India Islands, as well as to train out of this population Teachers for their own Schools and the Schools of all denominations of Christians.

Training Institutions were established in Jamaica and Antigua; and Schools in Trinidad, Demerara, Bahamas, St. Lucia, Mauritius, Seychelle Islands, &c. Of these the two Training Institutions and the Schools in St. Lucia only remain.

The origin of the Charity is as follows :—

Dame Jane Mico, widow of Sir Samuel Mico, Knt., formerly Lord Mayor of London, had a kinsman who was engaged to be married to his cousin, a favourite niece of the Lady Mico. They were to receive two thousand pounds on their wedding day, the marriage, however, did not take place. The story runs that the lady preferred an Ensign and eloped with him, but whether or not that is the case it is certain that Lady Mico's niece did not receive the £2,000.

About the time Lady Mico lived, the middle of the 17th century, the Christian captives detained in Algiers by the Moors seem to have excited general sympathy, and from time to time persons of charitable disposition were wont to give or bequeath sums of money for the redemption of these captives. Lady Mico did the same and half of the £2,000 above mentioned was by her will bequeathed for this purpose.

The clause of the will dated July 1st, 1670, is as follows: "Whereas I gave Samuel Mico aforesaid two thousand pounce when he had married one of my neeces hee not performeng it I give one of the said thousand pounce to redeeme poore slaves, which I would have put out as my executrix thinke the best for a yearly revenew to redeeme some yearly." By direction of the Court of Chancery in 1680 a certain freehold wharf and premises in London were purchased with the legacy and conveyed to Lady Mico's executors.

The Suppression of Algerian piracy and the release of all the Christian slaves stayed English benevolence and the question arose,—what was to be done with Lady Mico's legacy, which had increased from £1000 to over £120,000?

Various plans were proposed from time to time, but nothing was

done until Sir Thomas Fowell Buxton in 1834 conceived that the interest of the money might be legitimately applied to the Christian instruction of the children of West Indians, a purpose equally as charitable as that for which the money was originally left.

The revenue of the Mico Charity, amounting to over £3,000 annually, was so largely supplemented by parliamentary grants that the trustees were able to spend about £20,000 yearly upon education in the West Indies and Mauritius. In or about 1840, there were six Mico Schools in British Guiana open to the children of parents of all religious denominations, the parents being expected to contribute something if their circumstances permitted. But on account of the withdrawal of the Parliamentary grant for negro education, the Mico trustees were soon compelled to curtail their educational operations, and to abandon their work in Demerara in the end of 1841,—the Colonial Government, influenced by the advice of Dean LUGAR, having properly declined to support schools not subject to Colonial control. The school buildings for the most part passed into the hands of the London Missionary Society.

Whatever difficulties may have hitherto prevented the education of the great mass of the people were to a large extent removed by the abolition of slavery in 1838. The Blue Book of 1840 reports that 'a strong desire prevails among the labouring classes to have their children taught to read and write, of which it is politick to take advantage.' That this was the opinion of the planters generally is proved from the fact that as early as 1840, evening schools were kept on many of the principal plantations throughout the colony at the proprietors' expense.

Nearly all the religious denominations had taken up the work of education in good earnest, with this result

that in 1840 the Church of England had 42 schools; the Church of Scotland 27; the London Missionary Society 27; and the Wesleyans 5. Most of the schools were so far supported by sums freely voted by the Combined Court, the vote in 1841 amounting to £3,159.16. The first systematic way of administering the grant was as follows:—The town schools and a few Mission ones received a yearly allowance which seems to have been entirely at the Manager's disposal. St. Andrew's school, for example, got \$500 for several years. But it was otherwise in the rural districts. Separate parishes received grants in proportion to their negro population. Later on, the grant in behalf of the country schools was administered by a board of Commissioners who held their meetings in the Hall of the Court of Policy. To this board the country schoolmasters sent their quarterly accounts, certified by their respective ministers, and received 50 cents quarterly and *per caput* upon the average attendance. (Miss B. schoolmistress in New Amsterdam, reported to the Commissioners that the total number attending her school for the quarter has been 34, and the average daily attendance is equal thereto, 'which,' the Commissioners remark, 'cannot be the case.')

The first Board of Commissioners seems to have fallen into decay. But a new Commission with power to enquire into the state of the schools in the rural districts, and to frame a scheme of more effective public education, was appointed in the beginning of 1848, of which Commission the Hon. THOS. PORTER, was Chairman, and JOHN LUCIE SMITH, Esqr., was Secretary. In some of his despatches, the Secretary of State, Earl GREY, deplored that the education of the

Colony was still in so backward a condition, and warmly advocated, not only a more thorough system of public elementary instruction, but the propriety of establishing a normal school for the training of teachers, an industrial school, and a model farm. With, as we think, statesman-like prudence, Lord GREY pointed out in his despatch that the welfare of the country must for the future depend upon the manner in which the rising generation were trained to take their places and to discharge their duties as free and intelligent citizens. In another despatch upon the same subject he declared that preference in the way of Immigration would be given to such Colonies as attended to the instruction of the negroes, and that if this duty were not properly attended to, the colony guilty of the neglect would probably be left out of the reckoning in the distribution of imported labour. About the same time, the Rev. R. DUFF, Minister of St. Mark's, wrote a strong letter upon the subject. He argued that the system of education was utterly defective, that the schoolmasters were for the most part incapable, and that from want of proper supervision the returns enabling the teachers to draw the *per capita* allowance were in many cases unreliable.

The work of the new Commission was quickened if not occasioned by these and other communications upon the subject; and a new scheme of public education was presented to the Governor early in 1851. The Commissioners' Report being the first of its kind in the history of the Colony will doubtless be interesting to all who are engaged in the work of education. That is our excuse for reprinting the following extracts:—

As a preliminary step of the greatest importance your Commissioners

recommend the immediate appointment by your Excellency of an Inspector of Schools. The want of statistical information on the subject of Education is so severely felt by your Commissioners that they consider an Inspector cannot too soon be deputed to visit all the Schools in the various districts of the Colony, and to report upon their condition and prospects.

Your Commissioners would respectfully suggest, that the present *per caput* allowance for licensed Schoolmasters should be discontinued from the 30th of June next, when it is hoped the new plan might be brought into operation, and that after that period the funds required for educational purposes should be raised, partly by a colonial grant and partly by a local assessment upon the parents and guardians of all children, whether attending school or not, between the ages of five and twelve. This assessment your Commissioners would fix at \$3 per annum for each child, of which \$2 should go towards the remuneration of the Schoolmaster of the district, leaving \$1 for general purposes.

It seems highly advisable that a Central Board of Education should be continued, at which the Inspector should have a seat and a voice at its deliberations, but no vote, and that local Boards should also be appointed. These might consist of an indefinite number according to the peculiar circumstances of the district, and in the proportion of two to one might be composed of Elective and Official Members; the former to be chosen by the school rate-payers, and the latter to be nominated by your Excellency, and to include one Minister of each religious body having a licensed school within the district, and also any Stipendiary Magistrate or Justice of the Peace resident therein. The *ex officio* members to sit for life or until they leave the district, and the others to be chosen at triennial elections, which might be held one month before the termination of the sittings of the existing Board. Occasional vacancies to be filled up within one month of their being reported to your Excellency by the Central Board.

The Schoolmasters, your Commissioners consider, should for the future be licensed by the Central Board, and should be paid by a minimum of \$250 out of the general funds of the Colony, and by the extra

Your Commissioners are of opinion, that as a general rule, schools remuneration of \$2 *per caput* out of the local rates before mentioned, should be established at or within a mile of every village, containing at least 50 inhabited houses, and also in such other localities as

may be recommended to the Central Board by the Inspector of Schools.

* * * * *

The question of the mode of Education to be pursued in the various Schools has engaged the serious attention of your Commissioners. Except the reading of the Lord's Prayer every morning at opening, it seems to them that the education should be purely secular. One half holiday in the week, however, should be set apart for the purpose of affording the children an opportunity of receiving religious instruction from the Ministers of their respective Churches, and the necessity of their attending Divine Worship on Sundays, according to the forms of their own several creeds, should be strictly impressed upon their minds.

Public examinations should take place half-yearly in the presence of the various Local Boards and the Inspector of Schools, and prizes should be awarded. The expenses of these and the other charges incidental on keeping the school-rooms supplied with books, stationery, and other necessary furniture will, it is hoped, be met by the local rates. The hours of attendance might be left to the Inspector and the Local Boards; but the Holydays should be uniform throughout the Colony, and should consist of three days at Easter, three at Whitsuntide, two weeks at Christmas, two at Midsummer, and the Queen's Birthday. These to be exclusive of Saturday afternoons, and of the other weekly half holiday set apart for religious instruction.

With regard to immigrant children, your Commissioners would recommend that the expense of their Education should be defrayed in the proportions of one-third by the owner of the estate to which they may be indentured, and two-thirds by the general funds of the Colony. Their regular attendance at School ought to be made compulsory on the proprietor receiving the benefit of their services.

The establishment of a Normal School for the purpose of training fit and proper Teachers seems a matter of the greatest importance, and should be immediately attended to. Your Commissioners would suggest that a Master should be appointed as soon as possible, to be paid a salary of not less than 1,000 Dollars per annum out of the public funds, and to have a residence attached to the School. The number at the Training School might be limited to fifty persons.

Bearing in mind the number of Schoolmasters not at present receiving salaries from the Colony, and who have to be remunerated, your Commissioners would recommend that the sum of Six Thousand

Dollars (\$6,000) should be placed upon the Estimate for Educational purposes.

The Combined Court confirmed the principles of the Report. All parties were of opinion that two most urgent *desiderata* were an Inspector of Schools, and a Normal College for the training of teachers. The Commissioners from eight applicants for the office elected Mr. GEORGE DENNIS our first Inspector of Schools, at a salary of £550, upon condition that Mr. DENNIS should proceed to England and return duly qualified for the work in January 1852.* About the same time a vote of \$1,000 was passed as a salary for the Master of the Normal School. The practical difficulties in the way of establishing a School for the training of Teachers of so many sects were similar in character to those still experienced. The late Bishop AUSTIN had purchased a building in Charlestown and fitted it up as a Theological College at an expense of nearly £5,000. This institution known as Bishop's College was converted into a Church of England Training Institution in 1853. In the same year the Combined Court, in addition to £200 for a Training Master, voted ten Exhibitions for the training of teachers, five to the Church of England, one to the Church of Scotland, and four to the Wesleyans. The Church of England students studied at Bishop's College, the Church of Scotland students were for some time trained privately by a clergyman of the church, while the Wesleyans were sent to the Mico Institution in Antigua. The value of an Exhibition was at first \$100, but was afterwards increased to \$150, per

* Mr. Dennis afterwards joined the Consular service. He wrote an interesting work called, *The Cities and Cemeteries of Etruria*.

annum. In 1859 two Church of Scotland students were admitted into Bishop's College on certain conditions. Later on all the exhibitioners, 16 in number, were admitted. In 1868 an annual grant of £200 was given for repairing the building, and in 1872, the salary of the Training Master was raised from £200 to £300, in addition to which, the Institution cost another £400 yearly, most of that sum being provided by the Bishop. The Training College, thus established by the energy and zeal¹ of the venerable Prelate, continued to produce many well educated schoolmasters until 1878, when it passed into the hands of the Government. Its abolition was one of the acts of the governorship of Sir H. IRVING.

But this is anticipating. The report of 1851 insisted upon what amounted to so-called secular education pure and simple. The Commissioners, however, were not unanimous upon the subject, while the Protestant churches were unanimously opposed to any scheme in which religious teaching did not occupy a prominent place. The Anglican Clergy and some of the laity, the Scottish Presbytery, and the Wesleyan Ministers, separately memorialised the Governor and the Court of Policy, and urged their respective views regarding the propriety and necessity of instilling moral principles into the minds of the scholars through the medium of religious instruction. The Governor sent on the Memorials to the Commission who resolved in the following polite and characteristic terms:—

‘Firstly, that the Commissioners having full confidence in the desire and ability of the clergy of the different denominations in this colony to afford religious instruction to the youth of their respective flocks,

must adhere to the principle laid down in their report of preserving a separation between the functions of the Schoolmaster and those of the clergyman; but will require a certificate from every pupil of his receiving religious instruction from the Minister of his particular persuasion.'

In the report which the Commissioners sent back to the Governor they stated that their sole reason for prohibiting religious instruction was that they did not see how the Bible could be taught in undenominational State Schools. After long delay an Education Bill on the lines of the Commissioners' Report was read for the first time in the Combined Court in October 1852. At the same time twenty five Memorials, including letters from the Bishop, and the late Rev. J. KETLEY, were presented in opposition to the measure. The Inspector of Schools had been his rounds by this time, and had become convinced that no system which excluded the Bible from the Public Schools would be acceptable to the people. The people associated their political freedom with the Bible, and entertained the idea that the attempt to keep the Bible out of the schools was in some way to undo the emancipation of 1838. Mr. DENNIS also reported that any attempt to tax the inhabitants for the maintenance of a purely secular system of education would be violently resisted. The bill was accordingly rejected. And the Commissioners were instructed to prepare a measure in which religious instruction should find a place, and in which the schools hitherto under the management of the various religious bodies should be recognised and supported as such. It was not till February 1855, that a Bill entitled, "An Ordinance to define

the terms and conditions upon which assistance shall in future be granted from the Public Funds for the promotion of Education," was passed. It is amusing to note that whereas the Commissioners had previously recommended a system of secular education, the very first provision of the Bill which became law was that no grant would be given to any school that did not provide for religious instruction!

The Ordinance of 1855 provided that the Teachers were to be arranged in three classes according to the results of an examination. First class schoolmasters were to receive \$720; second class \$400; and 3rd class \$200; and first, second and third class schoolmistresses \$540, \$320, and \$160 respectively. The provisions regarding school fees were curious and perhaps a trifle amusing. All scholars under eight years of age were required to pay 8 cents weekly, and all above eight years of age 16 cents weekly, to schoolmasters of the first class, while schoolmasters of the second class received only 8 cents and 4 cents weekly. There can be little doubt as to which of two competing schools having respectively first and second class masters would command the larger number of pupils.

Thus was our educational machinery at length placed upon that basis of Church management and Colonial inspection, which in spite of many important changes it still occupies.

APPENDIX.

A few Extracts from Mr. Dennis' Report, Feb. 1853.

In general terms I may state that the schoolmasters in this Colony are, with a few exceptions, not only grievously deficient in attainments, but to a still greater extent in the educational training which would

enable them to impart such information as they possessed in the manner most easy to themselves and most conducive to the advancement of their pupils.

In the Church of England schools here, the masters are of all degrees of attainments and qualifications, from one or two who have received a Normal School education, and are as competent to teach as any in the Colony, to those who are utterly illiterate—unable to utter a grammatical sentence, to spell a line correctly, or to write a decent hand. The same diversity exists among the masters of the Wesleyan schools, some of whom are among the best, a few among the worst in the Colony. Here the great want of a Normal School is felt. Not a few of these very men, whose intellectual attainments are so much below par, possess, what is invaluable in a teacher in this land, high moral qualities; and a year or two's study and training would probably render them efficient masters. One fact that greatly affects the average character of the Church of England teachers, is the Clerks and Catechists being required *ex officio* to act as schoolmasters. This I pointed out in my former Report of July last as an evil, and subsequent experience has confirmed me in the opinion that it would be highly desirable to separate the two offices, and to allow the Clerks and Catechists to receive extra pay as schoolmasters, if found on examination competent to act in that capacity.

The masters of the Presbyterian schools do not present such a wide disparity in attainments as in the cases just mentioned. A few are unquestionably very superior to the rest, and, save their want of acquaintance with the modern methods of teaching, would take no inferior position among their class at home. But on the average they are, I think, higher in point of attainments, as far as I have been able to judge from my limited intercourse with them, than the masters of the Church of England or of the Wesleyans. Several cannot write well, or spell accurately, but there is not one so miserably deficient in intellectual qualifications as are to be found in connection with the said religious communions.

Among the striking defects of many schoolmasters in this land, is their wretched creole pronunciation, and their inability to articulate several of the sounds in the English language. These defects, which are common also to their pupils, the masters are unable to remedy, and they become confirmed by the sanction of example.

I cannot conclude this subject without expressing my opinion that the

system of Free Schools in this Colony is a great mistake. It is highly desirable that those parents who can afford to pay for their childrens education should do so, and very few comparatively are there in this land with whom poverty is a legitimate excuse. The negro will not value education for his child unless he pay for it. The higher the fee, the more regularly is it paid, and the more regularly does his child attend ; and in those schools where least is demanded, the most difficulty is experienced in obtaining it. The principle of Free Schools for this Colony is a false one. If schools must be free, it should only be after the imposition of a rate for educational purposes.

The usual method of enforcing order in the schools of this Colony is by the use of a leathern strap, sometimes cut at the end into thongs, which is more or less freely used on the hands of the children, according to the disposition and temper of the teacher. I have not unfrequently also seen it wielded still more freely and wantonly by a monitor. It is used indiscriminately for both sexes. Even in girls' schools the mistress has it at hand. Most teachers profess to employ it as seldom as possible, but it is pronounced almost universally to be indispensable, inasmuch as children who are ruled by their parents wholly by the use of the rod could never be effectually controlled in school by other means. In one instance only do I recollect a master to abjure its use, and he had experience for some years in a neighbouring Colony of the efficacy of milder discipline. In a few other cases, though the strap or rod is occasionally used, the ordinary mode of punishment is by detention after school-hours, or by the imposition of tasks. In one school it is the practice to immure delinquents in a "black hole" under the stairs. In one instance only have I seen discipline reduced to a system. A list of crimes and faults to be punished was suspended in the school-room ; the former, which involved offences against morality, such as lying, deceit, theft, swearing, using obscene language, &c., were to be punished with a certain number of stripes on the hand with the leathern strap, according to the delinquency of the culprit ; the latter such as inattention, idleness, disobedience, or want of cleanliness, were punished by detention after school-hours.

The sexes are generally mixed in class in the schools of this Colony—often from the want of separate accommodation at other times, because, to keep them together, forms part of the system professedly pursued. In the better schools of the Church of England the boys and girls are kept separate. Also in the few belonging to the Church of Rome. In

the Presbyterian schools the sexes are generally mixed, and often, though at other times placed on opposite sides of the room, they say their lessons together. In the Wesleyan schools both plans are adopted, and to nearly an equal extent; yet it is a leading characteristic of Stow's system, which is professedly pursued, to make no separation of the sexes in school. In the schools of the London Missionaries the separate system predominates, but I have not learned that its adoption is owing to experience of the evil effects of the contrary system; and in those schools where the sexes are mixed, I have been assured that no impropriety has ever been known to result. In fact, in only one or two instances in the Colony have I been able to learn that the separate system has been preferred in consequence of the observation of evil resulting from the opposite course.

Roraima.

Translated from the German of C. F. Appun, by H. L. Bayrhammer.*



HAVING arrived so far on the 25th of January (1864) the first thing I had to do was to erect a hut for myself and servants, in which all my Indians assisted. It was built near the beautiful cascade of the Arabo-pu and was finished in the afternoon, so that I took up my quarters in it the same night. Its structure was very simple—it belonged to no style—for it was only a great palm-thatch roof coming down to the ground and divided by a partition of the same material to form two rooms, one of which was to be my bedroom and the other the general living room. It was quite open in front and here my servants lived and here I constructed a rough table and bench.

After finishing these my Cakota Indians declared their intention of leaving and going home. I accordingly paid them their wages and sent them away well contented. I was now left with three servants and five Indians, among whom were JOHN and his wife who had accompanied me from Massaruni. JOHN, with WEY-TORREH, an Arekuna who had joined me at Hana-re, I appointed as huntsmen; the other three Indians undertook to skin whatever birds and other animals I collected, in which operation they showed considerable skill.

JOHN and his wife put up a hut for themselves in the forest close by and there also settled the Wako-koi-yeng Indian, MANUEL, who arrived with several others the

* "Unter den Tropen." Vol. ii. Chap. 4.

same day and offered his services, which however I did not accept knowing him to be deceitful and not trustworthy.

The savannah in front of my hut looked like a large cemetery, for massive blocks of green jasper, turned black by exposure, stood up in long rows and most strikingly resembled tall monuments, statues and grave-stones.

On the other hand the neighbouring cascade was a picture of verdant life. The cold water of the Arabo-pu, clear as crystal, fell over a wall of green jasper about eighty feet high, formed of even smooth stones as if put together by human agency. Over this the river ran through a perfectly even smooth bed in several falls like gigantic artificial steps.

