

Grenada, which is in a fairly prosperous condition, has enlarged the original idea of a botanic station by making provision for a small botanic garden, which is now in course of being laid out under the charge of a trained superintendent (originally from Kew, but with Jamaica experience) at the Paddock, within easy reach of the town of St. George. At St. Vincent the proposal to utilise the old botanic garden of the colony as a botanical station has been adopted, but the provision at present made is insufficient for the purpose, and will require to be slightly increased.

St. Lucia, to the north-west of Barbados, has shown a spirit of commendable energy in taking up the idea, and has given practical effect to it through the operations of its well-organised agricultural society. An experienced curator, also from Jamaica, has recently been appointed to the charge of the station, and good results are anticipated. At Dominica the botanical station has not yet assumed a practical form owing to the depressed state of the finances; but there is little doubt that ultimately such a station will be established, and the resources of this fertile island more largely developed.

Further north, Antigua, more especially concerned in the cultivation of the sugar-cane, has joined the scheme, and apparently is only waiting the completion of final arrangements at the central establishment. British Honduras, which has already benefited by its intercourse with the Botanical Establishment in Jamaica, has the site for a station, and a managing body has been appointed to begin operations at an early date.

To give a certain cohesion and uniformity of action to these several agencies, it was thought very desirable that a visit should be made to the islands concerned by the head of the Jamaica Department. This was accomplished in the early part of last year by the writer of these notes, who was happy to devote a short holiday, on retirement from Jamaica, in visiting the islands at his own expense.

During this visit sites for stations were examined and discussed, and suggestions made for their working on the lines best suited to local circumstances. As a practical instance of the feasibility of a botanical federation of the West Indies, it may be mentioned that recently an inquiry has been made, by general consent of the local Legislatures, into the condition of the indigenous forest growths of these islands, by Mr. E. D. M. Hooper, of the Madras Forest Department.

The Reports on Jamaica and St. Vincent are already published, and they are of such a practical and useful character that they cannot fail to have an appreciable effect upon the treatment and management of the forests both as reserves of timber to supply future wants, and as a means of maintaining a due humidity of climate and protecting the sources of springs and rivers. These Forest Reports, when completed, will add greatly to our knowledge of West Indian timbers, their nature, extent, and distribution; and they will also afford for the first time in history the actual economic and meteorological conditions of the interior of several islands beyond the confines of the present areas under cultivation.

In many instances the natural forest trees, as at Barbados, the Virgin Islands, and some of the islands of the Grenadines, have been nearly exterminated; those once very common, and represented largely in collections of botanical travellers of the last century, are now almost unknown. If the botanical stations are carried on with due regard to the industrial wants of the community, and are not allowed to degenerate into mere nurseries for ornamental plants, they will indirectly do much to enlarge knowledge as regards local floras, and bring to light many indigenous plants likely to prove useful on account of such medicinal and economic properties as they may possess. In the year 1824 it was laid down as one of the objects of the then Botanical Garden, at Jamaica, that it should devote

attention "to the investigation of many unknown native plants of the island, which, from the properties of those already known, it is reasonable to infer would prove highly beneficial in augmenting internal resources by supplying various articles either for food, for medicine, or for manufacture, . . . by means of which great commercial advantages might be obtained; among others, the various vegetable dyes claim particular attention, as promising a fruitful field of discovery." As indicating the direct bearing which this one field of inquiry (vegetable dyes) among many others had upon the future of Jamaica, it is interesting to note that while no dye-woods whatever were exported from the island in 1824, a small trade of the value of 1859*l.* was started in 1833, which since that time has steadily increased, until now it has assumed relatively large dimensions. The exports of dye-woods in 1870 reached a gross value of 112,313*l.* ("Jamaica Handbook," 1884-85, p. 375).

Similar results in more recent times have attended the increased attention given to the cultivation of fruits that had been neglected in Jamaica. The export of these in 1875 amounted to 14,912*l.*, in 1884 the total value had increased to 273,534*l.*

Results such as these, although obviously of a special character, justify any attempt that may be made to improve the circumstances of the West India Islands; and they afford also a striking instance of what is capable of being accomplished in these islands when careful investigation and judicious and enterprising effort are made to fit local circumstances to the demands of the outer world.

As regards the carrying out of a scheme of local enterprise in the West Indies, it may be mentioned that the recent appointment of Mr. William Fawcett, a highly-qualified botanist, to the post of Director of the Botanical Department in Jamaica, and the transfer of Mr. Hart, late senior Superintendent at Jamaica, to the post of head of the Botanic Garden at Trinidad, appear to offer every hope of success to a botanical federation of the West India Islands. Jamaica and Trinidad, as the two foci of operations, could very well group round them the lesser islands, and the full realisation of such a scheme as is here indicated only requires such working out of details as may well take place at an early period.