It was a beautiful picture. The clear shining water fell down over the pale green wall of rock, which, showing through, gave the rushing stream such a magnificent azure colour that one could not help gazing at it with admiration. At the foot lay mighty logs and tangles of floating wood brought down from the mountains in the rainy season when the river would be much swollen. From here the stream ran with the greatest rapidity between high banks, to join at two days' (paddling) distance the river Kukenaam; this flowing towards the west is swollen by the Yuruarie, also derived from Mount Kukenaam, to help make up the mighty Caroni and join the Orinoco near Puerto de Tablas.

I found the whole region so extremely interesting that I at once projected a long excursion up the Arabo-pu, which flows through a wide stretch of country at the base of Roraima. The savannah, where the ground was saturated with moisture, was covered with a multitude of

rare and beautiful flowering plants, of which I was most struck by the Befarias—the roses of the South American Alps—which formed great bushes and contributed to the unexampled beauty of the savannah by their splendid blossoms.

Along the bank of the river thickets of the magnificent *Kielmeyera angustifolia* were growing and covered with splendid, large, carmine, oleander-like flowers, which under the sun's rays dazzled the eyes with their brilliant colour—a splendid foreground to the ultramarine and violet slopes of Roraima that rose behind with its proud red and yellow glowing sandstone cliffs and silver water-falls precipitating from the top. Isolated rocks on the river bank were nearly covered with great clumps of *Cattleya labiata* (*Lawrenciana*?) on the flower-stems of which I often counted fifteen or sixteen magnificent glossoms. Among these the splendid flowering *Cypripedium Lindleyanum* also grew most exuberantly.

While standing for some time on an old hollow trunk lying beside the river I was awakened from my musings by a scratching and scraping inside. I kept very quiet, and watched the entrance for some time until the pointed yellow head of an animal was protruded. It cautiously peeped out, and believing itself safe, brought its whole body from of the hole. It was an ant-eater (*Myrmecophaga tetradactyla*) which lived in the hollow stem and was now going out to look for his supper, since no ants were to be found in his home. Unfortunately for him, fate had brought him under my observation, and as soon as he found himself in the savannah I jumped and tried to seize him. This however was not so easy, as on my coming near he defended himself so bravely with the

sharp claws of his forefeet that it was impossible to capture him. Then he tried to escape, but as he was not very nimble he could not succeed in getting away. As I could not catch hold of him with my hands on account of his dangerous claws, I took my large gauze butterfly net and succeeded in shovelling him into it. Folded in this, without his offering the least resistance, I carried him into my hut and soon incorporated him with my menagerie.

On my arrival home I found the Arekuna chief and several of his people awaiting me. He had brought a good supply of cassava bread and bananas, as well as a pair of new sandals, for which I gave him presents.

The night was like the preceding, very cool, and the thermometer, which had stood at 80 degrees during the day, now fell to 64 degrees, so I had to sleep in my hammock with two coats and trowsers as well as a blanket. This chill was especially felt by those live animals I had brought from the hot plains, of which there died from the coldness of the night in the course of the two weeks we spent here, a large water-hog (*Hydrochœris Capybara*) a *Nasua* (*N. socialis*) and the ant-eater I have just mentioned.

Early next morning the Arekuna chief again visited me bringing a gully-gut (*Galictis barbara*) and the very rare black striped *Nasua vitatta* of which this was the only specimen I ever saw.

The *Galictis barbara* was in the highest degree wild and untameable, and in a moment after I had put him in a cage made of strong staves half driven into the ground had broken through and taken to flight. He was, however, soon caught again by an Indian, but in spite of stronger

fastenings succeeded in again escaping on two occasions, until at last we had to tie him. Even then he found a way of liberating himself the following night and in the morning had disappeared leaving no trace.

My hunters proved that game, especially birds, was to be had in plenty in the Roraima forests. They returned in the evening with three powis, eight marudis, four duraquaras and two acouris, which they had shot in the neighbouring bush in a very little time. Besides these they also brought a few *Pipra connota* which they had killed with the blow-pipe. This elegant bird, which is called Kerepika by the Arekunas, I only met with at Roraima; the male is black, but the female greyish green, with the whole head, the neck and lower part of the thigh scarlet, as are also the feathers of the back part of the head, which are lengthened into two tufts that can be erected or depressed at pleasure. Another bird common in the forest of Roraima is the dara, (*Chasmarhynchus variegatus*), the throat of which in the male is naked and hung with vermicular fleshy appendages; except at Roraima it is met with nowhere else in Guiana.

The Arekunas of the settlement, Ibirima-yeng, three hours distant, brought me every day large strings of birds hung on bush-ropes, mostly *Tanagra*, *Pipra*, *Euphonia*, *Calliste* and several others, so that my Indian taxidermists had to work the whole day and I soon obtained a respectable collection. My mode of living in the hut at the foot of Roraima remained, with little exception, the same every day. At the same time however I discovered daily something new and interesting which was peculiar to the region. As morning dawned I rose from my hammock, and after taking

breakfast went to a neighbouring hill, where I worked at a water-colour view of Roraima. For this work I had chosen only the early morning from six to eight o'clock, for after that time the summit of the mountain grew over-cast with clouds which had lain in wait since sunrise on the lower slopes and then hid him for the whole day until near sunset, at which time he was again completely freed from the thick veil.

After my painting was finished, I went exploring the neighbouring forest or savannah, along the banks of the Arabo-pu, accompanied by CORNELISSEN and one of the Indians. The forest offered me rich botanical treasures, especially ferns, of which I found two interesting species—*Schizœa dichotoma* and *S. incurvata*.

My estimate for the Roraima chain of mountains gives at least two hundred species of ferns, half of which are probably peculiar to the region, and the remainder common to other mountainous parts of Guiana, as the Humirida and Canuku Mountains and the primeval forests near the coast. The only palms I found in the forests at the foot of the mountains were *Iriartea robusta*, *Ænecarpus Bataua*, *Æ. Bacaba*, and *Bactris concinna*, and near the top at the base of the cliff, 6,000 feet high, some species of *Geonoma*. The *Iriarteas*, standing together in large groups, contributed very much to the beauty of the forest, which otherwise in the dry season, from the many leafless trees, made a rather unfavourable impression. An immense number of trees, fallen and half rotten, which had been thrown down by violent storms reigning here in the dry season, were lying about in the forests, and my Indians had the task of cutting several of them in pieces daily to search in the rotten

wood for beetles or rare grubs, by which means I became possessed of a fine collection of Coleoptera.

From these excursions I generally returned to my hut about noon, and after a meal occupied myself with arranging and preparing the collections made; this finished I took an hour's rest. Then, about two o'clock in the afternoon, a real botanical excursion in the surrounding country was undertaken, from which I generally returned with some rich floral treasures. A bath in the clear cold water of the Arabo-pu concluded the day's work, after which I returned to my hut, where I generally met Indians of the neighbourhood with provisions and natural curiosities for barter.

I was thus visited about the end of the first week by an Arekuna family from a distant settlement on the Kukenaam. Among the party were four young girls who excelled in beauty all Indians I had hitherto seen. They may have been twelve to fifteen years of age and were already completely developed, so well formed in their bodies, and so harmoniously proportioned in their limbs, as to have served a sculptor for models of a Venus. At the same time, their charming faces did not show the pouting lips and bottle noses of negroes and coloured people, but on the contrary the latter were those of noble Romans, and their small mouths showed the former to be thin and very little projected. Their sparkling black eyes and raven dark hair completed their rare beauty, and in addition to this, like all Indian females, they had very small hands and feet like those of children. Except for their colour—which however was much lighter than that of other Indians—they could boldly rank with the most charming European women.

I gave them presents of pearl beads which they accepted with pleasure, and for which each of them allowed me one kiss, although they knew not the meaning of this ceremony as it is not known among any of the tribes. The Indians looking on burst into loud laughter at the sight. After the family, which consisted of ten persons, had remained for two hours and had satisfied their curiosity by gazing at most of my possessions, they went off to visit the old chief in Ibirima-yeng.

Both my coloured servants appeared to have been much attracted by the female beauties, and, with my permission, accompanied them to the next settlement, from whence they did not return until the evening of the following day. They appeared to have been very pleased and from that time made similar visits twice a week, at which they wore their best clothes and curled their hair *à la Titus*, at the same time taking presents of pearl beads and fine-tooth combs for the young ladies of the settlement; the combs were, sad to say, very much needed by them. Love was of course the reason for these journeys, and I did not begrudge them this, since they, without the slightest interest in the beauty of nature or their romantic surroundings, must have felt very dull.

For several days I had intended to ascend Roraima, but had been unable to get the Indians to accompany me until the morning of the 9th of February, when the old Arekuna chief KAIKURANG arrived with twenty of his people and offered to ascend the mountain. My preparations were completed at eleven o'clock and I started with my people and the Arekunas, leaving only CORNELISSEN behind to take care of the hut as he was afraid

to come. I should have liked very much to have had some of the Arekuna girls among my followers, but the chief told me they had refused for fear of the cold nights on the mountain and superstitious notions, it therefore resulted that the wife of JOHN the hunter was the only female among my attendants.

Cautiously we passed over the Araba-pu, close to the edge of the water-fall, with thick sticks in both hands to prevent our feet from slipping on the smooth slimy jasper rocks of the river-bed and save us from shooting down the cascade. The path then went along the bank, and up a very steep ascent, on the top of which was an elevated savannah covered with very sharp small pieces of jasper which soon played havoc with my sandals; luckily, however, I had a second pair with me. The savannah was barren to the highest degree, hardly even a small plant being visible until after two hours we arrived at a brook which was a source of life to fringes of vegetation. On its banks stood thick stems of the handsome *Alsophila villosa*, covered with dense brown hair and short stiff leathery fans by which this fine plant, which grows also on the southern slopes of the Andes in Venezuela, gets the appearance of a *Cycas revoluta* rather than a tree fern. Beside these grew a multitude of *Lomaria Schomburgkii* decorated with similar stems and fans, but smaller in size.

One party of twelve Indians remained behind here to set fire to a wide circuit of the Savannah as soon as we should be a good distance away, and then hunt and kill the deer which would be thus driven out. Meanwhile we climbed the steep slopes which were covered with savannah plants. Only the deep gorges which descend

from the top, and which are richly watered, are covered with high forest. In some places this extends over the precipices according as the soil on them is fertile and moist. At the foot of the high sandstone wall of Roraima, which rises fifteen hundred feet above the slope, extended a broad fringe of trees which differed remarkably in their gnarled growth from the lower forests.

Our guides moved slowly upwards over the steep precipices until, after two hours painful climbing, we reached a height of about two thousand feet, and resting here, looked back on the savannah below. The Indians had set the dried grass on fire some time before and now immense flames shot up towards us, advancing rapidly and sending on ahead dense black clouds of smoke which rolled up the mountain to where we were standing. To stay here longer under such circumstances was not to be thought of so we retired as fast as we could into a neighbouring gorge covered with forest, through which a clear mountain torrent rushed, and here we were secure against the fast approaching sea of fire.

The atmosphere around us vibrated like the thin veil of a water-fall in front of a wall of rock at the approach of the mighty column of fire, which rushed towards us with deep thunderings and powerful roarings, turning everything around into an immense mass of fire in a moment. At the edge of the little forest in which we had taken shelter it found fuel in the shape of tall grasses and the rank festoons of *Scleria flagellum* which grew up to the tree-tops. As quick however as the fire had approached so quickly did it pass, raging up to the summit of the mountain, fighting only with the grassy vegetation of

the savannah, as the trees were too fresh and green. Thick black columns of smoke rolled away from those places over which it had passed and hung over them for a long while like great clouds, out of which from time to time single birds of prey shot down with wild cries to the still hot ground to pick up those animals which had been burnt to death.

The deep forest gorge wherein we had taken refuge was chosen as a camping place for the night because of its brook and the agreeableness of its situation. Here several banaboos were quickly erected and as it was only three o'clock in the afternoon I took an excursion up the gorge. Meanwhile the Indians also dispersed, partly to hunt and partly to collect for me such natural objects as appeared to them rare. The brook came down in numerous cascades and its rocky banks were thickly covered with the most elegant ferns, especially the beautiful *Hymenostachys elegans*, *H. diversifrons*, *Trichomanes pilosum*, *T. brachypus*, *T. Ankersii*, and many others of similar kinds, while tall tree ferns stretched out their feathery leaves softly vibrating among the trees laden with orchids and tillandsias, above which was a perforated roof of tender green vaulting the crystal cool water of the brook. For a long while I made my way upward, following the course of the torrent, climbing over the rocks which filled its bed. The higher I got the thinner grew the forest until it became a thicket of matted bamboo and ended at last in the low vegetation of the savannah. Over this, blackened by the fire, I retraced my steps and found on my arrival at camp that the Indians had all got there already.

Those Arekunas who had been left behind to fire the

savannah had, I am sorry to say, no success beyond catching six specimens of a small kind of *Cavia* (*C. leucopyga*) which is called by them "Attu." Considered as edible, the animal did not look by any means inviting, as it had a decided likeness to a large rat except that the tail was wanting. These six rat-like creatures were the only result of the day's stag-hunting and there was nothing else to eat except cassava bread. The Indians praised their fine flavour, but this could hardly be depended on when their strange ideas of pleasant flavours were considered, however I ordered the six attus to be prepared for supper by my cook.

Meanwhile I examined the collections made for me by several of the Indians and found them to consist chiefly of plants, of which they brought only those parts of least value for the herbarium, entirely ignoring the flowers and fruits. When some fine leaves attracted their attention they gathered flowerless branches, and among these the magnificent *Thibaudia nutans* with rosy immature leaves, the elegant *Weinmannia ovalis* with tender light-green beautifully shaped leaves, *Melastomas* with red velvety leaves, and so on. The most interesting things which JOHN'S wife had collected was that magnificent *Rapateæ*, *Saxo-Fredericia regalis* which I mentioned in describing my journey over the Membaru mountains, and the superb *Utricularia Humboldtii* with three or four large brilliant ultramarine flowers on long stalks. Not to discourage the Indians from collecting I put all their plants between the drying papers whether they were worth anything or not, intending to throw away those that were useless on returning to my hut. After doing this I lay in my hammock in hungry expecta-

tion of my delicate supper, which came quite soon enough. The cook brought me on a plate two specimens of the cavia, which immediately affected my nose, smelling as they did like old mouldy skins. Since however game is never as sweet as Eau de Cologne, I did not blame the meat for its pungent smell, but tried by breathing it several times to accustom my nose to it, at the same time directing my thoughts to pickled cabbage (Sauerkraut), cheese and other viands which smell just as nasty but nevertheless taste very good. Gaining courage from this I quickly cut off a piece of this odorous meat and swallowed it without much chewing. The first bite did not give me the proper flavour, but the second piece which quickly followed it to the stomach did not remain there long. I jumped up quickly, and in the darkness of the forest, which seemed in unison with my feelings, quickly ejected it through the mouth. Although I had never eaten a rat, this meat seemed like what the flesh of that animal might be, its repugnant sweetness and penetrating skin-like odour affecting my stomach in such a way that the very sight of the cooked animals was disgusting, and I ordered my servant to remove them before I re-entered my tent.

I had finally to content myself with a supper of cassava bread and to put away the thoughts of my disgusting meal by a good sleep from which I was awakened towards morning by the arrival of a party of strange Arekunas. They came from a settlement on the Kuke-naam and had been attracted by the fire on Roraima, which could be seen at night from a great distance, they thinking on seeing this, that I was on the mountain. To our great joy they had some baskets of barbecued

venison, of which the greater part was at once handed to the cook.

After finishing my meal I asked the Arekunas to accompany me to the summit of the mountain, but they decidedly refused. Their chief told me that it was only up to where we were, and not farther, that they had intended to accompany me, as their superstitious fear of an evil spirit, and also a mighty eagle which lived at the top and killed every one who approached too near, prevented them ascending the mountain.

For a long time all my remonstrances failed in producing any effect, but at last, when my patience was almost exhausted, by a promise of rich presents, I succeeded in getting the chief's consent to go a little farther upwards with several of his Indians. To cut a path through the dense stunted bush, which extends along the base of the high sandstone cliff, he sent two of his boldest people, whom five of my Indians accompanied, all provided with cutlasses, so that we might not be hampered in ascending the mountain.

That this day might not be passed in an unprofitable manner, I undertook a botanical excursion, ascending the steep slopes which lead to the summit, where I was richly rewarded by the rare plants which I found on the savannah, and skirts of the forest; these consisted more especially of ferns and ground orchids, which covered the ground. Near the stunted bush, at the foot of the sandstone wall, towards which I advanced, were lying mighty blocks which had fallen from the cliffs, completely covered on their tops with orchids. Besides the lovely *Cleistes rosea* I found in the crannies of the rocks *Masdevallia Guyanensis*, *Oncidium pulchellum*, *Cattleya*

pumila, *Cattleya Mossiæ*, *Zygopetalon Mackaii* and several species of *Odontoglossum*, *Myanthus* and *Epidendron*. In contrast with these I found on the moist savannah, standing in great masses, the magnificent *Saxo-Fredericia Regalis*, and another fine *Rapateæ*, *Stegilepis Guyanensis*.

Until late in the afternoon I remained in this region, which gave such an exceedingly rich treasure of plants, and then descended the steep mountain to my camp in the gully. The Indians had again brought me large collections for the herbarium and again I found more than half of these entirely unsuited for my purposes. Besides these they had brought some live *Cavia leucopyga*. A sense of disgust came over me at the sight as they reminded me of yesterday's supper, but meanwhile I ordered them to put them in a cage woven of *Calathea* stems so that they might be taken back to the hut, and form part of my menagerie, but next morning they had disappeared after biting through the bars of their cage. Fortunately the Indians who had been hunting brought in two savannah deer towards evening so that we had plenty to eat, and jollity prevailed among the people. The track-cutters had also returned from the summit of the mountain and had as they assured me, made a comfortable road for climbing through the forest.

Next morning, the 10th of February, I undertook with the chief **KAIKERUNG** and some other Indians a journey to the summit of *Roraima*. Only the less superstitious of the *Arekunas* accompanied me, with the five in my employ, **JOHN'S** wife, and my two coloured servants. The weather was unfavourable in the highest degree; rain and an exceedingly strong wind made the steep ascent very

difficult ; and when we had climbed up for about an hour we found ourselves in a thick mist or cloud, which the storm drove before it with lightning speed. In ascending the slopes I had to brace myself up against the might of the storm so as to save myself from being blown down one of the many yawning precipices which flanked both sides of the path. At last, however, after much pain and trouble, we reached a small plateau which stood at the top of several steep precipices, and here we took a short rest. Giant boulders which had fallen from the high sandstone wall were lying about here in chaotic confusion, their surfaces covered with a luxuriant vegetation of the same orchids which I mentioned before, as well as aroids and bromelias. From the sheaths of the last, rose prominently the long flower stems of *Utricularia Humboldtii* with their fine ultramarine blossoms. Round about the boulders grew the great trunks of *Clusias*, *Thibaudias*, *Vochysias*, *Gualtherias* and *Myricas*, also overgrown with *Tillandsias* and *Orchids*. The rain soon ceased, but from the dark canopies of the high trees, great drops continually fell, uniting to form a small brook which flowed through the plateau and contributing to the luxuriance of the vegetation and the deep-green colour of the plants which overspread the ground. Behind this plateau stretched the stunted bush already mentioned, fifteen hundred feet above which frowned in gloomy majesty the reddish grey, partly blackened sandstone wall.

I cannot speak of the view over the country to the distant horizon, as the masses of clouds below us, driven by the storm, obstructed the view on every side. To escape the wind, which was particularly rough on this

open place, we soon recommenced our march, quickly getting over the small plateau and entering among the low bushes. This was the strangest tropical forest I had ever seen, and which I met with only once again in South America, on the small ridge at the summit of the Cumbre del San Hilario in the Coast-Andes of Puerto Cabello. Densely crowded together, the knotty twisted tree-trunks branch out from the very base, and then again bunch and fork one after another, so that with the creeping vines, ferns, scitamineæ and great masses of *Geonoma* palms (*Geonoma maxima*, *G. acutiflora*, *G. arundinacea*, and *G. baculigera*) they form such a close thicket as to be almost impenetrable to man. Completely covered with white-grey and sap-green mosses, which hang down in the greatest profusion like long beards, the most charming ferns, the most beautiful orchid blossoms, and the brilliant coloured bracts of the *Tillandsias* peep out and give this miniature forest a most odd appearance.

The whole forest rises amidst great mounds of debris from the sandstone cliffs. Gigantic boulders overhang each other, held together by interlaced roots, often for short distances stretching over deep precipices so that a passage can only be made by climbing on them and on the tree tops.

We camped at a fairly level spot intending to stay for the night. My tent was put up and the Indians built small banaboos covered with fronds of the *Geonoma maxima*. Drinking water was obtainable from a cistern-like excavation, thirty feet deep, where the forest overhung a precipice. As it was impossible to get down to this we had to fasten our cooking vessels to bush-ropes

and draw the water up as from a well. Having made our arrangements for the night we started for the difficult ascent to the base of the gigantic sandstone cliff, leaving behind the three Arekunas, whose superstitious fears prevented their climbing farther. After an hour's dangerous walking over the branches of trees and through long tunnels, from the sides of which festoons of wet mosses hung, and from whose green vaultings cold water like that of a shower-bath continually dropped, we succeeded in getting near the base of the cliff. My intention was to climb some of the great boulders which rose to a height of about a hundred feet at the foot of the wall, so as to get a perspective view, which it was impossible to obtain among the bushes, but after arriving at the rocks I found my project beset with great difficulties. Between the ground on which we stood and the boulders, was a gulf about five hundred feet deep, over which stretched a natural bridge about a hundred feet long, formed of a tangle of bush ropes, so closely intermingled that it was only through a few openings that a sight of the deep precipice could be obtained. The Indians carefully stepped over this natural bridge and I followed. The bush-ropes swayed to and fro under our weight but they were so thick and strong that it was impossible that they could break or tear away. Now and again one or another slipped so that his legs went through; he sat down as if riding the tough ropes and could not gain his feet until released from this disagreeable position by some of his companions.

At last the great boulders were reached. As the one I intended to climb was wet and slimy I took off my sandals and stockings at its foot, and then, with very

great difficulty, climbed up. Here I soon found the impossibility of getting farther as the cliff rose almost perpendicularly and it was utterly beyond the power of man to climb such a wall. Seen from such a short distance, it looked black and very porous, scaling off here and there in long flakes of about an inch thick. The reflection of the light from the hollows thus produced, gave the brilliancy to the wall which we had seen at the distance when the sun shone.

The upper edge as seen from this distance was a straight horizontal line, with great forks and points of the most strange shapes, and the magnificence of the scenery was completed by the fall of the Arabo-pu, which, with a thundering roar, fell down fifteen hundred feet and disappeared in the thick bush, to afterwards make another great leap before hurrying down into the plain. Forming the most southern limit of view, rose the gigantic obelisk-like rock Ibirima which with its point, excavated as it were, overhung in a threatening manner the steep mountain declivities. For thousands of years it may have been in this position and who can say for how many thousands more it will yet remain. The open space between it and the cliff is only a few feet broad and can be best seen on the south side of the mountain. A magnificent view presented itself to my eyes from this stand-point. In the far distance lay before me the strangely-shaped chain of the Humirida mountains, of a deep ultramarine colour, the highest summit, that of the Zabang-tipu being especially noticeable from its bell-shaped form. But what was that lying between these mountains and Roraima? Luxuriant savannahs, glorious woods, fine shaped hills alternating with beautiful valleys,

through which like silver ribbons wound the numerous rivers which originate from the summits of Roraima and Kukenaam—the Kukenaam, Camaiba, Arabo-pu, and Cotinga. And, all this in most brilliant colours, which with the changing light, appeared more or less intense every moment.

While I was admiring the magnificent panorama, the old chief came up and pointed with his hand to the south where lay a valley between low hills, through which flowed the broad Kukenaam. It covered a considerable area, but in other respects was like all savannah valleys having nothing strange or particularly interesting. However, to draw my attention he gave me its name as Beckeranta.

I must have heard this name before but could not at that moment remember where. My interpreter, the hunter WEY-TORREH, told me that many years ago several hundred Indians had killed each other and were there buried. Once more I glanced at the far distant luxuriant savannah, the soil of which was manured so richly with blood, and saw that the country round about was indeed very charming, but considering the horrible butchery, less agreeable for the eye to rest upon. WEY-TORREH was eager to give me further information about this horrible affair, but I told him that this was not the place for it and that I would ask him on the morrow.

On the top of the small plateau above the precipices I intended to make a sketch of the cliff of Roraima. For some time I remained on the top of the great boulder, collecting a few pretty ferns which grew in clumps on the surface, then giving the word to return, my companions scrambled as well as they could down its slippery sides. I preferred

to sit and slide down by means of my hands as guides and brakes, but on attempting this my feet slipped on the moss-covered rock and I went down with the speed of an express train. By the impetus thus given, when I arrived at the bottom my legs instantly went through the bush-ropes and I found myself in a most uncomfortable position over the precipice, the prickly jungle only keeping me from falling. The Indians burst into loud laughter when they saw my disagreeable situation, but came quickly to my help and soon drew me out. My body was scratched in several places by the thorns, but the thing that annoyed me most was that I had slipped back at the same place where I had left my sandals and stockings, and kicked these indispensable articles down the precipice. Since I had not another pair, and none of the Indians could help me, I was put to the sad necessity of descending Roraima barefoot, which since I had never yet attempted to dispense with shoes and stockings, was a great discomfort, especially in such a place. To climb down the rocky surface of the mountain, walk on the sharp-edged pieces of jasper which covered the savannah, pass over the natural bridge of bush-ropes, climb the branches of the low thicket and then pass through the moist tunnels, were indeed no pleasant tasks that evening. However, at last I arrived at my tent with feet wounded and sore, and found the three Arekunas who had remained behind busy cutting up a deer, which they had shot in hunting below the steep precipices. Fires soon blazed underneath each hammock and the little tough legs of venison were quickly roasted upon the barbecues to satisfy our hunger after so much hard work. A cold wind blew, which drove the clouds about us,

pierced into our camp and shook the big drops of water from the wet palm crowns and the umbrella-like spreading tops of the stunted bush. The change of temperature between the hot savannah at the foot of Roraima and the height on which we found ourselves now was very perceptible, and the naked Indians lying in their hammocks were chilled notwithstanding the fire which blazed underneath. So cold was it that I could hear a strange sound of chattering of teeth which with the whole surroundings made me think of the day of doom. The howling, which helped to bring up this idea was produced by the loud noise of the cascade of the Araba-pu falling from the neighbouring cliff.

Night came on and with it a still cooler temperature, which later sunk to 50 deg. Fahrenheit, and made me feel very chilly, notwithstanding I had on double clothes and a good fire underneath my hammock, which latter however the strong wind continually blew aside. The awful noise of the mighty cascade, the whistling of the wind which chased the clouds along the neighbouring cliff, and the cold, to which I was lately unaccustomed, prevented my sleeping, and much as I had been previously glad to get a quiet night without mosquitoes, which on this height luckily did not exist, now this satisfaction was altogether dissipated.

At dawn next morning I was still awake, and giving up all idea of getting a little rest, I jumped out of my hammock and sat down beside the fire. Now and again was to be heard a deep sigh and a faint shivering with cold as one of the Indians sat up in his hammock and tried to stir up the dying embers of the fire underneath, or stretched his stiffened legs so closely over it that I

fancied the scent of roasted flesh was coming from them. Sometimes the owner of the legs had gone to sleep with them hanging down in this way, and sprang up suddenly like a grasshopper when the flame reached them or when they touched a burning log. Musing upon these things, I passed the time until the sun had risen, when the Indians, one after another, came out of their hammocks and prepared to cook our breakfast. I am sorry to say that my coffee was finished and I had to put up with the Indian substitute, thick gruel of cassava meal or arrowroot, very proper for little children of one to three years of age but of course unsuitable for me; however it warmed me considerably and made me feel more comfortable. A large piece of roasted leg of venison, with saw-dust-like cassava bread followed the babies' pap, after eating which we at once started to return.

Before leaving this cold place a shrub having rather large dull green leaves and magnificent crimson bell-shaped flowers with milk-white centres, met my eyes, and I gathered some specimens for my herbarium. It was the beautiful *Leiothamnus Elizabethæ*, very rare here, but more common on the summits of the Coast-Andes of Puerto Cabello in Venezuela. After much trouble and with very sore feet, I reached the plateau from whence I intended to sketch the great sandstone wall. But a view from here at this early time in the morning was not to be thought of, as a mass of clouds hung like a great pall over everything, covering up all below and leaving only the strange-shaped forks and pinnacles of the cliff to be illumined by the rising sun, which, according as the rays were refracted, glowed with splendid purples and yellows.

The sun rose higher, the wind blew and commenced to tear asunder the veil of clouds, their great detached fragments floated towards the cliff and united in lines to form a screen, until the wind reached them here also and played its daily pranks, chasing them swiftly along the great wall.

I ascended one of the colossal boulders which lay around, sat down on the top and commenced to sketch the cliff of Roraima. From the tops of the high trees, saturated with moisture, which overhung the rock, great drops fell without ceasing upon me and my sketch-book, and rendered my work very difficult. Besides this my hands were cramped by the cold so that my patience was tried to the utmost. Remembering now the name of Beckeranta I called my hunter and interpreter, WEY-TORREH, so that he might relate the story while I was sketching—the story of Beckeranta, the vale of Kuke-naam, the grave of the murdered Indians which I had seen the day before from the cliff of Roraima. I give it here in brief :—

Twenty-four years ago there lived in the settlement of Ibirima-yeng, at the foot of Roraima, a Piaiman named AWACAIPU, who had, by his great cunning and fraud, become famous among the superstitious Indians, and was looked upon by them as a superior being. In his youth he had resided for some time in Georgetown and was one of the attendants of SCHOMBURGK in his explorations of the interior, whereby he had acquired some knowledge of the English language as well as the arts, tricks and bad habits of the negroes and coloured people with whom he had associated. By means of these acquirements he managed, after his return to Ibirima-yeng, to acquire some influence over his countrymen,

but as this did not satisfy his great ambition he endeavoured to make himself chief over all the Indian tribes of British Guiana. For this purpose he sent messengers inviting all of them to a great assembly which he intended to hold at the commencement of the dry season, at which he told them they would hear wonderful things and obtain the means of putting themselves on an equality with the white people. They must engage to forget all their quarrels for the time and bring offerings to the mighty Piaiman.

The fame of this man, who was only twenty-five years of age, was so great, that nearly all except those who were Christians accepted the invitation, coming from even the most remote parts of the country. Thus it happened that in this Kukuenaam valley at the time appointed nearly a thousand Indians of all the Guiana tribes were gathered together. Here they erected huts and waited the pleasure of the great Piaiman and the fulfilment of his magnificent promises. Every family brought presents of knives, scissors, looking-glasses, beads, salempores, ammunition, needles and other articles of value to the Indians, receiving in return, as charms to protect them from the evil spirit, three small pieces of printed paper. These consisted of leaves of books and newspapers, including the *Times*, which had been used by SCHOMBURGK for drying his plants, and were left behind at Roraima when that gentleman wanted to reduce the bulk of his luggage as much as possible—now the sly Indian knew how to give them a fictitious value.

AWACAIPU named the large settlement, in which so many different tribes had assembled in peace and concord, Beckeranta, an Indian form of a Creole-Dutch

word meaning "Land of the White" a name seemingly justified by the event. He had built for himself at some distance from the settlement a large double-floored clay hut with window-openings hung inside with salempores. Here he lived in the upper room, invisible to the crowd, and on the ground floor kept his harem of all the most handsome girls he could collect from the assembly without regard to the rights of their lovers. He was rarely to be seen in the gatherings of the people, and when he did appear was wrapped all over in salempores, only his cunning eyes appearing from the folds, threatening death and destruction to any one bold enough to dispute his commands. By his orders drinking bouts took place every night for several weeks, beginning at sunset and ending with the dawn. During the day, the men, drunk with paiwari, lay in their hammocks, while the women were incessantly occupied with the manufacture of this (to the Indians) pleasant beverage. Both sexes, however, united in the evening to pass the whole night beside the paiwari troughs, dancing and singing, when the two council-houses were specially set apart for this diversion. In this way many weeks were passed in the gayest manner while AWACAIPU was continually thinking over and maturing his plans to get all the tribes under his control. At last he appears to have succeeded in devising a means to this end, which was to include the murder of all those present who were capable of bearing arms. These, the most powerful and likely to oppose his projects, having been destroyed, he felt convinced the remainder would easily come round to his ideas, and to avoid the danger of delay resolved to carry out his *coup d'etat* as quickly as possible.

He therefore appeared suddenly before the people at midnight, when they were drunk with paiwari, and addressed them in a long speech. The Great Spirit MAKUNAIMA, he said, had spoken with him, and ordered him to tell them that he (MAKUNAIMA) did not wish that his children should be driven out of their own land by white men, to live poor and naked with the wild animals. He loved them and not only wished to make them equal in every respect to the whites, but even to raise them above the strangers. They would become rich, carry fire-arms instead of bows and arrows, have white girls for wives, and even themselves get white skins instead of brown. All who wished to obtain these advantages would have the opportunity offered them from that night until the one after the morrow, and those who chose this course must die during these three nights, one by the hand of another. The night of the following full moon the bodies of the slain would rise from the dead and come down from Roraima to their families, in colour and manners equal to the whites, and rule over the other brown men who had not gone through the same ordeal. With this AWACAIPU ended his murderous address, convinced by his cunning and knowledge of his countrymen, that the result would be powerful and effective.

The Indians, in spite of their pride in their own capabilities, envy the white people in every respect. They never acknowledge, however, amongst others that the whites are more intelligent and that they cannot acquire similar capacities by practice, but among themselves they admit this to be the case. And, it is especially the white skin which they envy, many of them being ready to give their lives if they could only possess it for a short time.

The crowd of Indians, however, although they expressed their approval of the first part of this communication, showed pain and terror depicted on their faces when they heard its dreadful conclusion. AWACAIPU was quite prepared for this, and when he saw the whole assembly standing perplexed and irresolute, he reproached them mockingly as cowards, and tried to incite them to action by brandishing the war club he held in his hand. Then letting it fall again and again on the heads of those nearest to him, these one after another fell down into the paiwari troughs with cracked skulls, where their blood mingled with the liquor. Of this horrible mixture he now dipped a calabashful and drank himself, afterwards replenishing the vessel and handing it round until not a drop remained in the trough. After that all hesitation was gone, every fear was deadened, and there was left only a mob of wild devils of both sexes, young and old. Drunkenness and bloodshed having overcome all ideas of peace and friendship, old hatreds began to come up afresh and tribal animosities to be revived. The almighty Piainan had hitherto wisely suppressed these, but now, by his terrible example and command, they were given free play. From the walls, where they had hitherto been peacefully hanging, the mad Indians snatched their war clubs, and swinging them high above their heads, brought them down upon each other with terrific force. Furious yelling, frightened cries and low death rattles, now took the place of the monotonous chant of "Heia, Heia!" in which they had so lately, united by friendship, danced round the full paiwari troughs, while AWACAIPU, having attained his purpose, went off home and left the Council-house to his unfortunate victims. The orgie of this

bloody massacre lasted until the end of the third night, in compliance with the supposed command of MAKU-NAIMA, and nearly four hundred persons including children fell victims of their most horrible superstition and the mad ambition of a savage. Then, the gay drinking bouts were over, and the survivors hid themselves in their huts to wait for the fulfilment of AWACAIPU'S promise.

A fortnight passed and the day fixed for the resurrection arrived—the time of the full moon—the day when the Indians would be put on a level with the whites—the day for the celebration of their great triumph. Immediately after sunset they began to look eagerly, and waited—waited through the long night—but never saw a single white Indian come down from Roraima to Beckeranta. In the morning, with downcast looks, the Indians assembled, and proceeded to the house of AWACAIPU, who quieted them by stating that the Great Spirit had ordered him to say that within five days they would be sure to see their murdered relatives rise and come to them as white people; the transformation had only been retarded a little. But, many of them had lost all confidence in him and a strong party had been formed who believed no more in his communications, for which they had many good reasons. In the first place he had forcibly and against their wish taken several fine young girls from their lovers, and put them in his harem, and then the assembled crowd began to be tormented by a very powerful enemy, hunger. Such a large body of people living here for over a month had necessarily consumed a large quantity of food, and beside that had used up much cassava in preparing drink. And this cassava is the only vegetable the Indian cultivates in

quantity, his staff of life ; all others such as yams, sweet potatoes, bananas, papaws, pine-apples, &c., are only of minor importance and therefore grown in but small quantities. Again, although the Indian can well enough endure privation for a few days, yet when this continues for any length of time he becomes very ill-humoured.

On the fifth night after the full moon they all again assembled upon the hill to await the fulfilment of the prophecy of the Piaiman, who sat on a boulder in their midst. For the whole night they stood watching silently in anxious expectation, but the sun rose with AWAI-CAPU'S promises yet unfulfilled. At last the crowd became impatient, and began to doubt his magic power ; low murmurings were heard, becoming every moment louder and more threatening, until at last they broke forth into a dreadful howl of rage. AWAI-CAPU rose from his seat, probably intending to try and quell the raging crowd, but as he did so an herculean Indian jumped beside him and brought down his war club with such tremendous force that the false prophet was stretched dead on the spot. The man who did this was my interpreter WEY-TORREH'S father, who had taken upon himself to avenge the hundreds of innocent victims destroyed by the murderous Piaiman.

Staring as if stupified the crowd beheld the deed, expecting every moment to see the anger of the Great Spirit fall upon the murderer of AWAI-CAPU. When, however, nothing happened, the people dispersed and went to their huts, uttering loud cries and lamentations over their murdered countrymen. Immediately afterwards the Piaiman's seraglio was broken up, and the half-willing half-unwilling inmates returned to their families,

while the mutilated body of its former master lay on the hill, to become during the following night a centre for all the hungry dogs of the place. Nobody enquired after him; he was dead, and his power entirely gone.

Next day all the Indians left Beckeranta and travelled homewards, having, to their grief, at last discovered to what a tissue of lying and deceit they had been the victims. WEY-TORREH and his father only remained at the deserted settlement long enough to set it on fire, and see that nothing was left of Beckeranta but a few half-charred posts. Then they also departed, leaving only the carrion crows to dispose of the fragments left over by the hungry dogs.

Thus ended WEY-TORREH'S story. My sketch had been finished long before and the cold morning breeze at this high elevation made me shiver, I therefore descended from my stone seat, and hurried towards a fire which my party had lighted to roast some pieces of meat.

Slowly we crawled down the mountain, and with very sore feet I arrived towards evening at my lonely hut near the magnificent fall of the Arabo-pu.

Recent Atmospheric Disturbances in British Guiana.

By Samuel Vyle, Government Electrician.



THE old time records of Demerara do not contain much information as to special disturbances of the atmosphere, at any particular period of the year, though it would appear that thunder and lightning were the usual accompaniments of the change from wet to dry, or *vice versa*. Lately however—in fact since the laying of the Telegraph Cable to Bartica—disturbances of an exceptionally severe character have been noticed in the neighbourhood of Bartica and Her Majesty's Penal Settlement, at the mouth of the Massaruni. The rise of these disturbances is as a rule very sudden, being invariably the ending of a sudden heavy storm of rain, which breaks with fury upon a hitherto cloudless sky. The rain-drops have a most peculiar appearance, almost like partially thawed hail-stones. Now it is known that hail generates electricity, and the condition of the rain drops referred to suggests the idea that probably actual hail began to fall; but in descending from the higher and colder atmosphere, to our hot tropical one, it became partially melted, yet not sufficiently so as to entirely disguise its form.

But, whatever may be the cause, it is certain that from June to September there are at what might be termed the foot of the hills of the colony, some of the most brilliant displays of lightning to be witnessed in any part of the world. The Instruments used to protect the Telegraph

Cables have been repeatedly struck by lightning, and the Telegraph Instruments themselves damaged. On Saturday the 4th Nov. 1893, about 6 p.m., an unusually heavy shower of rain, with lightning, followed by loud peals of thunder, broke over the Settlement. The darkness of the heavens was intense as if to afford a good background for the vivid display of the lightning, which for fully an hour illuminated the eastern portion of the sky. Looking up the river towards Kyk-over-al there was seen at first a dazzling forked or ordinary kind of lightning. Then followed the crisp sharp bomb-like explosion; and after it a sort of wriggling, corkscrew like fire, which seemed as if it worked its way from out the earth, upwards, and died away. There was also seen—or rather indicated—very distinctly the kind beheld all over the colony, which appears like a mighty bird-like glow of light, or flame, behind the clouds, which flaps out three or four bursts of light, and disappears, only to re-appear at very frequent intervals, for a whole evening. But the most brilliantly beautiful display of all beheld by the writer, and never before noticed, was an immense corrugated ribband-like light which seemed to multiply itself over the whole expanse of the heavens, in a thousand fantastic forms.

No harm whatever was reported as resulting therefrom; but in various parts of the colony damage has been done, though no human life has been lost. A cow however was killed during the past year near to a shattered Telegraph pole on the East Coast of Berbice. Along the Demerara Railway a number of recently erected Telephone Instruments were damaged; whilst at Belfield, several poles were split, and the bare copper wires melted. At Abary poles were also split, but the wire was not injured. No

damage has been reported in Georgetown, where considerable protection is afforded by the large number of Telephone, Telegraph, and Electric Light wires.

Very few buildings are protected by Lightning Conductors, although the planting interest have gone to the cost and trouble of affixing Conductors to most of their Estates' Chimneys, allowing them however to take care of themselves, ever after.

Magazines for powder &c., are in some cases fitted with Lightning Conductors, whilst some are yet existing without them. The Lighthouse it is true has what appears to be a protector; but it is utterly useless, from the fact that the connecting links are insulated by whitewash from one another. Unless the Conductor has a clear path to the ground, (where it should be attached to a good size Copper-plate, and properly embedded,) it is useless. As yet no harm has attended either of the cases referred to, nor the many buildings of prominence still unprotected in the city. There however still remains the possibility and uncertainty. Will that uncertainty lead to a remedy?

Chicago's White City: A Reminiscence.

By Thomas Watt, Member of the Institute of Journalists.

THIS paper does not purport to be a description of the World's Columbian Exposition of 1893—that unparalleled enterprise conceived and arranged by the United States of America in commemoration of the quadri-centennial of COLUMBUS'S discovery of the New World, and in the carrying out of which, to a successful issue, “all nations that on earth do dwell” may without the slightest shade of exaggeration be said to have co-operated and aided. A full number of *Timehri* would scarce suffice for a complete and detailed account of the aggregation of wondrously beautiful buildings, architectural gems singly and collectively, to which the poetic appellation of “The White City” was given, and their contents. No; that which I have been solicited by the worthy Editor of our Journal to contribute for insertion in this issue—pressed, I might say, at the eleventh hour—can at best be merely by way of a personal reminiscence, discursive and devoid of plan or method, of this unique and memorable Exposition, which it was my privilege and good fortune to attend in a professional capacity, as special correspondent for the colonial press, during well nigh a third of the World's Fair season. There was a British Guiana Court at this, the most notable international Show ever held, but at no time while it lasted was there ever a “Guianese colony” in Chicago. Perhaps a dozen people all told went at different times from British Guiana to the World's Fair, and

I shall ever hold it in pleasing recollection that it was, as already stated, my privilege and good fortune to rank amongst this "favoured few."

Chicago is probably best known by the term "Lake City," from the fact that it lies on the shores of Lake Michigan. It is also sometimes called "Pork-opolis," or "the Metropolis of the wild and woolly West." Distant nearly a thousand miles, in round figures, from New York, it is the second largest city in the United States in point of population, wealth, and industrial and commercial importance. Chicago to-day holds nearly a million and a half inhabitants, and she is not yet sixty years old. It is a curious co-incidence that it was incorporated as a city in the same year as our own Georgetown—in 1837, the year of Queen VICTORIA'S accession to the throne of Britain and on the eve, so to say, of Negro Emancipation in the British West Indies. But its original settlement dates as far back as 1779, when POINT DE SABLE, a fugitive slave from San Domingo, located himself there. The city in 1871 was practically destroyed by the memorable conflagration which consumed 17,450 buildings, rendering homeless 98,500 persons, killing 200, and occasioning a money loss set down at the enormous sum of \$190,000,000. To quote from an official guide-book of the World's Fair:—"One year after the fire many of the best business blocks in the city were rebuilt; five years after the fire the city was handsomer, architecturally speaking, than ever; ten years after the fire all traces of the calamity had disappeared." There was a second fire twenty years ago, causing nearly four millions damage, but the district was soon rebuilt in a substantial manner, and whilst restored and revived Chicago

has been the scene now and again of labour and Communist riots, the historians record with pride that nothing which has occurred served to check its wondrous growth and prosperity. Here let me quote something as to its situation : —

The site of the business portion of Chicago was originally a marsh. It is believed that Lake Michigan covered at one time almost the entire surface occupied by the present city. Beneath the marshy soil is blue clay, and underneath this is a quicksand. A leading engineer maintains that Chicago is built upon a crust less than thirty feet thick, and that the weight of the massive structures which have been and are being erected, may prove sufficient at some time to break through it? The result would be a disintegration of the foundation soil upon which these buildings now stand and a general collapse. This view, however, is not entertained by engineers generally, although the crust theory is admitted. Water is struck at a depth of about 8 feet.

On a substratum such as this, made-up land really and truly, are reared the scores of "sky-scrapers" which have made Chicago renowned, ranging as they do from the 13 storey Chamber of Commerce building to the giant Masonic Temple of 20 clear storeys above street level. Generally, foundations are made by pile driving and overlaying the soggy soil with steel rails crossed and re-crossed and filled in with cement so as to secure uniform pressure. The worst feature of Chicago is its Styx-like stream yclept the Chicago River, which formerly emptied into, but now by diversion flows from, Lake Michigan and divides the city into its northern and southern "sides." There are between 300 and 400 churches and chapels, and it is the birth-place and home of DWIGHT L. MOODY, the world-famed Evangelist of MOODY and SANKEY notoriety. It has 15 leading and 10 minor theatres ; "the Continental Sunday ;" and the celebrated "Stock-yards" in which huge shambles visitors may

any day, and every day but the Sabbath day, see live porkers slaughtered by the hundred and watch the various processes of treatment of the carcass ending with the inevitable pork sausage. Such, in brief is the home of the "hustlers," which won the contest for the honour of having the World's Columbian Exposition. A New York journalist, a member of the staff of Mr. GORDON BENNETT'S powerful organ, told me that the selection of Chicago was a huge political device—which, however, failed in its aim and object, for the Democrats enjoyed the handling of the shekels and not the Republicans: he was also kind and thoughtful enough to acquaint me with the fact that Chicago had the worst water supply in the world, and solemnly adjured me, as I valued my health, sedulously to avoid drinking any unless qualified by a dose of good whiskey! New York, to be serious, was emphatically "down on" the idea of Chicago having the Fair. To the mind of all and sundry in the Empire City, New York—only and pre-eminently—ought to have been the location. My journalistic friend aforesaid assured me that Chicago was the veriest tyro in the art of handling crowds, "whereas we, Sir, handle a crowd every day of our lives, have made it a study, and flatter ourselves we know how to do it." He was right there. New York can handle crowds. With her splendid street car system, her network of elevated railroads, and her mammoth ferries, she fills and empties her business quarters *de die in diem* with an ease unequalled even in the city of London proper, the daily ingress and egress of whose multitudes is alike the admiration and the bewilderment of every stranger. But Chicago won her spurs after all. There was a big

attendance at the Fair from first to last, and the means of transit were excellently looked after.

I had my first glimpse of the White City on the morning of May 11th, from the train in which I had journeyed from New York. There was a rush to the windows, and the white towers, turrets, and domes glistening in the light of that bright, crisp spring morn formed a welcome as well as interesting and picturesque sight. It denoted the near approach of the termination of a long overland ride of well nigh a thousand miles. The "Exposition Flyer," covering the distance—960 and odd miles, to be somewhat more exact—in 19 hours, had not been put on by the New York Central at that early stage in the history of the Fair, and both by that and the Pennsylvania route 25 hours was about the average time taken by the expresses—enough at a stretch to make one feel desperately glad at the end, despite the much-vaunted comforts of railway travelling in the States. The New York Central and the Pennsylvania R. R. Companies were working conjointly and into each other's hands, wherefore tourists westward bound could book by either route with the alternative privilege of returning by the other. But the sole advantage derivable was that of seeing the country—on the P. R. R. you traversed the mining district of which Harrisburg and Pittsburg are the centres, and away up in the hills you saw that triumph of American railroad engineering, "The Horse-shoe Curve": on the N. Y. C., you had the opportunity of travelling through the whole of the immense New York State, of seeing a little of the Erie Canal, the whole of the lovely Hudson River scenery, and Niagara from a Canadian as well

United States *point d'appui*. No reduction on ordinary fares could be obtained at the opening of the Fair—nor indeed, did anything like a “War of Rates” set in till long afterwards. There were several foreigners among my fellow passengers from New York to Chicago, and two in particular I remember—an Algiers merchant and his lady who were hieing to the Lake City in the hope of doing business in the Fair season, and, attired as they were in their gay Moorish costume, the pair were in all verity the observed of all observers at stopping places. Madame it was said was a Parisian born, but in deference to her swarthy lord and master she wore Algerian dress, consisting of a dainty fez bedecked with jingling gold coins, a scarlet jacket *a la Zouave*, richly embroidered with gold-lace, &c., &c. The only other passenger of whom I have any lingering recollection was a Hibernian who struck up a conversation with me in the smoking car. He eschewed politics, he freely informed me, because as the result of his practical experience, “one party is as bad as the other; ivery man jack, from the commonest po-lis’man to the President, has his price; so, Sir, I take no truck o’ them at all!” There is no “class” on an American train, that is so far as ordinary accommodation is concerned. But on the through routes there are always WAGNER or PULLMAN “drawing room” or “Palace” cars, for the use of which an extra charge is made, and it appears that these conveniences do not belong to the railroad companies, who merely hire them, as well as the sleeping cars, as required, from the manufacturers. Presumably the system is a form of application of the great division-of-labour principle, and of course it tends to the maintenance of monopoly rates. There

are not two PULLMAN or two WAGNER Companies, and hence it is that while the ordinary railroad fare from New York to Chicago is \$20 one way, you pay an additional 25 o/o for the use of a "sleeper" overnight and I know not how much more for the privilege of luxuriating in a "drawing room" or "observation" car during the day. PULLMAN'S cars are turned out from a place on the outskirts of Chicago, the works and the houses of the work-people covering a large area and being known as the town of PULLMAN, the entire estate being the Company's property. I remember a fine large model plan of the town of PULLMAN in the Transportation Building.

Arriving in Chicago for the first time is calculated to vividly recall the feelings of a provincial Britisher on his advent into London. You are like one lost in a crowd—if you have no one to meet you, if your quarters have not been selected in advance, and if you have lent a deaf ear to the persuasions of any of the hotel "agents" who usually board the trains as they are nearing the main termini. But as it is in the English metropolis, so it is in Porkopolis—the officials inside of the railway depôts are the pink of politeness to strangers, and there is always a "Bureau of Information" handy; whilst outside the police are available and ready to post inquirers on what they should do or whither they should go. In my case I fortunately had been able to command the good and kind offices of our Commissioner, hence my course was simple, easy, and plain enough. All I had to do was to lodge my luggage checks at the Union Depôt baggage office, and make my way out to the Fair. I say "out to the Fair" because the Exposition grounds lay quite

away in the suburbs, a distance of some seven miles in a south-easterly direction from the City Hall. From the Union Depôt the readiest method whereby a stranger could reach the Fair was by street car. It was the easiest because the nearest to the railway station ; but it was anything but the most direct and speedy. It was a horse car, and the stoppages must have been about one in every three or four minutes. At last, however, the wearisome ride ended, and a short walk brought one to the " outer walls " of the Fair. I ascertained afterwards that there were seven points of entrance, including the two steamer landings on the Lake side, with, in all, 326 turnstiles, 97 ticket booths, 182 ticket windows, and 172 exit gates—facilities considered capable of admitting half a million every hour if the attendance were equally distributed at all the gates.

The site of the World's Fair proper was Jackson Park, situated on the shore of Lake Michigan, and embracing 533 acres of ground. Several minor buildings and special exhibits, however, were located in the " Midway Plaisance," a wide strip of land containing 80 acres connecting Jackson Park with Washington Park, the latter described as " a beautiful gateway to the Exposition," covering 371 acres, and ranking as the largest of the " lungs " of Chicago. In the two years' interval after the Lake City won in the competition for the honour of holding the Exposition, against New York, St. Louis, and Washington, the whole appearance of Jackson Park underwent a complete transformation, the extent and nature of which probably only a very fractional part of the multitudes who visited the Fair understood or comprehended. This is how " CONKEY'S Complete

Guide," a semi-official Exposition publication, describes the spot as at the close of 1890:—

"The larger part of the site dealt with was a swampy, sandy flat, liable at times to be submerged by the lake. Other parts were low ridges, which had originally been sand bars thrown up by the lake. Upon some of these ridges there were trees, most of them oaks, of stunted habit because of the sterile and water-soaked soil in which they had grown, and the extreme exposure to frigid winds from the lake, to which they had been subject to a late period every spring. The idea was that there should be a system of navigable waterways, to be made by dredging-boats working inward from the lake through the lowest parts of the site, the earth lifted by the boats to be so deposited as to add to the area, and increase the elevation of the higher parts, which would thus become better adapted to pleasure-ground purposes and to be used as the sites for the buildings of the Exposition."

This stupendous undertaking, together with the beautification of the made-up grounds, cost upwards of five millions of dollars, and on the Exposition buildings there was a further expenditure of at least eight millions of dollars—a vast amount of money under these heads of outlay, sufficient to "run the show" here in British Guiana for say five consecutive years; but the result was the beautiful "White City" an adequate and merited description of which human language is almost powerless to convey. It was a magnificent sight when I arrived there within two weeks after the opening, even though the installation of exhibits still proceeded full swing amid the discomforts of a Chicago Spring; the grounds had grown increasedly beautiful ere I bade farewell six weeks later when the Western Summer had fairly set in; and it required but little strain on the imagination to foretell how transcendantly lovely the matured floral and horticultural accessories must have looked during the Indian Summer immediately before the curtain fell and "Old

Glory" was reluctantly hauled down from the towering flagstaff, atop of which it had floated for half a year over a site and a scene unparalleled in ancient or modern history. For a while after my *debut* at the Fair overcoats for men and furs for ladies continued not only *en regle* but absolutely indispensable. Towards the close of my sojourn, the heat became sweltering, and hundreds of visitors were observable roaming daily about in their shirt-sleeves with their summer outer apparel thrown over their arms.

Our British Guiana Court was located in the Agricultural Building. The Ethnological Exhibit under the roof of the Ethnological Building I had no chance of seeing, inasmuch as that part of the Show was not ready for opening up to June 30th. I will here quote the descriptions of our main and principal exhibit as published in two of the Fair guide books. The "Official Guide" had the following:—

BRITISH GUIANA.—Among its many exhibits are wood, minerals (especially gold), white and crystal sugar, and a number of boats used by different tribes of India (*sic.*) Also two huts built by an Arrawak Indian. Much space is taken in the Ethnological Section. There is a very creditable showing of manufactured articles illustrative of the suitability of some of the woods of British Guiana for fine furniture.

"CONKEY'S Complete Guide," before mentioned as a semi-official work and issued by the "Official Printers" to the Exposition, the firm whose monopoly—or in World's Fair phraseology "concessionary"—rights effectually stopped the sale of our admirable Hand-book, was more correct and detailed, thus:—

BRITISH GUIANA.—The British Guiana exhibit stands in the north-west corner of Agricultural Hall, and forms one of the wildest but most picturesque scenes in the building. Huge, square cut logs, from trees that shot upward 250 feet in the air of British Guiana, form pillars of

the exhibit. Greenhart (*sic*) and Mora—the hardwoods used in ship-building—the Koorahura, the Wallaba, used for making rum casks, and the beautiful crabwood, seen so often in furniture, are the most valuable exhibits. They are exhibited in the rough and after passing through the hands of the workmen. British Guiana is proud of her trees and maintains that her woods are still full of them. Besides these specimens of woods there are logs of purpleheart, hoolooballi, tonka bean, locust, white and yellow satinwood, and towranero. Some curious specimens of buttress wood, which has no heart and looks like the shrivelled hand of a giant, are exhibited as stands for flower pots. British Guiana also shews her skill in making curacao bitters and rum. Her preserved fruits are a speciality. In 1884, 250 ounces of gold were found in her gold mines. Last year the miners obtained 130,000 ounces and some of this is on exhibition. The prettiest part of the exhibit lies in the cases where some beautiful feather fans are shown.

There was a third publication, a copy of which I did not obtain, but wherein I was informed we got credit for showing the ugliest toad in the world! Commissioner QUELCH, it is superfluous to add, was in no sense responsible for the vagaries displayed by the guide-book compilers. Our Court was situated in the extreme of the Agricultural Building, not only *on* but almost entirely *in* its north-west corner-side. Entering from the north-west door, the visitor was confronted by the Liberian Court, next to which on the same side of the aisle came Curacao, and then third in order, the B.G. Court. On the opposite side of the alley were Mexico, with a façade equal to that of Liberia and Curaçoa combined, and Uruaguay right opposite our Court. Then came a cross alley, separating our Court from those of the Spanish West Indies and Brazil, while further southwards stood Trinidad. Jamaica was located in another building, the Manufactures and Liberal Arts Palace, associated with the latest World's Fair calamity. On my arrival at the Fair, which I have already explained was ten days after the inauguration by

President CLEVELAND, the British Guiana and Liberian Courts were the only ones of those above mentioned in a complete and finished condition. The Spanish West Indian Court was not ready for the reception of the public until the visit of the Princess EULALIA in June, and truth to say there was precious little in it worth looking at even then. The whole appropriation seemed to have been expended on the pavilion itself, the exterior of which was designed to represent an arcaded courtyard, and the material used in the construction being plaster the showers of thin white dust formed a fruitful source of annoyance to our Commissioner, who at length had to insist on the workmen periodically sprinkling the ground with water so as to mitigate the nuisance in some measure. As to exhibits, the Spanish West Indian Court principally consisted of a series of more or less elaborate showcases filled with varieties of cigars and cigarettes, and these "fixings" seemed lost on the carpeted area. Alhambra-like outwardly, from an internal point of view the Court gave you the impression of a first-class jeweller's showroom or the inside of a slap-up drug store. Our B. G. Court was an actual and theoretical Museum. How Cuba contrived to obtain so enormous a space for such a beggarly array as she turned out, was a standing mystery. Even with our circumscribed and altogether too limited allotment, Mr. QUELCH succeeded in arranging a show that was universally admired from first to last, but if he had had a ground area equal to that secured by his Spanish neighbours, the British Guiana Court would have reflected indeed the importance of the "Magnificent Province." Mexico's agricultural exhibit was opened while I was there,

but I recollect nothing beyond the pretentious pavilion exteriors of the Brazilian and Uruguayan sections, and as to the last mentioned, a great deal of time and money was spent on a landscape view of Coto-paxi mountain, which panel painting directly fronted the main entrance to our Court. Liberia made a nice little display, and her Commissioner, a gentleman of colour, was exceedingly courteous and obliging to his visitors. He was accompanied by a coloured young man who acted as Secretary. The curious feature of the Liberian representation, as it ultimately transpired, lay in the circumstance that it was "financed" by postage stamps, but if the story published in a New York journal were credible really unbounded faith was reposed in the philatelic enthusiasm of the Americans, and the unfortunate Commissioner came dangerously near being landed "high and dry" pecuniarily speaking, until just in the nick of time a New Yorker purchased his stamp stock in a lump. I never succeeded in seeing Curaçoa Court save from the outside. There was always a rope across the entrance way, and for all practical purposes the exhibit might just as well have been *non est inventus* up to the end of June. There were two life-size models of Dutch creole peasantry, a man and a woman, standing just within the entrance. I used to ask Mr. QUELCH'S factotum when Curaçoa would be open, and the query grew at last into a regular, daily joke. The sole information procurable, however, was that the Curaçoa Government had only voted a very limited amount for the Exposition, and the balance after installation expenditure merely sufficed to meet the cost of keeping the little Court open a certain number of times

and the dates had to be spread over the Fair Season! Such was the story; I do not vouch for its accuracy, and simply give it as I heard it, with the addendum that not once during May or June can I charge my memory with having seen the Curaçoa Court open. Trinidad had separate forestry and horticultural exhibits, in addition to her showing under the same roof as ourselves. Mr. QUELCH told me he had been much pressed in the installation period to split up his exhibit, that is to say, to send his mineral collection to the Mining Building, and his woods to the Forestry Building, while the Women's Department cast covetous eyes on his rich samples of our Portuguese ladies' art needlework. But he resisted all temptations and all persuasions, with the result that, save and except the ethnological department and a batteau or two in Transportation Building, we retained "all our eggs in one basket," and beat the West Indies in regard to the comprehensiveness of our display. The B. G. Court was a veritable little museum, and its popularity and notoriety were unquestionable, the urbanity of the Commissioner contributing very largely to the attractiveness of our section among the Fair visitors. Mr. QUELCH was a *persona grata* all round—with the World's Fair officials, with his brother Commissioners whether from foreign parts or the United States itself, with the Chicago Press, and with the public. In this statement, I feel certain all the Guianese who visited the Fair will concur, and justice demands that it should be recorded in the pages of *Timohri*. But my task is not that of "booming" either an individual or an exhibit, and I must get back to a reminiscent strain. Not being a sugar or rum expert, I cannot "talk shop" about such

matters though perhaps not so hopelessly ignorant as the World's Fair Judge who was caught by our Commissioner in the act of classifying Guiana crab-oil as "oil from crabs!" I may state, however, that the Cuban saccharine exhibit seemed shockingly poor. Of sugar, I do not think there was any from the Spanish West Indies, and what little rum was on view was simply lost to sight among cigar boxes. Talking of Cuban cigars reminds me, that now and then robberies were reported from that Court, the plunder on one occasion consisting of eight or nine Cabanas valued at a dollar each, indicative of fine, exquisite taste on the part of the nocturnal thief, for the peculations invariably took place during the night, when only a few members of the Columbian Guards, (the World's Fair police) were left in charge of each of the several buildings. Trinidad, Jamaica, and ourselves displayed cane sugar, of course, and of the trio I liked our show best. They exhibited theirs in boxes or glass jars, either or both, and Trinidad had in addition some specimen cane-stalks. Our sugars were shown in open saucers under a large glass case, in two sections, one the dark crystals manufactured specially for the United States market, and the other the graded fine qualities sent to the United Kingdom. This was surmounted by a pyramid of rum samples. Neither of our British West Indian rivals at the Fair adopted a method of this sort. In that respect, Mr. QUELCH'S plan was as effective as it was unique. It was an object lesson, and to my personal knowledge the lesson served its purpose and the object was discerned and noted. Not one, but several, Americans in my hearing, sought to have an explanation of the division of the

sugar samples, and when they had got it followed it up with another query, "Why don't we get this beautiful clean stuff here?" Then came the Commissioners' opportunity, and in such instances local readers in particular may rely that the nail was driven right home. Who can, or dare, say that a word in season under those circumstances, was not more powerful than a dozen "treaty arrangements?" Louisiana, of course, had a special display of sugar, part of her State pavilion being made up of sugar-canes and sugar in horizontally-laid barrels with the ends glazed. But to my unpractical eye, the product looked dirty—something in hue between our dark and straw crystals. Anyhow, right or wrong, the general impression I got was that considering the magnitude of the industry and its subsidy from the United States revenue, the appearance of the product as exhibited was not in any sense comparable with that shown by the British West Indies.

Our display of timber was very fine, and our Commissioner deserves praise for his handling of the exhibits in this connection. Mr. QUELCH'S mode of utilizing the big squared logs of hardwoods served a double purpose. It secured, on the one hand, a novel and effective framework for the Court and saved the expense of a pavilion, while on the other it brought our commercially valuable timbers into a prominence they would scarcely have obtained had they been relegated to the recesses of the Forestry Building. Trinidad had a small Court there, but it was swamped amidst the multitude of exhibits from the great lumber-producing States and elsewhere. In the construction of the main divisional buildings of the Fair, the material called "staff" entered very largely. But in

this respect the Forestry Building was an exception. It was made entirely of wood, and had a colonnade composed of tree trunks from almost every State in the Union. Among the interesting contents of this picturesque edifice—it looked like a huge chalet surrounded on all sides by a wide verandah.—I may mention a section of yellow fir from Oregon 6 feet 4 inches in diameter and, reputed to be 700 years old; a spruce cutting, 9 feet 9 inches diameter, from a 300 years old forest giant, 305 feet high, estimated to produce 180,000 feet of lumber; and a round section of Californian redwood 14 feet in diameter, with a mark on its huge disc showing the diameter in 1492, the year of COLUMBUS'S discovery of America, what time the tree had already attained the patriarchal age of 475 years! All these were very curious, but their interest paled, I think, before one of the exhibits in the Federal Building, as it was called, the stately and classic structure put up by the United States Government and in which were shown historic treasures of the Washington State Department, Smithsonian Institute, War Department, Post Office Department, and others. Constructed of iron, brick, and glass, and covering about 4 acres of ground, an octagonal dome 150 feet in height, rose from its centre, and the most prominent object in the spacious rotunda thus formed was a section of the great Sequoia tree from National Park, California. The original tree was 26 feet in diameter, 81½ feet in circumference, and 300 feet in height, and the section of which I write was taken from it at a height of 20 feet above the ground; it had to be hollowed out, and divided into sections and hauled by means of teams of sixteen mules each, on heavy

trucks built for the purpose, a distance of sixty miles over an exceedingly heavy mountain road. The section was sub-divided into 46 smaller sections, some of them weighing 4 tons each, and eleven cars were required to transport the pieces from Monson, Cal., to Chicago. The total cost of cutting, shipping, and installing the section was \$10,475. There was a winding staircase inside, whence visitors could proceed to the top of this immense wooden mass, which looked not unlike the hull of an old-time man-of-war. It was in the United States Government Building that I saw a huge "Relief Map," of South and Central America showing the proposed line of the Intercontinental Railway; and in the galleries devoted to exhibits of the "Bureau of South American Republics, &c," I noticed a large collection of enlarged photo. views, embracing British Guiana, Trinidad, Martinique, Jamaica, the Bahamas, Curacoa, Venezuela, &c. Those of Venezuela preponderated, and as to our own colony the pictures were confined to our immigrant population, representing "Coolie Musicians, British Guiana," "Coolie Belle, British Guiana," "Hindoo Coolie, British Guiana," "Coolie Magician, British Guiana," "Group of Hindoo Coolies, British Guiana." I imagine they were enlargements of ordinary photographs, and some of the subjects being rather familiar my idea was that the originals were the work of NORTON BROS., sent on to the State Department by some thoughtful Consular representative here while that firm of photographers was in business.

Anent our timbers, it may be worthy of mention that a lumber-buyer for the Burlington Railway Co. once

visited the B.G. Court, took the names of a lot of our polished specimens, and volunteered the opinion that he had never seen woods anywhere so suitable for railway car internal furnishings.

There are a host of recollections which crowd in on the mind as one writes—visions of how vastly delighted colonists with antiquarian taste such as the Hon. N. D. DAVIS and Librarian RODWAY would have been to have wandered leisurely through the model "Convent of La Rabida" exploring its wealth of Columbian treasures in the shape of portraits, maps and charts, and curios from the Caribbean—of how interested go-ahead members of our Children's Protection Society would have been to have seen the great model Crèche, Gymnasium, and Kindergarten School which comprised the Children's Building in the White City—of the strangely effusive "loyalty" displayed by a republican city and community towards a daughter of the Royal house of Spain and her husband—the "Infanta and Infante" as they were described on the invitation cards for a concert given in Festival Hall in honour of the Princess EULALIA—of the intense pleasure it afforded every Britisher and British Colonial to listen at that concert to the magnificent singing of England's great tenor, Mr. EDWARD LLOYD, whose "Cujus Animam" was a treat long to be remembered—of the strange "World's Fair language" which came into vogue, so that you heard one man invite his friend to "just drop down to Australia for a minute, then we'll go in at Spain and see so and so, taking in France, Sweden, and Ceylon on our return—they're all in a cluster you know!"—but I feel that I must stop here as Mr. RODWAY tells me that space is

very limited, and perhaps on a future occasion I may find time to resume my reminiscences of Chicago's White City.

Report of Meetings of the Society.

Meeting held on the 13th July.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 10 members present.

The President informed the meeting that himself, the Vice-President, and Honorary Secretary had waited on His Excellency the Governor and requested him to accept the office of Vice-Patron of the Society—the office which had always been filled by the Governor. His Excellency kindly consented and showed a warm interest in the welfare of the Society and matters pertaining to agriculture. He had promised also, with Lady Lees, to be present and open the Horticultural Show next month.

Elections.—*Members* : Messrs. W. Gloster, E. F. Wright and R. P. Kaps.

Associates : Messrs. C. Dowding, T. H. Trotman, Willis Bailey, William Peets, Arthur Tengely, A. H. Napper, E. Heyliger, H. O. Dempster, George M. Shaw, and C. H. L. Rudder.

The Secretary read the annexed report of the Committee of Correspondence, in connection with which Mr. Bellairs gave the annexed notice of motion.

Georgetown, July 11th, 1893.

To the President and Members
of the R. A. & C. Society.

Gentlemen,—By direction of the Committee of Correspondence, I have the honour to lay over copies of the Prize List of the Horticultural Exhibition to be held in the Promenade Gardens on the 25th of August next. Copies of this have been distributed throughout both town and country and advertisements inserted in the different newspapers, so that there is every prospect of as fair a Show as can be got

up at such a short notice. The Committee are of opinion that such an Exhibition should be held annually, when probably it would be more successful, as people could grow flowers, fruit and vegetables for competition."

The Committee are in treaty for bands of music, illuminations and other attractions, which will no doubt add to the interest of the Show. They hope that the members of the Society will look upon it as of special interest to themselves and do everything possible to make it a distinct success.

I have, &c.,

J. RODWAY,

Secretary, Committee of Correspondence.

NOTICE OF MOTION.

"That this Society will endeavour to make the Horticultural Exhibition an annual affair to be held yearly about the month of August. And that the Governor be requested to place five hundred dollars on the Estimate to be distributed as prizes at the said Horticultural Exhibition.

The Secretary also read a communication from the Agricultural Committee, recommending that the Society subscribe the sum of two guineas to the Rothamsted Jubilee Fund.

Georgetown, July 11th, 1893.

To the President and Members of the

Royal Agricultural & Commercial Society.

Gentlemen,—By direction of the Agricultural Committee I have the honour to forward a copy of a circular calling attention to the extreme importance of the Rothamsted agricultural experiments, and the unexampled services of Sir John B. Lawes and Dr. Gilbert. This year being the Jubilee of these experiments an Executive Committee has been formed to arrange for a memorial, for which subscriptions limited to Two Guineas are being received.

The Committee are of opinion, that considering the great advantages of these experiments to agriculture throughout the world, the Society should forward a subscription of the maximum amount, (£2.2.0.)

I have, &c.,

S. R. COCHRAN, per J. RODWAY,

Secretary, Agricultural Committee.

In reply to a question of the Hon. N. D. Davis, the President said he thought this would come within the province of the Society as encouragement to agriculture. He might mention that the Chairman of the Committee of the Fund was the Duke of Westminster, who was also the President of the Royal Agricultural Society of England.

Mr. Binnie spoke in favour of the contribution, and no one dissenting, it was agreed to carry out the recommendation.

The President said before they proceeded farther he might mention that it would be a graceful compliment to make Sir John Lawes an Honorary Member of the Society. Under the rules this could be done on a recommendation of the Directors which might be made before the next meeting.

The annexed letter from Mr. Quelch, the colony's Commissioner to Chicago was referred to the Columbian Exposition Committee.

British Guiana Section, Agricultural Building,
World's Columbian Exposition,
Chicago, Ill., June 8th, 1893.

L. M. Hill, Esq.,

Secty., R. A. & C. Society.

Dear Sir,—My former letters, and those that Mr. Watt has written to the papers, will have given you all in Guiana, a fairly complete account of matters in connection with our Exhibit, up to the present time. I mention now a few matters that need consideration; and I want, to one or two of them, as early an answer as possible—by the return of this same steamer (the "Tjomo") if you can manage it. The first thing for notice is the question of the Handbook. In my last I told you (letter to Mr. Rodway) that most likely it would be impossible to sell our catalogues or any printed matter in the Exhibition. As it turns out, any such matter may be given away, but not sold, unless we sell through the publishers of the Official Catalogues, who have a concession from

the fair authorities. Through them, we should have to give up 75 per cent. of the gross receipts, which is nothing but excessive, and the total control of the sales must be left in their hands. Of course I have not done this, I'd rather give the whole lot away. As a rule throughout the Exhibition, all such matter is being given away by the countries concerned. A few that have advertisements sufficient to pay for the original cost, sell through the Official Publishers, at the 75 per cent. loss. At present, I am distributing the handbook through all official channels, to the representatives of all nations and states, also to the editors and reporters of the Press, and to those of our visitors who are particularly interested in our things or ask after them. I am not giving them away to any and everybody. Continuing as I have begun, I imagine about half the number will be thus distributed and I could ship the other half back to the colony to be sold there, either now, or at the end of the Exhibition. The other alternative is to give them all away, and thus spread information broadcast as to our resources. The latter plan I would advise; though the former would bring back a part of our outlay—an important point, considering that the handbook has eaten up about \$2,000 of our grant. I await your immediate advice on the point, and meantime do with them as I have already stated. I may say that I have settled up Andrew and Sons Company account, and have the handbooks here. Our own catalogue is not yet printed, owing to the delay of the official catalogue. I gave the matter in to the Fair authorities in the beginning of April, but we, like many others, were left out of the First Edition, which was very incomplete. The Second Edition, with one part in, is just being printed and I have had proofs of a part of it. The numbering and method of cataloging is so special, that it would be useless to print our's separately unless the sets of numbers agree. This I shall be able to determine when our section in the official catalogue is finished. All that I did in our Court catalogue has really to be done over again. Of course, the catalogue will have to be given away. I am writing short headings of the various groups, so that whatever is done with the handbooks, this catalogue will give short lists of our exhibits, with short explanatory headings of each group of things, the whole being much more condensed than I had intended. This of course will be done to avoid increased expenditure, since we shall not be able to recoup ourselves by selling.

Not being able to sell the handbooks, will, as you will see, make a very great difference in the funds I have or shall—have at my

disposal. We should have realised about \$2,000, if we had sold them at 25c. per copy—and this I should have been able to use in paying return passages to Guiana of the Indians that you may send up, and in packing up and sending back whatever had to return from our exhibits, also in paying for extra light in Court, in storage of packing cases, and all the carpentering etc. that will have to be done at the end in clearing up our space. There will be hosts of small expenses at the close, and unless I can get from you additional funds to go on with, I am not at all clear now how I shall stand at the end. Of course this difficulty is not due to increased or extravagant expenditure—this must be borne in mind. It is simply due to the fact that an expenditure of \$2,000 was made from the grant, over the handbook, with the idea of its being recouped by sales. If we had known that the sales could not be made, no doubt the handbook would not have been printed. More than this, while it is quite true that the sales of our things will give me something in hand, this cannot be till after October; and if I have to pay return passages on many Indians, and as Mr. Rodway indicates, part passages here on their coming, from what I have in hand here, it will be a tighter fit than I should like to run. Of course our expenditure here is not finished. The main exhibit in the Agricultural building is done with except for the payment of the man in charge; and I have to pay quite \$100 per month, owing to the fact that I have to arrange for caretakers from 8 o'clock in the morning till 10.30 on most days, including Sundays—with sweeping and dusting which are serious matters owing to the clouds of dust that settle upon everything. The entire Ethnological exhibit has yet to be seen after. The building is only just finished, and I am only able to begin our section next week. We shall have a large amount of lumber and coals etc., to pay for and high carpenter's wages. The Indian huts are not yet put up, owing to the fact that the ground is only just being graded for us. The whole of that section has been terribly delayed; and I could not do anything in the matter till things were straight. Of course everybody else is in the same boat. Our catalogue is yet to be printed, as I have already explained; and many tickets to be arranged and paid for hereafter. I have some written and explanatory tickets on most things, but this is only temporary. Beyond these and the other expenses already mentioned, my own allowance has to come out of what I have, and some additional expenditure for the Indian who is with me, for the thirty dollars a month which the Fair allows for him does not by

any means cover his expenses—necessary ones. I am getting extra things (clothes) for him, for the warm things I got before are becoming unbearable in the heat of the Chicago summer. Judging by what it is already, it is not difficult to believe that it goes up to over 100 deg. in the shade later on.

As far as I can judge now, you will have to advance me another \$2,000—the amount, that is, that I would have had in hand, had I been able to sell the catalogues and handbooks. If I send the handbooks to Guiana, you will realise quite \$1,500 or at least \$1,250 on them; and at the end of the Fair, the things sold will certainly realise quite \$800 or more. You will thus see that the \$2,000 that you will send me in advance, will be recouped for certain, at the end—the only thing is that I shall want it in advance to go on with. I do not think you will have any difficulty in understanding my position—I have put the matter as clearly as I can, and not very briefly either. Again I will draw to your attention, that the desired advance is not by any means due to my expenditure: it is simply a matter of the handbook.

As to the Indians, I have nothing further to add; I am now only waiting to hear what you have done. My last letter to Mr. Rodway or rather to the Committee will have reached you before any Indians could have been sent off; and will have put you in possession of all information I could give as to what was wanted. The aboriginal Indians would be enormously appreciated and popular up here, and the more the better, but unless the advance of \$2,000 is made, if they come, I am afraid I shall wish them at Jericho (that is to say Guiana) instead.

I send four clippings from the newspapers to give you some idea of what is said publicly of us. From these you will see, from an independent standpoint, that I have done (as I tried to do it) my duty by the colony and its exhibit to the fullest of my capacity. Luckily I am quite well and fit now, but the accomplishment of the main part of my task, to be ready by the first of May, and under the conditions of weather and exposure through which I had to work, was only performed at a considerable personal risk. Doctors' bills and many cabs are some of the accompaniments that lessened to some extent the risks of exposure. Coming straight up from the tropics, the risks to me meant more than it did to others, and from the fact of coming alone, I had always to face, even when unwell from cold and exposure, work that others with three or four on the Commission could avoid. Many others did not suffer in the horrible weather, simply from the fact that they stayed in their

hotels, and left things for warmer times. Even now, many exhibits are just being installed, which should have been accomplished quite a month or more ago. The notices I send you are from important journals and papers—the *Chicago Times* of May 7th and June 3rd. The *Inter Ocean* June 7th (special Illustrated Supplement) and the *Business Register and Trade Journal* of May 13. They give fairly accurate accounts: but as you will notice there are misstatements here and there which could easily have been altered had proofs been submitted to me: but what these journals write and publish, they don't submit, at any rate not to the persons who could get them right: and unless one spent a good bit, it does not seem that they will take articles on one's own exhibits that one may put them right. If we could afford the expenditure, I dare say, it would be better. We have had short notices in many other papers, but of little account. You have already had descriptions of our exhibits, so there's no use repeating, but I will send photographs later on. I may say however that it is immensely popular and very highly appreciated by all sorts of visitors, and I am quite satisfied at the result, as I believe you all would be could you go through the Court. We are however horribly crowded up for want of proper space. If praise could spoil me, I should return to Guiana as mad as a hatter, owing to the very flattering remarks one hears from people as they pass through, who have no idea whatever as to who I may be—unbiassed observations I mean. Up to now, owing to very numerous calls on Commissioners for meetings of different kinds and attendances at various functions etc., and the long distances to be walked to and from the great buildings, I have had much less time in the Court than I should have liked; but luckily this is gradually improving. I trust you will all know that to the best of my power I am doing what I can to our advancement. I am glad our Natural History features were fairly well represented. They have been an enormous attraction and you will notice the papers seize on them at once for illustrations. Questions upon questions are asked in all directions about our sugars, gold, timbers, fibres, barks, etc.; and I think our Show cannot fail to lead to real results. These have begun already, and many men of experience in timber, gold and forest products declare their intention of examining, and investing capital in our colony. I may say that I guard myself very clearly in giving information of all kinds, to give it as accurately and yet as forcibly as I can. False ideas and exaggerated accounts can do us no real and lasting good. Placed as our Show is, and in its present form, it is undoubtedly a

magnificent advertisement for us; and no one who could watch the course of events here, could say anything else. I am extremely glad now, that, for the colony's own sake, it has made a representation in the Exposition. The Chief of the Department of Agriculture, in which we are placed, is always telling me when we meet that he regrets we had not, in the first, asked for proper space, and that he was unable to give me what I wanted when I came up afterwards.

As to the exact position as regards money matters, I will notify to the Hon. Treasurer, when I send down accounts in a few days' time to him. Touching money, I was horribly alarmed a little while ago by the suspension of one of the banks in Chicago to which I had transferred \$2,000 of our funds. In the Administration Building, in the Fair grounds, a branch of one of the large Chicago Banks was started in May, under a concession from the Fair authorities: and as it was an absolute convenience in every way, nearly all the smaller Commissioners transferred the whole or part of their funds to it. As it was under concession from the Fair authorities, it was practically guaranteed by them, and when the main bank in town suspended, the authorities, as in honour they were bound to do, took over the risks and paid up all deposits from foreign depositors. There was thus no loss whatever to any one, though at first there was a good deal of anxiety and delay. The amount, I transferred to the First National Bank of Chicago—which is the first National Bank in the city. As an instance of the other worries that arise, I may tell you we are always having glass in the cases broken by people leaning on them in spite of labels that beg them not to do so; and worst of all, the other morning, the man in cleaning dust from a set of large bottles with starch and seeds, etc., that were wired together, pulled a lot of them down accidentally on the big glass case underneath. Luckily, unfortunate as it was, the damage was not very great, though it has led to new glass for the case, new bottles for the seeds, and caused the Court to be partially closed. It was a dreadful trial for my temper though, for that very afternoon, the late Governor of New South Wales, the Earl of Jersey, was coming to look us over.

Just lately too, there has been a difficulty in the matter of awards. All the European countries, on account of the system that was being enforced by the Committee on awards, in spite of renewed protests, declared all their exhibits out of competition; and as a matter of principle, British Guiana was also so declared: with the idea of compelling

the Fair authorities to change or modify their system. Brazil, Japan, etc., also joined. Since then modifications have been made on both sides, and matters bid fair to be settled satisfactorily, and of course we shall be in competition again. The responsibility was great; but it was a matter of backing up other countries to whom it mattered largely. To put you in touch with everything would take a book, so please excuse more and trust me to do the best that I can in all that pertains to my duties.

Yours very faithfully,

J. J. QUELCH.

The thanks of the Society were accorded for the following donations:—

To the library,—from Ven. Archdeacon Farrar, Revd. Samuel Clarke's Sermons Vol. 2, 1734, Dr. Isaac Barrow's Works 3 Vols., 1687; from Mr. Boxill, Barbados, Rules and Prize-Lists of Barbados Agricultural Society.

To the Museum,—from Dr. F. H. Anderson, Turkish, Egyptian, and old Greek coins, a Mummied Hawk from Thebes; from Mr. H. I. Perkins, Ammonites; from Mr. J. A. P. Bowhill, *Cordyceps sphingium*; from C. A. Lloyd, Salt Earth from Pirara.

The Assistant Secretary explained that the earth from the Pirara savannah was up to the last few years utilised as a source for salt by the Macuis, and spoke of the bearing of this on the fable of Lake Parima.

The President stated that the next lecture would be delivered on the 24th of July by the Hon. E. C. Luard and Mr. S. M. Bellairs. The subject would be "The Stately Homes of England," illustrated with lantern views by Mr. Luard and descriptive sketches by Mr. Bellairs.

Mr. Rockliffe stated that with permission of the meeting he would like to make a recommendation.

Mention had already been made of the poorness of the few exhibits of the colony at the Imperial Institute and he would therefore propose that

“At the close of the Chicago Exhibition such of the exhibits as may be thought suitable, as well as other individual exhibits from the colony as may be acquired by purchase or gift, shall be sent to the Imperial Institute ; and that Mr. Quelch's Commission be extended for the purpose of arranging the same before handing it over to the Institute authorities.”

After some discussion this was referred to the Exposition Committee as well as to that of the Imperial Institute.

The meeting then terminated.

Meeting held on the 10th of August.—Hon. A. Weber, Vice-President, in the chair.

There were 9 members present.

Elections.—*Members* : Mr. Stewart Gardner and Revd. G. W. Andrews.

Associates : Messrs. A. B. L. Belgrave and A. McBeith.

His Excellency Sir Charles Cameron Lees and Sir John B. Lawes were proposed as Honorary Members by the Directors, to be elected at the next meeting in accordance with the bye-laws.

Mr. S. M. Bellairs brought forward his motion, of which due notice had been given, that the Society endeavour to have an annual Horticultural Show, and to this end ask the Governor to place on the estimate the sum of five hundred dollars for prizes.

In moving the resolution Mr. Bellairs said that since

he had entered the room he had been advised to postpone his motion until the result of the coming Show of the 25th inst. was seen. But he did not see the necessity for postponing it, but on the contrary saw the desirability of bringing it forward now as a hint to exhibitors at the present Show. He then went on to speak of the scarcity of good fruit and vegetables in the colony, and the necessity for a regular impetus being given to their culture.

Mr. F. A. Conyers seconded the motion, at the same time remarking that he thought it would have been better brought forward when the result of the present attempt was known. Mr. Thomas Daly and Mr. Watt also spoke to similar effect.

After some further discussion Mr. Bellairs agreed to allow the motion to stand over until the next meeting.

The Assistant Secretary read the following letter from Mr. Quelch :—

Chicago, July 8th, 1893.

L. M. Hill, Esq.,
Hon. Secretary R. A. & C. Society.

Dear Sir, I am still awaiting information as to what action the Society advises as regards the handbooks : but meantime I write for report. I have received notification through Mr. Rodway that the Indians are not to come : and considering the matter from all points of view I think this is the best thing to settle upon. Our expenditure has necessarily been very great, and the sending and looking after a set of Indians might have cost us a good deal more than was anticipated. If we had had sufficient funds to bear all cost, no doubt our Indians being here would have been a good advertisement. As it is, however, the British Guiana section advertises itself. It is a very popular Court, and is always crowded with people from opening to close, and this has been the record of each day since the opening. People from quite distant places come to our section, having heard through others that it is one of the chief things to see ; and frequent detailed enquiries are made by

visitors of importance, concerning our exhibits, and colony, and its capabilities as regards sugar, fruit, timber, fibres, gold, etc., etc. I cannot help believing that substantial good will result in our representation at this exhibition. I have given references to many of our local firms for articles of different kinds; and time upon time, merchants and others wait upon me to get detailed information as to our trade, &c. Our high grade sugars attract a lot of attention and the white sugars of plantation Perseverance particularly have called forth special enquiries. One merchant is very strong on this sugar, believing that there might be a very large trade in it if the protective duties were done away with, and he thinks that with the reciprocity treaty between two countries, this point ought to be secured.

As you will see from the various clippings I have sent, the newspapers give us very good notices—free of all charge—not only papers of Chicago, but also of Canada and New York. One of the extracts I send is from the *New York Journal of Commerce and Bulletin*, one of the greatest, if not the greatest of the American trade Journals. The *Business Register and Trade Journal* of Chicago, and the *North Western Lumberman* have also given us good accounts. The worst of all these accounts is that there are little inaccuracies in most of them, but as they never submit proofs of what they write, there are no chances of correcting. We are thus being fairly well advertised; and not the least effective way is by my prompt attendance at all sorts of functions, lunches, dinners, banquets, receptions, and meetings where Commissioners are invited, for wherever I go the papers of course note the attendance, and British Guiana is thus noticed. More than this my name has been specially in the papers here as Commissioner for British Guiana over three separate exhibition matters. In the first, over the failure of the branch bank opened under the auspices of the Administration of the Fair, I expressed the opinion pretty strongly that the Administration were responsible for the funds deposited under their guarantee, the papers took it up, with the result that the Administration paid up our deposits and took over the liabilities, as in honour they were bound to do. The second time, over the Jury of Awards of which you have been already advised; and thirdly over the recent arrest of one of the Foreign Commissioners owing to the stupidity of a guard. In all these matters the Commissioners support one another, and the papers publish everything; and we got the advertisement by their specially recording the opinion of

J. J. Quelch, the Commissioner for B. G. I mention all these little things to shew you that I try to be as much alive as possible to our interests. Another matter that I must mention is the insertion of a page advertisement in the large illustrated magazine of the Fair, known as the "World's Columbian Exposition Illustrated." The charge is \$300, but I got it for \$250, in the July issue. They give a general account of the exhibit and a large illustration if desired. Some of the Commissioners have their photos. inserted as part of it, but it seemed to me to be taking advantage of one's position, and I had a good view of our Court with a good clear account of the B. G. Exhibit solely. The view comes out very well, but it was impossible to shew everything. I have ordered 100 copies to be sent to you for distribution to the papers, and the Exhibition Committee, and the others who helped towards the success of our section—but of course the Directors or the Exhibition Committee will distribute them as they deem best. The only proviso is that a copy be sent to His Excellency the Governor, and to the Government Secretary—when they arrive. I have only just given the order so that they may not reach you for some time. The expense of the advertisement is heavy, but others places are doing it, and I believe it will pay—besides, as our Indians are not coming up I judged that it would be a wise investment of part of the money that would otherwise have been spent on them. I am writing details of expenditure for the Government to Mr. Conyers, the Treasurer; and I am asking that the remaining funds in the hands of the Committee be sent me. I think they have another \$800 and as there will be no further calls for it in B. Guiana, it ought to be put on the funds here. As I have to go over all such matters in my letter to Mr. Conyers, there is no good in doing it here, and I therefore refer the officers who have interest in the matter to Mr. Conyers. Our expenditure here is by no means finished; the Ethnological Section is only just being arranged, the building being at last ready for work. In another fortnight I hope to be finished with the labourers; but then there will be my own personal allowance, the extra keep of the Indian beyond the \$30 per month the exhibition allows, and the cost of attendants in the two buildings, which is by no means a light item owing to the long hours during which the Fair is opened—8 a.m. to 11 p.m., throughout the week and on Sundays. Besides this there will be the printing of our Catalogues. This I cannot get on with till the Official Catalogue is finished, since our numbering must agree and their system

of Cataloguing is peculiar. They have had the copy since the 14th April, and up to now, only a small part has been put in type. Meantime we must wait. Later on there will be the storage on our boxes to pay for, and the carpentering, and freight on the things to be sent back, which will be a large item on account of the distance. If it were allowed to sell duplicate objects, etc., now, we should be able to realise a good little sum on many things, but this is not allowed; and after the Fair, there will be such a lot of things in all the different buildings that we cannot hope to realise much. At present funds are all right, and with the \$800 which should be sent on, I may be able to go through all right, the more especially if the handbooks are sent back for sale and their value realised. Later on I shall be able to speak more definitely on this point.

I hope the copies of the "Illustrated" will come in as a little pictorial souvenir of British Guiana at the Exposition.

As regards the Indian Section, I may mention that we have a very good location in the Anthropological Building, and I think it will be a good show we make there. Our space there is 44 ft. by 28 ft. = 1,232 sq ft. I only wish that in the Agricultural Buildings we had asked for something in proportion, we should then have had about 5,000 sq. ft. with space to shew our things to advantage and plenty of room for wide passages which is a much more important matter than at first sight appears. However we are very popular as it is, and the smaller space has given us less expenditure in cases and materials generally. The worst of it is that people who do not see what you show, judge of the importance of the exhibit by the space. I may also mention that one of the Indian houses has been constructed on the grounds on the S. lagoon. The other was in course of construction when the news reached me that the Indians were not coming, and I then did away with it. The timber I have used as a railing round the space in the building of Ethnology and besides for a small model entrance to the Section, in the shape of an ordinary forest benab. The various boats were a good deal damaged, but I have had them repaired and caulked, and the gold boat neatly painted.

By this same mail, I am writing a report to the Government. It occurred to me that although I wrote regular reports to the Society, it was still due to the Government to report progress. I am sending also under cover to them press clippings from the papers of notices of our exhibits, and of lunches, banquets and receptions and meetings gene-

rally, officially attended by me—as partly showing this special feature of my work. Also cards of the two British Banquets—the first by the British Royal Commissioners and the Colonial Commissioners on the Queen's birthday—and the second by the Commissioners of the British Colonials to the British Royal Commissioners. At the first there were about 150 guests out of 200 invited; and at the second about 130 out of 180 invited. Our names and countries are all stated on the cards of invitation, as you will see by the enclosed, which I send to the Society. Both banquets were pronounced successes. In the latter I had to do some speechifying. Just lately I have been lecturing before the World's Fair Agricultural Department on the woods of British Guiana,—officially, but the lecture is retained for publication, though as I don't lecture from manuscript, I have to write it out for them. Thos. Watt who was present took down most of what I said and no doubt will give it in one of our papers later. On Thursday I am reading a paper as it is called, before the World's Congress Auxiliary—but of this more anon. I have gone over all sorts of news, and told all there is to tell except that the Indian has been a little out of sorts lately. He has been all that I could wish and has been very useful to me. I am quite well in spite of the hot weather which is touching us up. It was 97 deg. yesterday.

Very faithfully yours,

J. J. QUELCH.

The Chairman said the report was a very interesting one and showed that they had the right man in the right place. He thought they ought to show their appreciation of his work by a vote of thanks for his able administration of the British Guiana Department at the Exposition; he would therefore propose this.

Mr. P. P. Fairbairn seconded. Having seen the exhibit at Chicago he was in a position to say that Mr. Quelch had made the most of his space and that everything in the Court was nicely arranged.

Mr. F. A. Conyers supported the motion. He thought the Society and colony very fortunate in having such a Commissioner. Mr. Watt, speaking from personal obser-

vation at the Exposition, confirmed what Mr. Fairbairn had said and spoke of Mr. QUELCH'S indefatigable attendance at the Court.

The vote of thanks was carried unanimously.

The thanks of the Society were accorded for the following donations :—

Rev. Jos. Ketley, Van Cooten's Chart of Demerara and 3 copies Historical Notices of the Congregational Church.

Thomas Watt, Official Guide to World's Columbian Exposition.

The meeting then terminated.

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Meeting held on the 25th September.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 12 members present.

Elections.—*Honorary Members* : His Excellency Sir Charles Cameron Lees and Sir John B. Lawes.

Ordinary Members : Dr. H. B. Ford, Mr. G. Firth Franks, Dr. F. H. Edmunds, and Mr. R. A. Barclay.

Associates : Messrs. Chas. E. D. Farnum, J. Graham Young, G. B. Dodge, and W. T. Johnson.

The following report of the Committee of Correspondence on the results of the Horticultural Show was read. The Treasurer also handed in a statement showing the receipts and expenditure in connection with the same matter.

Georgetown, Sept. 11th, 1893.

To the President and Members of the
R. A. & C. Society.

Gentlemen,—On behalf of the Committee of Correspondence, I have the honour to report on the Horticultural Show as follows :—

According to arrangement it was held at the Promenade Gardens on

Friday, the 25th of August, and as the day was fine nothing occurred to interfere with its success as an out-door fête. Taken altogether they consider the result as favourable as could be expected, considering the short notice, which would not allow of exhibitors growing anything especially for competition.

Plants in flower were but poorly represented and fruit and vegetables by no means as good as they might have been. Several important fruits such as mangoes were unfortunately out of season, and it is a matter for consideration whether the Show should not be held at some other time of the year, although the uncertainty of the weather might interfere if this were done. Undoubtedly the great attraction of the Show was the floral decorations, especially the dinner tables, which were universally admired. The fine collections of foliage plants were also very good, and Mrs. Sherlock's exhibit won the special prize for the best in the Show.

In connection with the whole Show they have to remark that but very few exhibits came from those people who might reasonably be expected to compete in great numbers, i.e., the small farmers and cottagers; possibly, by having a special class for these something better would result at future exhibitions.

The expenses amounted to a total of \$739 76, of which \$175 50 was paid for prizes, \$118 36 for bands of music, \$148 95 for materials and erection of shed, including tables, \$180 16 for electric lighting and other illuminations, \$99 69 for printing and advertising, and \$17 10 for sundries. On the other hand, the returns from 492 admissions in the afternoon, and 1,790 in the evening, amounted to \$332 88, sale of bar concession \$21 00, and sale of shed \$50 00. Adding the Government grant of \$250 00, the total receipts from all sources amounted to \$653 88, leaving a balance to be paid by the Society of \$85 88. As the Directors of the Society guaranteed the amount of \$250 00, the Committee are of opinion that the results are by no means unsatisfactory, although they would naturally have liked to see the Show self-supporting. This, however, they believe, has never been the case with any Exhibition in the colony, and could hardly be expected at first.

The Committee suggest that in future the hour of opening should be much later, say, 3.30 or 4 p.m., which would allow more time for the exhibits to be properly arranged, also that no re admittance on one ticket should be permitted, as in the evening it was reported that return tickets were sold at half-price.

It has also been suggested that the prizes for the ornamental and decorative part of the Show might consist of medals or illuminated certificates of small intrinsic value, thus giving more money to be devoted for prizes for fruit and vegetables—the more useful part of the exhibition. The Committee mention this suggestion for what it is worth, but they do not endorse it.

Another suggestion was that a person should be put in charge of each class, to take the entries, or at least two should be appointed, one for the useful, and the other for the ornamental part. The work entailed on the Secretary in taking the entries was most fatiguing, and the tedious waiting very annoying to the exhibitors.

The Committee cannot close their report without recording their thanks to Mr. James Rodway for his services, especially on the day of the Exhibition.

I have, &c.,

J. RODWAY,

Actg. Secretary, Committee of Correspondence.

On the motion of Mr Thomas Daly, seconded by Mr. Thomas Watt, the report was adopted, and on the recommendation of the President a vote of thanks was awarded to the Committee for the trouble they had taken in connection with the Show.

Mr. Bellairs then brought forward his motion which, with permission, he altered to read as follows :—

“ That this Society will endeavour to make the Horticultural Exhibition an annual Show, and that the Governor be requested to place on the Estimate a sum of five hundred dollars, to be distributed in prizes at the said Exhibition.”

Mr. Bellairs said he thought they were all agreed as to the desirability of holding these exhibitions annually, and such being the case he did not see that it was asking too much if they petitioned the Government for a vote of five hundred dollars.

Mr Wood Davis spoke in favour of the motion but thought a thousand dollars would be better, and did not think the Government would hesitate to give that sum.

The people in the country districts wanted encouraging, and if small grants were made to the villagers to aid them in growing things for competition it would have a good effect.

The Revd. D. J. Reynolds said he heartily approved of this movement, as he looked upon it as very essential that people should be encouraged to grow flowers and fruit, as the cultivation of those things had a refining influence. He would suggest that if they could interest the school-children in future exhibitions it would be a good thing as they might influence their parents. Then he thought something might be done by speaking to the country people directly.

Mr. Binnie supported the motion and spoke of the want of proper cultivation and the difference between one grower taking up new land and another doing his best with the old.

Mr. Conyers spoke of the financial position of the Society, and after some further discussion the motion was put to the vote and carried, the Secretary being directed to forward a copy to the Government.

The thanks of the Society were accorded for the following donations :—

To the Library,—Revd. Jos. Ketley, 1 vol. Congregational Record and a collection of local and anti-slavery pamphlets; Mr. Æneas D. Mackay, Report on the Resources of Colorado; Mr. Jas. Veecock, Falstaff, a Comedy.

To the Museum,—Revd. P. A. Stevenson, Cannonball picked up at Santa Mission, Camouni Creek; Mrs. Fred. White, a live labba tiger (*Felis pardalis*); Mr. Æneas D. Mackay, 31 skins of Canadian birds 5 arrow-

heads, and a cut of the "Walk-in-the-water," the first steamboat on Lake Erie; Mrs. Mackay, 14 assorted coins.

Mr. Watt asked whether the Directors had in contemplation any mode of celebrating the approaching Jubilee of the Society, which would arrive on the 18th of March next. He thought it an event which ought to be commemorated and the manner of doing this would probably require some thought and attention beforehand. He mentioned the matter simply to call the attention of the Directors.

The President said the Directors would think over it and thanked Mr. Watt for calling attention to it.

Mr. Watt also asked whether the fact of Mr. Rodway's name appearing as Editor, on the present publication of *Timehri* would interfere with Mr. Quelch's future connection with the Journal.

The President said that if Mr. Watt would let his question remain over until next meeting he would then give an answer.

It was accordingly taken as a notice of question.

The meeting then terminated.

Meeting held on the 16th November.—Hon. A. Weber, Vice-President, in the chair.

There were 9 members present.

Elections.—*Members:* Revd. P. B. Austin and Messrs. Eyre Hutson, A. H. Shaw, P. Benjamin and E. G. Fonseca.

Associates: Messrs. R. T. Dennis, T. A. Rowe, C. A. Mylau, B. E. Franker, J. C. Weir and W. A. Ireland.

The Assistant Secretary read a communication from the Government informing the Society that an item of \$500 would be placed on the Draft Estimate for the coming financial year for prizes at an Horticultural Show as requested by the Society.

In reply to Mr. Watt's question of which notice had been given at the previous meeting, as to whether Mr. Quelch's connection with *Timehri* was interfered with by the change of editorship during his absence,

The Chairman said that as far as he could gather Mr. Quelch had resigned his post on the Journal before leaving, as might be seen from the following extract from his letter to the Directors, dated Jan. 9th last:—

“I have also to bring to your notice the question of editing the Society's Journal. Soon after my arrival in the colony to take up the position of Curator, I was asked by the Directors to undertake the editing of the Journal, after the resignation of Mr. im Thurn, and for the last six years *Timehri* has been edited by me gratuitously, and though the editor labours under a special difficulty of getting papers suitable and of sufficient merit for the Journal—a difficulty which perhaps none but he can fully estimate, I think I may claim that the Journal has fully maintained if it has not advanced its position. My absence from the colony during two issues will, it seems to me, necessitate my resignation of the editorship; and as I have already occupied the position for six years, in comparison with Mr. im Thurn's five, it will be as well perhaps that a change be made.”

Continuing, the Chairman said that it appeared from this that Mr. Quelch had completely resigned the editor-

ship but he hoped that his connection with the Journal would not cease.

Mr. Rodway said he was quite prepared to give back the editorship to Mr. Quelch when he returned.

Mr. Conrad thought the letter should have been brought before a General Meeting.

Mr. Watt said he took it that an omission had been made in not intimating the change to the General Meeting.

Mr. Legge thought there was some misapprehension, as according to the rules it was under the Committee of Correspondence and any intimation of a change in the editorship would have been simply a matter of courtesy and not of right.

The Chairman said the letter had been considered and accepted by the Directors and it was probably an omission on their parts, that it had not been laid before the General Meeting. The matter might be left over until Mr. Quelch's return.

Mr. Æneas Mackay said he should like to ask if the Directors had in view any public reception, in the form of a banquet, dinner or something of the kind, to Mr. Quelch on his return to the colony.

The Chairman said he could not answer that question but thought that a notice of motion should be given

Later, Mr. Jacob Conrad handed in the following notice of motion :—

“ That a Committee of this Society, consisting of the Hons. Dr. Carrington and Arthur Weber, Mr. F. A. Conyers, Revd. D. J. Reynolds, Mr. Thomas Watt and the mover be appointed to consider and carry out a public reception to Mr. John Joseph Quelch, on his return to the colony from Chicago as Commissioner to the World's Columbian Exposition, with power to add to their number.

The Assistant Secretary read the following letters from Mr. Quelch:—

Chicago, Sept. 5th, 1893.

L. M. Hill, Esq.,

Hon. Secretary, R. A. and C. Society.

Dear Sir,—There is nothing very special to write about just now, but as there are several minor matters which are worth mention, I send my periodic report. The question of money, I have already treated very fully in my letter to Mr. Conyers as Hon. Treasurer, and the Committee are therefore in possession of all I have to say on that point—and what I propose doing in the event of no more money being forthcoming. I had hoped to have been able to return a very large number of exhibits as desirable additions to our Museum, but failing the \$2,000 which I should have had in hand from our sales of hand-books, there will be no funds with which to defray cost of freight; and I shall therefore be obliged to sell off nearly everything at whatever prices we may be able to obtain. There will be such an enormous amount of stock of all sorts from all parts of the world for sale at the end of the Fair that things will have to be sold for a mere song to get rid of them. This is regrettable altogether; but as the Committee cannot supply the funds which it was expected would be in my hands from the hand-book, I have no other path open to me.

A proposal has been made, I see, to send the main part of our exhibits to London to the Imperial Institute: and under the circumstances, I think the idea a very wise one, since a very good show there might be made of our things here, whilst at the same time it would save the necessity of selling things here at far below their value. The idea had occurred to me here, when I began to realize what would have to be done at the close of the Fair, and I had intended writing to the Government to suggest the transfer of the greater number of our things. It would not be difficult for me to sort out what would suit well for the Imperial Institute and I could send these off, and the Committee could arrange as they see fit for some one to put things straight in London. The only thing to be pointed out is that I must have money to pay the cost of packing and the freight charges. You have the bills for freight from St. John's to Chicago, and the other from America to London can easily be calculated, so that it can fairly well be determined by you what would have to be provided for the purpose. Packing up would

take some time, and labour of that sort, and carpentering, has to be paid at the rate of from 50-55 cents per hour.

If the idea is carried out, the Committee ought to let me know definitely as early as possible, and furnish the necessary funds so that I can go ahead as soon as the Fair is over—otherwise a watchman will have to be provided for each of our two main exhibits—and extra expense incurred.

I may say at once that our exhibit is still as popular as ever—more so in fact, for as the number of visitors to the Fair increases our proportion of visitors too increases. I regret more and more that the space between our cases and exhibits had to be so small, owing to our want of room. Day by day we are all the time crowded up, so that it is difficult to pass about, and this is getting worse as time goes on.

The narrow passages between the cases are partly the cause why the view in the "World's Columbian Exposition Illustrated" is so indefinite. In a bird's eye view the exhibits under the circumstances run together. I am sorry that so many seem disappointed in the view—to my mind I think they are all unreasonably so, for but a mere common sense survey should show that one cannot get a well-defined view of our large space, under the conditions under which any view must be taken. The careful inspection of the view shows clearly the various objects. It necessarily is on a very small scale; and it had to be taken high up in the gallery 30 feet above the main floor, and from one corner of the space. The light, even above, is bad for taking photos; since the glass roof had to be painted and awnings put up to keep the intense glare of the sun from the exhibits in the building. Below the light is even worse for the purpose, owing to the tall pavilions around and the amount of bunting. I had hoped to have a view showing the log-pavilion that runs round our Court, but it was so dark that nothing satisfactory could be made of it. Everything in the view is depressed and crowded necessarily, for it was taken almost overhead so to speak. The logs of the pavilion prevent any good view from being taken outside, and inside on the same level, the cases hide each other. So much for that except that I must say other people up here are more appreciative, since a good many visitors who have come to the Court have told me that they have been directed thither by the article and view in the "Illustrated." Just now I have before me a letter from Florida where nine people who are thinking of going to the colony have been attracted thither by the same account and view. It was through that

they wrote to me, and I think this says a good deal for the value of such an advertisement. I at any rate, am satisfied with the result, and I claim to be in a better position to judge than outsiders. The view given of Trinidad's is not to be compared to our's since our space is more than double that of Trinidad in agriculture—while owing to the openness of their exhibit, the camera could be placed not five feet away. Our exhibit is too crowded for a good photograph, but all the same it is one of the centres of attraction in the exhibition.

Crowds of our visitors still call us British Guinea, and though I have 26 small maps of S. America, at all the entrances to our pavilion, with British Guiana marked in red and showing how the name is pronounced, still the same thing goes on.

The awards business goes on ; and I think will soon be finished. Only a little is known yet of the results. I send a *Tribune* in which you will see we have nine awards for sugar and five for rum. The estates are marked as you will see, but the list is not quite official and the names are often misspelled. The system of judging is very curious and unsatisfactory. Sugar is judged as sugar, so that no refining crystals, 1st and 2nd molasses sugar or muscovado had any chance against white and yellow crystals. When the judging is over and the results known, I am going to make a special report on the subject. Meanwhile the Portuguese art needlework also is awarded a medal. Judging in Ethnology and Natural History has only just begun, and as I am appointed one of the judges I am extra busy. Details I will give later on when more is published. I send you slips for general information, for the Society, and the papers on a variety of subjects. Many of the Chicago notices are appearing in the papers in different States, and they will thus advertise us a great deal. My correspondence is getting considerably more than I can attend to owing to inquiries from all parts caused by newspaper reports, etc., and I only wish I had money enough to employ a secretary. British Empire day was a great success, and the speech for British Guiana seemed to be fairly satisfactory since it was well spoken of. With other Commissioners I went on an eight days' tour through the great wheat growing states as the guest of the towns and railways—and we were most cordially received. You will find a cut of me in one of the slips from a Minneapolis paper, and you will see that in one of my speeches, reference was made to my "very gracious English"—Good for British Guiana ! The trip was good in two senses for us, it was a part advertisement for the colony, since British Guiana

was always mentioned, and the little change did me good after the round of work and worry in Chicago. Of this trip I shall have more to say later in a special report. We went right into Canada to celebrate on British soil for a few minutes, and I believe views will be found later on in the *Graphic*.

Adolphus, the Indian is very popular. The Editor of the *Recorder* got my permission for him to write them an article a little while ago, and you will see it is not at all bad. He also came off winner in one of the swimming contests organised for aboriginals of all nations.

The official catalogue is not yet complete so that it is no good sending you the partial thing that is being sold for the present. The proceedings of the World's Congress auxiliary will not be printed for some months, money for the purpose not having been yet voted. I will enquire for prices in all these cases, and the Book Committee can forward the amounts for them when I let them know.

Again I can't help reiterating my belief that our representation, besides being a great present success, will be of real solid good to the colony. There are assurances of it already as you must have noticed. The first direct result will be an accession of trained miners who are coming out for work prepared to take their chances. Many have started already. I think I have covered all the ground, so that I shall close—the more especially that I see from the meetings of the Society that they seem to consider my long reports somewhat in the light of a bore. I am, &c.,

J. J. QUELCH.

Chicago, Sept. 13th, 1893.

L. M. Hill, Esq.,

Secty., R. A. & C. Society.

Dear Sir, —As the *Carib Prince* is advertised to sail from New York on the 16th, I send a line to say that I have sent off, since writing last week, orders for 80 copies of the September number of the World's Columbian Exposition Illustrated to be sent to you to be dealt with as the previous lot. This is called the "Queen's number," since a picture is given of Her Majesty, and one of Princess Christian, with a special account of Royal exhibits. My real reason for sending them is that it gives a picture of "Our Commissioner" with his record, and an article on British Guiana, which I wrote for them. This has been done for us quite free of payment on our part, owing to our former

advertisement, and because I have been of some use to the editors of the paper, in introducing them; I think they have treated us very well. Please send copies to His Excellency the Governor, to the Hon. the Government Secretary, and to the Assistant Government Secretary, etc.

I have to say also that we have an award in the Transportation Building for our exhibits of boats of different kinds—and that two awards are declared for us in Forestry, one to the Government exhibit and one to Messrs. Park and Cunningham for set of woods. As they have classed the logs of timber and the panels of ornamental woods, as one exhibit, in spite of my separate entry, I have made formal protest and complaint, pointing out the special nature of, and the marked difference between the two exhibits, and stating that the two exhibits, separately, are as much entitled to award as they were recognised to be collectively—the more especially when compared with others in the whole exhibition, where these two exhibits are simply unique and unsurpassed. What the result will be I can't say.

I have also lodged formal protest against the judges in sugars, since they have utterly ignored the refining crystals, 1st and 2nd molasses and muscovado sugar. I have pointed out that the sugar trade with the United States consists entirely of these classes of sugars, and that it is the great bulk of our trade, and of special manufacture for the special market: and that it is as rational to judge these sugars in competition with white and yellow crystals, as it would be to judge any raw sugars against refined. What the result here will be, I cannot tell.

The other lists are not yet out, so I cannot say what may have been gained besides, but I know we have several others. In haste, very faithfully yours,

J. J. QUELCH.

Chicago, Oct. 22nd, 1893.

Dear Sir,—I wrote you last week officially to catch the Dutch Mail Steamer "Prins Willem II." sailing on the 21st; but I send this by the "Tjomo" to say that I have got your letter safely, and those of Mr. Rodway and Mr. Conyers with the drafts for the \$800 from the Imperial Institute Committee. I have written to Mr. Conyers to acknowledge the receipt.

I feel quite comfortable and relieved now with the money in hand; for I shall have funds enough to meet whatever expenditure may arise until money from sales comes in, without touching what should be left

aside for return passages and other such expenditure. As I explained in my letters 'tis not that I thought we should spend more money than the vote given for the purpose, but that I wanted more money in hand here until I could realise from sales. I am certain that we shall have a balance in hand after all expenditure is met—especially by the action of the Imperial Institute Committee in taking over many of our things from the Exposition Committee, which would not by sale here now have realised very much. The Committee have acted very wisely for the Institute, I think, since the collection that I can send from here will make a very creditable Show. They have trusted me to do the best I can in the matter, and I need hardly assure them that I will do so to the best of my power. M. Rodway gives their detailed instructions, which I will attend to; but I must leave it to a later opportunity to say exactly what I am sending off. Of course the logs of timber, the sugars, rum, molasses and preserves, and such like things, I shall get rid of here. They are bulky, and are much better supplied fresh in the latter cases from the colony direct. Many of the things that I should have liked to return to the Museum, it will be advisable for our better advertisement to send to the Institute, especially where they are easily replaced in the colony to the Museum. Our own things from the Museum, that I allowed out, and the mounted animals will return. The gilt models I am sending to London—they are very instructive and are worth it; but I shall lighten them by cutting out the centre of the base on which they stand. They only make one case when packed into each other. You will have noted that freight was my chief fear. I learn now for *the first time* that arrangements were made for payment on your side. No statement of this kind was ever made to me before nor could I estimate, as well as you could in the colony, what it might come to, for I had never any statement to guide me, of what the first cost was in their coming up here. I knew the cost was great for it took up all the funds left behind in the Treasurer's hand, but I was never notified of the details to guide me on the return. I imagine I shall have quite enough here now to pay railway fare on the returned packages—anyhow, I feel all right. I will write for report at the end of the month when I hope to give lists of awards. By the bye, I must say that I had purposely given the name of the exhibitor as the Government, in some cases, for the reason that it seems that only one medal can be got by an exhibitor, though many certificates may be issued to him for different exhibits.

The Government, the Exhibition Committee, the Commission and the R. A. & C. Society, were therefore all different titles of exhibitors, that might get medals, while under one name, only one medal would be issued. 'Twas policy, and I will see what can be done in the matter.

Just now I am very tied up with correspondence. Judges's work, meetings, receptions, etc., and with little time left for sleep, owing to the distances to be travelled at night, am pretty well fagged out. " 'Twill be over soon" I comfort myself with.

It will be much harder and longer work getting away it seems. The authorities are going to give us no special facilities for getting away. They will charge admission to the grounds after the close, and admit visitors, so they don't care to be in too much of a hurry to lose us. And then, the enormous amount of stuff here will congest the lines for weeks! I expect I shall not be able to leave here much before the beginning of December. As soon as it can be done, of course, I return.

Yours very faithfully,

J. J. QUELCH.

The Chairman said the letters were very interesting and he was glad to see that there were no more financial difficulties to be overcome.

A letter from the Editor of the *India Rubber World*, was also read, this containing a request for information as to the ballata trade. The Assistant Secretary was directed to collect what information he could procure and forward to the writer.

The Assistant Secretary read letters from His Excellency the Governor and Sir John B. Lawes, thanking the Society for electing them honorary members.

The thanks of the Society were accorded to Captain Shieve for a framed picture of "Columbus' Caravels in sight of land" and to the Hon. N. Darnell Davis for a copy of the "Second Report on Criminal and Civil Justice in the West Indies, &c." 1828.

The Chairman mentioned that the election of Office-bearers for the coming year would be held at the next

meeting, when he hoped there would be a good attendance. The meeting then terminated.

Meeting held on the 14th December.—Hon. Dr. Carrington, C.M.G., President, in the chair.

There were 22 members present.

Election.—*Member*: His Lordship W. P. Swaby, Bishop of Guiana.

Mr. Jacob Conrad brought forward his motion, of which due notice had been given, for the appointment of a Committee to arrange for a public reception of Mr. Quelch on his return from Chicago.

Mr. Conrad said he brought the motion that the Society might have an opportunity of honouring Mr. Quelch and showing their appreciation of his services at the Columbian Exposition. Looking at the discomforts involved in such a change as that from the tropics to an extremely cold climate like that of Chicago, and the arduous duties of his position when he arrived, they could not but agree that Mr. Quelch deserved some recognition. He considered that the colony could not have been better represented, and was sure that everyone would agree with him that he had made a big show with little.

Mr. Æneas D. Mackay seconded the motion, and the Hon. A. Weber supported it, saying that he had heard from some of his American friends that Mr. Quelch was one of the most popular of the Commissioners, and was looked upon as a great authority on all matters.

The motion was carried unanimously, the President saying that as Mr. Quelch was expected in a week or two, the Committee would have an early meeting.

The Hon. N. Darnell Davis gave notice of motion as follows :—

“ That he would move at the meeting in January, that the following be added to the Society's Bye-Laws, Chapter IX., Book Committee and Library, Clause 1, at end of Clause,

“ The Committee so elected shall at its first meeting appoint a Chairman and Vice-Chairman, but no member of the Committee shall be so elected unless he shall first have intimated to the Committee or to some member thereof his willingness to accept one or the other of such offices if he be elected thereto.”

The President read the following letter from Mr. Quelch, which he remarked was written before one of those which had been read at the previous General Meeting :—

Chicago, Oct. 15th, 1893.

L. M. Hill, Esq.,

Hon. Secty., R. A. & C. Society.

Dear Sir, — Since writing to you for report last month, I have been notified through Mr. Rodway of the very kindly act of the Society in passing a vote of thanks to me for the performance of the duties which I undertook in accepting from the Government the position of Commissioner for the colony. It is very gratifying to me to know that the way in which I have tried to perform my work has met with the approbation of the Society and though even now my mission is by no means finished, I must state that I have throughout striven, so far as I was able, whether by pen, mouth or act, to do the best that was possible to me for the colony whose interests were entrusted to me. I need hardly assure the Society that I shall strive for the remainder of my time to keep the record as complete—the vote of thanks is but I take it, a mark of their confidence that the interests of the colony will not suffer in my hands. As such I thank them for it.

I am sorry that having met with the approbation of the Society in the method and performance of work, I have been compelled lately to write as though wanting more funds. I say sorry because the request for money is but seldom one that leaves a pleasing impression. And yet I would point out that I have been asking for nothing more than the maintenance of the conditions under which I agreed to accept the position of Commissioner. Besides the \$10,000 which were placed to

my order here, it was fully considered that at least another \$2,000 would be at my disposal through the sale of the handbooks. As this sale would have been throughout the six months, this amount would certainly have been to my credit before the end of the Fair, had it been possible to sell the handbooks: and though the expenses of the Indians, had they been sent, would have absorbed a good deal of this, certainly it would not have absorbed more than about \$1,000 or \$1,200. This would still have left me in hand some \$1,000 or \$800, more than I now have, to meet the miscellaneous expenditure of carpentering, packing, customs dues, transportation and freight charges, etc.

As no money was derived from the handbooks, there was no option but for me to ask for an equivalent amount to be sent to me. True we shall realise something by the sale of many of the exhibits, but the awkward fact is that these things can only be sold at the end of the Fair, and unless I stayed up here till the end of December and left all packing and despatch of things till then, so that I should have no expenditure for freight till after the things were sold. I could hardly utilise this money directly. As I have said already, I do not anticipate that any more money will be spent than what I have in hand together with what we get for things sold—but I need more money in hand to meet current expenditure for freight, storage transportation, etc., until the money from sales is realised. I have enough for the personal expenses of myself and the Indian, and for our return passages, and for part freight and carpentering, but all working expenses in Chicago are extremely high; and they have to be met at the time. I had no desire to have myself placed in the unenviable position of being called upon to pay out moneys which I could not at once meet. I suppose it is impossible for you in Guiana to put yourself in my place to understand the conditions of things as they are cropping up now at the end of the Fair in Chicago. Everybody is trying to pack up and clear out as soon as possible, scarcity and dearness of labour, and a great emporium of stuff thrown on the market from all parts of the world, and the greater part of it for sale! I asked at least that what money was at the disposal of the Committee should be sent on to me, because I have to pay—prepay—all charges for freight on this side. It was easy from Georgetown to send on things and to collect, in Georgetown, charges afterwards—here they have to be paid to begin with—else they would not be forwarded at all. It was thus of no use for the Committee to keep exhibition money in hand

while it was needed on this side, hence my urgent request for what was in your hands:

I have said all this to make my case clear—what more is to be said on the matter I must say when I return. I do not know what the Committee may have done to meet my requests; it is too late now for me to do any more. I asked for the additional funds that I might be placed in an independent position, even with a surplus of money, of being able to do what was necessary without constriction. If they have left me in the lurch, I must await the turn of circumstances and do the best I can as things arise. So much for that.

I have sent you a whole series of clippings from the newspapers on our exhibit, on banquets, receptions, etc., which may be of interest as Guiana was always represented. Some of the accounts are good, others are very curious samples of what the reporters can do. You will see that I was away on a Foreign Commissioners' trip to St. Louis for 2 days. About 70 of us went, and had a very fine time. I have also sent on to the Government Secretary, a series of photographs of the Guiana section which will give a fairly good idea of it as a whole. We are so crowded that it is a very difficult thing to have satisfactory photographs taken from below, and from above it is too far. The outside view is very good—and the view of our court in the Ethnology is fairly clear and good, though it only shews a part of the side and front. I am sending by another mail another set to the Society.

The final awards are not yet made. I think we shall have about 50 or so. They have entailed a considerable amount of work on me in meeting and talking with the Judges, the more especially as I was myself one of the Judges on the Ethnology and Natural History section. Just now I am particularly busy. Correspondence and meetings take up a very considerable part of my time—and reading papers at the Congresses add to it. However, I am well, in spite of severe changes of weather, from wet to cold and to warm and *vice versa*. Vast crowds are visiting the Exhibition from day to day. Our section is constantly packed with people rendering it difficult to move about in it. I hope to write within the next week or so when the final awards are published—till then let this come in as a sufficient notification that things so far go all right. Yours faithfully,

J. J. QUELCH.

The President stated that as might be seen from Mr. Quelch's later communication his appeal for more funds

had been met by a grant from the Imperial Institute Committee, of \$800, for the purpose of procuring such a selection of the Chicago exhibits as might be thought most suitable for the Institute.

The Assistant Secretary laid over samples of corn, corn meal, plantain flour, and cassava flour, which had been kiln-dried and prepared by Messrs. Silva Bros., Pomeroon, by means of machinery lately imported. A letter from Mr. J. A. Kendall, an Associate of the Society, was read, referring to a premium offered by the Society in 1889 for the first corn-drying kiln erected during that year. Messrs. Silva Bros. thoroughly understood that they were not entitled to claim the premium in accordance with the terms of the Society's resolution, but hoped as they had been at considerable expense that their case might be considered.

The President directed attention to the samples lying on the table for inspection. As they would see from the copy of the Society's resolution passed February 21st, 1889, \$50 was offered to the first person who erected a kiln in the colony during that year, the amount to be paid on the award of the Commercial Committee. It was for the meeting to decide what they would do.

Mr. Conrad thought the resolution should be revived so as to apply to this case, as although the work had not been done at the time still it was done now; he would therefore recommend that the \$50 be awarded to Messrs. Silva Bros.

The Hon. N. Darnell Davis said there was some doubt as to whether Mr. De Barros had not anticipated Messrs. Silva.

After some further discussion the matter was left to the decision of the Commercial Committee.

The thanks of the Society were accorded to the Government for copies of Surgeon-Major Comins' Notes on Emigration from India to British Guiana, Trinidad, Jamaica and St. Lucia.

The President said that the next item on the agenda was put down as the "President's valedictory address," and he believed it was usual for that officer to say a few words by way of commentary upon the proceedings of the Society during his term of office before vacating the chair.

The usual meetings had been held during the year, one falling through for want of a quorum, when something happened to prevent the members attending. Once or twice also he had been unable to attend on account of Militia duties, when he had to thank the Vice-President for taking his place. Various questions of interest had been discussed at these meetings, among others being the definition of "political" as applied in the Society's bye-laws. He thought that even if political discussion had been allowed it would not have risen to any great height, but probably it was better that it should be excluded. Cattle disease on the East Coast had been reported to the Society and the matter referred to the Government, but he believed it had afterwards turned out to be not of such importance as on a former occasion. Attention had been called to agricultural education through a motion by Mr. Binnie, who was desirous of introducing it into primary schools. The question of the working of the Adulteration Ordinance was also brought up and a resolution passed and

forwarded to the Government urging that it be effectively carried out. He was glad to say that quite recently measures had been taken, and there could be no doubt that a well considered scheme for carrying out the provisions of the Ordinance would result in good to both wholesale and retail purchasers. In this matter the Government would undoubtedly receive the cordial cooperation of Professor Harrison, the Government Analytical Chemist. With regard to the representation of the colony at the Imperial Institute, they would recollect that the inadequate show of the colony in that magnificent building had been brought to their notice on several occasions. It had even been said that it would be better not to be represented at all than by such a miserable display. Some time ago the Combined Court voted a thousand dollars for a better show at the Institute and the Committee appointed some years ago met and resolved to procure such of the Chicago exhibits as might be suitable to the amount of \$800, leaving \$200 to go towards the cost of arranging in the Institute, which Mr. Ohlson, Secretary of the West India Committee, had kindly promised to look after. He expected that by this arrangement they would get a good representation of the colony. The question of bringing to the colony some of the Chinese, who were being expelled from the United States, was brought up by the Hon. N. Darnell Davis. The attention of the Government had been directed to the matter and it was under consideration, several schemes for their introduction having been published. A very important matter had come up at various meetings, and occupied a great deal of their attention—he meant the Columbian Exposition at Chi-

icago. His Honourable friend Mr. Weber had said that the World's Fair was the largest and most wonderful exhibition ever known in the World's history, and he supposed it would be a very long time before any one saw its like again. The administration of the British Guiana exhibit at that show had been entrusted to the Society, and he would say that the Committee had discharged their duties in an admirable manner and secured an excellent representation. From time to time the letters of Mr. Quelch had come before them and he was sure they were read with interest, and that all were grateful to him for the manner in which he had made the Society acquainted with the progress of affairs at Chicago. He thought it was a very fortunate circumstance that the Society had decided to give due honour to Mr. Quelch for the pains, energy, and enterprize which he had shown in carrying out the task that had devolved on him. He thought they all agreed that Mr. Quelch was the right man in the right place, and that they could not have had a better or more earnest representative than he had proved to be, it therefore well became the Society to honour him. With reference to the Horticultural Show which as they were aware was held in August, although not a marvellous one, it was a fair beginning, and as such he thought they ought not to be dissatisfied with it. He believed they were right in asking the Government to place on the Estimates a vote of \$500 so that it could be repeated annually, when he hoped they would determine to make the Shows as successful as possible. During the last few years it had been usual to have lectures more or less bearing on science, and during this year three of these had been given. The first, was by Mr.

G. B. Steele, on "The Pyramids, and Sphinx"; the second, by Mr. Allan E. Messer, on "The British Cabinet"; and the third, by Mr. S. M. Bellairs, on "The Stately Homes of England," illustrated by photographic views by the Hon. E. C. Luard. With regard to agriculture he believed the Agricultural Committee would report, therefore he would not trespass on their province. For his own part he would like to say he was anxious that the agricultural work of the Society should advance, and to that end wrote to some seven gentlemen, competent to deal with agricultural questions, asking them to read papers at the Society's meetings. He was sorry to say that neither of them had been able to do so, and he regretted to state that no agricultural papers had been read. He would leave it to the Agricultural Committee to say how far they had attempted to stimulate the interest in agricultural matters, and to what extent they had been successful. He should have mentioned that the number of lectures was small but he hoped they would hold him free from blame in that respect also, because he had applied to a number of competent gentlemen, but only two or three promised to prepare them. They all knew that lectures required time and thought, and in these times he supposed it was not convenient for busy men to prepare lectures such as they would like to deliver before the Society. With reference to the Library the Assistant Secretary informed him that it had been increased by the addition of over six hundred volumes, making a total of more than seventeen thousand. He supposed that in a way the Society had cause to be proud of such an important library, but he must confess for his part he always looked upon

it with somewhat mingled feelings for two reasons, the first being that he believed firmly that the fact of their being able to deal in literature caused the Society more or less to run off its true lines, and become, as a former President described it, a philosophical or literary institution. The other reason why he spoke of the library with mingled feelings was because he believed that were it not for its existence they would probably have a large and important free public library, the absence of which cast a reproach on the colony. He had said it before and would say it again as long as he was connected with the colony, that there was no shortcoming more marked than the fact that this wealthy and important colony had not got a free public library. He believed that when this reproach was removed a benefit would be conferred on the population generally. At the same time, as a member of the Society, he looked upon its library as something of which they might well be proud. In regard to the Museum he might inform them that some pictures from the "old masters" had been hung in the new gallery and several additions had been made to the collection. When Mr. Quelch returned the collection would be considerably increased by some interesting specimens which had been mounted for the World's Fair. The roll of members had been increased by the addition of a hundred, but against this they had to record the loss of forty-four, leaving a net increase of fifty-six during the year. Among the losses by death they had to deplore several gentlemen who had held high places in the estimation of their fellow-citizens, including the Venerable Archdeacon Farrar, Honourable W. S. Turner, Revd. Joseph Ketley and Mr. Exley Percival. In

conclusion he said it was time to bring his remarks to a close and to lay down the office which they were good enough to confer on him twelve months ago. He had felt it a honour to be elected to the high and important office, because he knew there was no position in the colony conferred by the votes and opinions of one's fellow-citizens more to be valued than the Presidency of the Royal Agricultural and Commercial Society. At the first meeting he had presided over he had taken leave to draw their attention to certain provisions in their charter of incorporation, which he conceived were not carried out in their full or true spirit. During the year these provisions had often been in his mind, but he was sorry to say that his remarks had not fallen on fruitful ground, and he was afraid the agricultural interests of the Society had not been developed to the extent he had hoped. He would not go over the same ground as on the former occasion, but would only express his hope that they would yet be enabled to deal with such important subjects as the development of agriculture in the colony. It gave him great satisfaction in retiring from the office of President to be able to recommend as his successor a gentleman who stood high in the agricultural world. He felt sure that if knowledge, ability and earnest attention to the duties of President could awaken their interest in agriculture it would be done under his auspices. He would not say anything of the work of the Agricultural Committee as he understood that the Hon. Mr. Howell Jones, its Chairman, would give in a full report. He again thanked them for the honour they had done him and for their attention to his remarks.

In reference to the report of the Agricultural Com-

mittee, Mr. R. G. Duncan informed the meeting that its Chairman had been prepared to give in the report but had been unfortunately called away from the meeting on business.

The President then said the next business was the election of Office-bearers for the ensuing year. He had been informed that it was the privilege of the retiring President to nominate his successor. He had already referred to the gentleman whom he proposed to submit to their suffrages, and he need hardly say more when he mentioned the name of Mr. R. G. Duncan, Financial Representative.

Mr. Thomas Daly seconded the nomination and said he felt sure that in Mr. Duncan they would have a very good President indeed.

Mr. Duncan was unanimously elected with acclamation.

In returning thanks the President-elect said they could rest assured that the interests of the Society would have his best attention, and that he would do his best to further its welfare, in which he hoped to have the cordial co-operation of the Directors.

Mr. B. S. Bayley proposed the Hon. Dr. Carrington as Vice-President. He said they were all aware of the energy, zeal, and ability with which he had conducted the affairs of the Society during the last twelve months, and he was sure he would do as much in the future as in the past.

Mr. Conrad seconded and the Vice-President was also elected unanimously.

Dr. Carrington thanked the meeting for their kindness and promised to do all he could to assist the President.

The Ordinary Directors, Managing Directors, and Exchange Room Directors were then duly elected as per annexed list, after which the President proposed that Mr. Conyers be continued in the office of Honorary Treasurer. It was an office that required a person of integrity, and he was sure they had such a man in the present Treasurer. Mr. J. Wood Davis seconded and Mr. Conyers was unanimously elected.

The President then said he was sure they all regretted the absence, through sickness, of Mr. Luke M. Hill, their esteemed Honorary Secretary. He hoped Mr. Hill would soon be restored to health and strength and yet be able to render good services to the Society. Meanwhile, as he was leaving the colony, it would be necessary to elect another gentleman to the office, and he would propose Mr. R. T. A. Daly, who had already held the office, and as he believed, had discharged the duties to their satisfaction.

The Hon. N. D. Davis seconded, and Mr. Daly was also unanimously elected.

The different Committees, Local Secretaries and Resident Director in London were then elected as per annexed list.

A question having been asked as to Mr. Quelch's eligibility for membership of the Committee of Correspondence, he being an employe of the Society and not a member, it was agreed to leave the matter over for the present, asking the Directors to see if it be not possible to elect him an Honorary Member.

The meeting then terminated.

Office-Bearers for 1894.

Patroness:

THE QUEEN.

Vice-Patron:

HIS EXCELLENCY SIR CHARLES CAMERON LEES, K.C.M.G.
GOVERNOR AND COMMANDER-IN-CHIEF, &c., &c., &c.

President:

R. G. DUNCAN, F.R.

Vice-President:

HON. J. W. CARRINGTON, C.M.G., Q.C., D.C.L.

Hon. Secretary:

THOMAS DALY

Hon. Treasurer:

F. A. CONYERS

Ordinary Directors:

S. R. COCHRAN

HON. B. H. JONES

GEO. H. HAWTAYNE, C.M.G., F.R.G.S.

H. KIRKE, M.A., B.C.L.

HON. E. C. LUARD

HON. A. WEBER

Managing Directors:

B. S. BAYLEY

HON. N. D. DAVIS

GEO. GARNETT, F.R.

Exchange Room Directors:

T. H. GLENNIE

FERRIS GRANT

C. WEITING

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F.G.S.*Hon. Secretary:* S. R. COCHRAN

W. P. ABELL
 ROBT. ALLAN
 GEO. BAGOT
 C. L. BASCOM
 S. M. BELLAIRS
 G. M. BETHUNE
 W. T. BINNIE
 JACOB CONRAD
 J. M. FLEMING, M.A.

H. GARNETT
 J. GILLESPIE
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 HON. E. C. LUARD
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 J. B. MAYERS
 W. R. SPENCE
 HON. W. A. WOLSELEY

Commercial Committee:

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Vice-Chairman: T. H. GLENNIE

Secretary: J. Y. BALDWIN

B. S. BAYLEY
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 C. BROMLEY
 JACOB CONRAD
 W. CUNNINGHAM
 J. WOOD DAVIS

J. H. DE JONGE
 G. H. RICHTER
 A. SUMMERSON
 JAS. STUART
 E. T. WHITE

and the Exchange Room Directors.

Committee of Correspondence:

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Vice-Chairman: PROF. J. B. HARRISON, M.A.
 F.I.C., F.G.S.

Hon. Secretary: J. J. QUELCH, B.Sc.

Treasurer: F. A. CONYERS.

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 H. H. CUNNINGHAM
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 REV. D. J. REYNOLDS
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 HIS HONOUR W.A.M. SHERIFF
 JOHN DUKE SMITH, F.R.
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	J. VEEOCK
	THOMAS WATT.
<i>Local Secretaries (Berbice)</i>	DR. E. D. ROWLAND.
<i>(Essequibo)</i>	HON. A. R. GILZEAN.
<i>Curator of Museum:</i>	J. J. QUELCH, B.Sc.
<i>Assistant Secretary & Librarian:</i>	J. RODWAY, F.L.S.
	<i>Resident Director in London:</i>
	NEVILE LUBBOCK.

Popular Lecture.

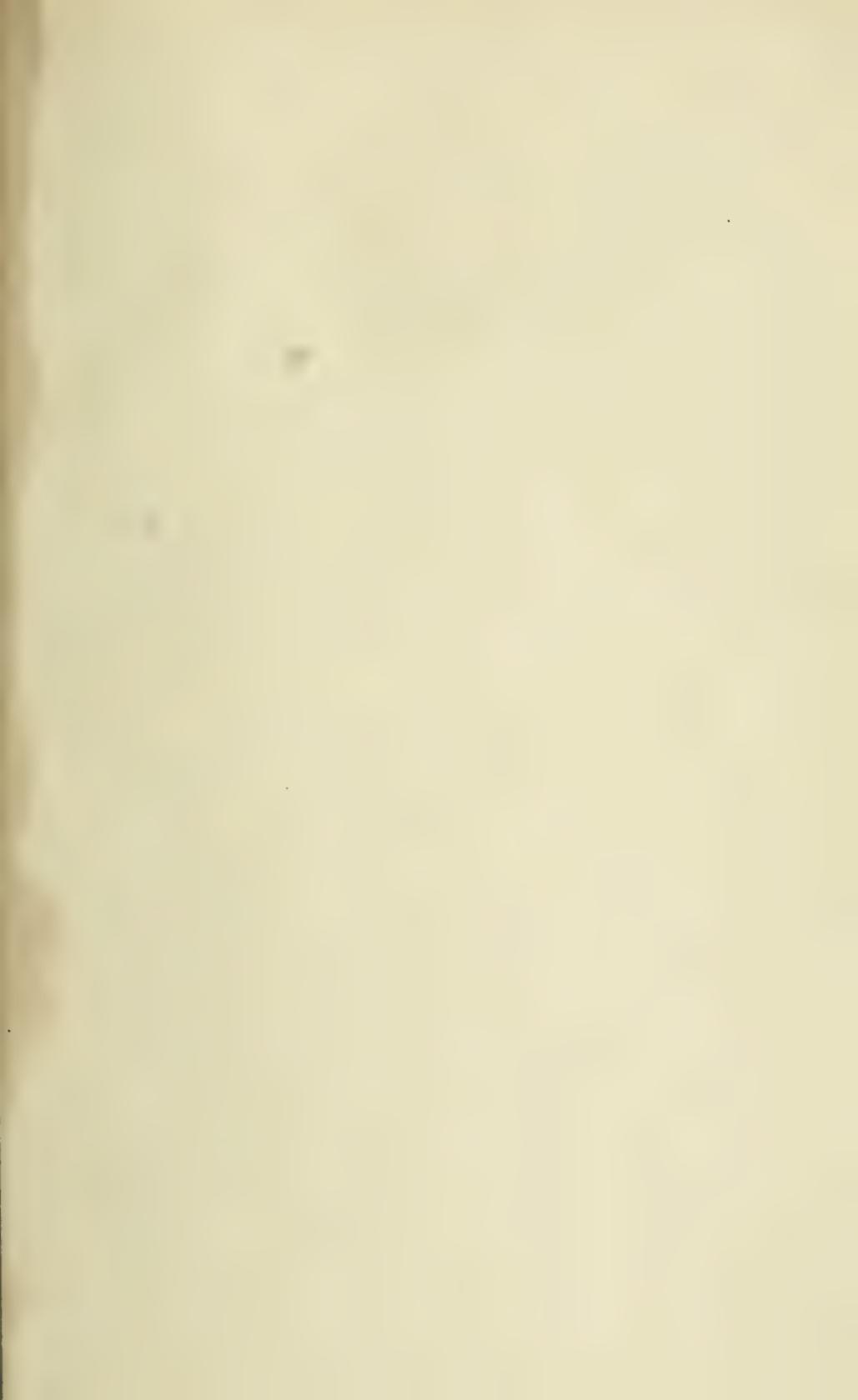
“ THE STATELY HOMES OF ENGLAND.”

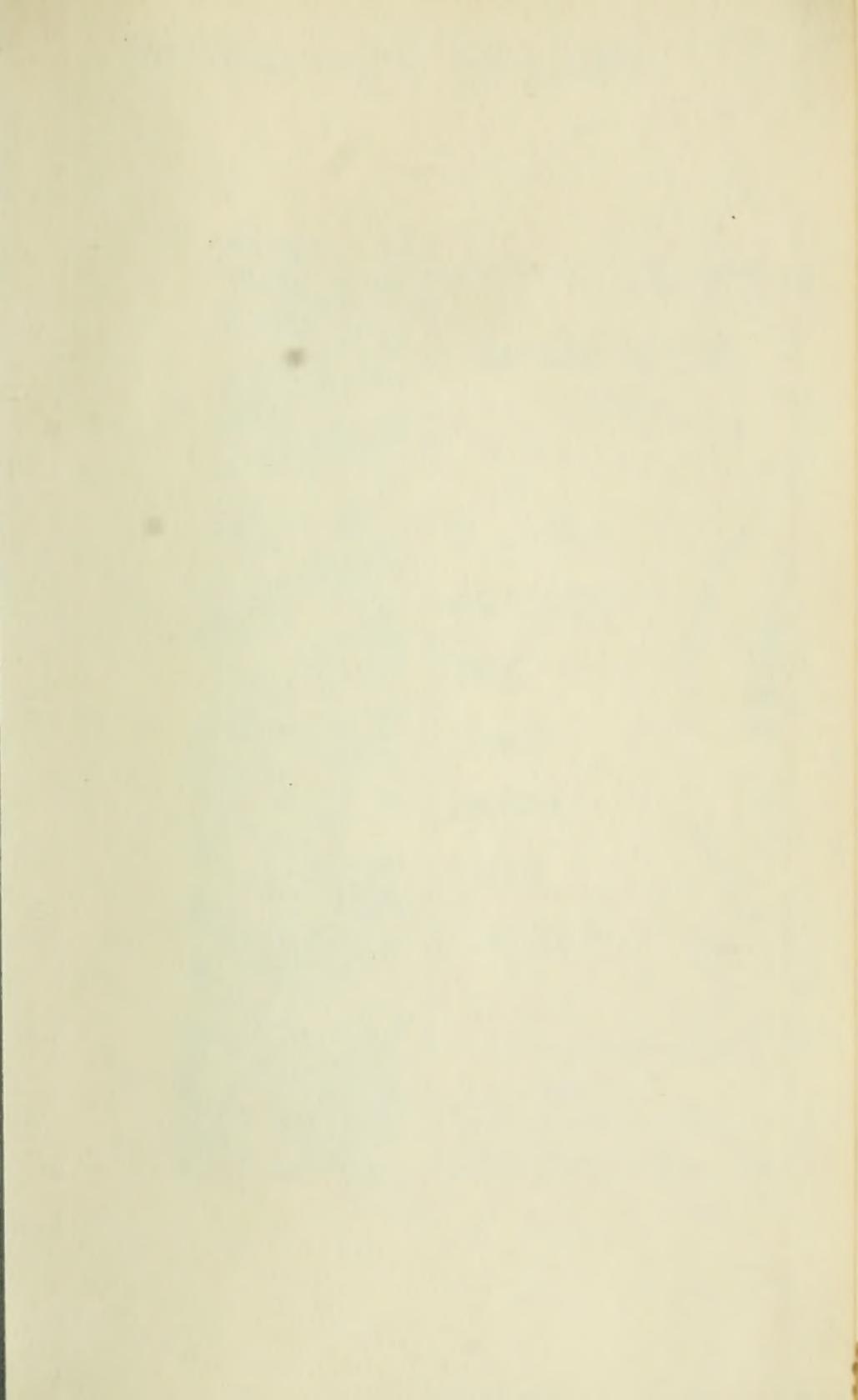
*Delivered on Monday, July 24th, 1893, by S. M. Bellairs, and illustrated
with Lantern views, exhibited by the Hon. E. C. Luard.*



HE lecturer gave an interesting account of some of the English Mansions, including Windsor Castle, Hatfield House, Haddon Hall, Chatsworth, and a number of others, photographs of which were thrown upon the screen.







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