It is important, however, to bear in mind that the success of the Jamaica Botanical Department, which has acted for several years as the centre of botanical and economical operations in the West Indies, has been in a great measure due to the valuable suggestions and the moral and material support which for many years it has received from Kew. It was from Sir William Hooker that Jamaica received its first supplies of seed of the several species of *Cinchona*, which have laid the foundation of the only English *Cinchona* enterprise in the New World. It was from his illustrious son and successor at Kew, Sir Joseph Hooker, that Jamaica received its tea plants and seeds, india-rubber plants, coca plants, fibre plants, and regular and large supplies of all the economic and medicinal plants which have flowed through Kew for distribution to various portions of the British Empire. Few can realise the eminent services which have been rendered by Kew in this direction, both by its correspondence and contributions, but there is every reason to believe that the results will ultimately be apparent in the greater prosperity of the inhabitants of the West Indies, and in the larger development of their rich and varied resources.

D. MORRIS

ART AND SCIENCE IN A NEW LIGHT

MR. BRETT is an artist of reputation and of remarkable industry. His pictures are popular, and meet with appreciative purchasers. He is enrolled among the Associates of the Royal Academy, and no doubt looks forward to be in due time raised to the dignity of Acade-

mician. At the request of the Fine Art Society he has this winter allowed a series of about fifty sketches painted by him on the west coast of Scotland last summer to be exhibited in the New Bond Street rooms. These sketches show that he has recently spent a long holiday among some of the most delightful scenery in the British Isles. As a man who has evidently got on in the world, looking back upon a distinguished past and forward to perhaps a still more distinguished future, he might reasonably be expected to smile pleasantly on the world that has used him so well. If the keen eyes that stand him in such good stead in landscape-painting reveal to him the weaknesses and frailties of his fellow-men, one might at least anticipate that they would wink hard at these shortcomings and rather turn to the good side of men and of things. But apparently Mr. Brett sees only too vividly what he conceives to be the impostures and ignorances around him, and his soul is stirred within him at the sight. The exhibition of his last year's sketches has furnished him with the occasion for discharging the vials of a wrath which, like that of Tam o' Shanter's wife, he must have been nursing for a long while to keep it so warm.

The Exhibition (now closed) was illustrated by a pamphlet, which on the title-page is described as "An Explanatory Essay," and on the first page is more emphatically designated as "The Commentaries." Mr. Brett, apparently with some presentiment that this literary effort of his might not meet with the same kind reception that attends his pictorial labours, stipulated expressly, as he tells us in a "Prefatory Note," that his paper should be published exactly as it left his hands. We cannot therefore plead for him that his essay was hurriedly thrown off in a fit of ill-temper. He ostentatiously goes out of his way to accept the responsibility of its matter and its style. A description of each picture, from the artist's point of view, with a running commentary on his method of working, the difficulties in Nature to be overcome, and his way of grappling with them, would have been interesting to the general public and valuable to artists and students of art. He seems to have started with the idea of writing some such commentary. But by the time he gets to the second page he catches sight of the red rags of imposture and ignorance, and without more ado rushes madly at them. The first victims of his fury are press critics of art. Nothing is too contemptuous to be said of them. Mr. Brett looks on them as a set of ignorant charlatans, too idle to work, too proud to beg, but who are glad to earn the slender pay allowed to them by careless editors. Some wretched scribbler had pronounced his work to be "laborious," which we would have thought rather a complimentary epithet; but Mr. Brett cannot forgive it. The writer who used it he stigmatises as a "bell-wether," and those who blindly followed his lead are described as "enlightened tom-tom players, who have gone on sounding the same note for a quarter of a century or more."

After this onslaught the painter tries to find his way back to where he was, and for a little while the reader begins seriously to entertain the hope that the promised commentary is coming. But the author gets upon the subject of clouds, and instantly a bigger bunch of red rags looms in front of him. Down goes the head, and with one triumphant howl of derision the infuriated writer rushes at scientific men in general, and the Royal Society in particular. After this second outburst he hardly calms down again till the end of the performance. No sooner does he turn from the treatment of the clouds to the ground beneath us than geological theories in all their hideous deformity and crass ignorance stare him in the face. The text is not roomy enough to contain all that he has to say about the misdoings of the geologists, so that he has to overflow into a footnote. Next comes the turn of those misguided astronomers who have

led mankind wrong about the moon and the planet Mars.

One is tempted to ask what is the meaning of all this sound and fury. What relation has it to the pictures it is meant to preface? What object can the writer have had in indulging in it? Men of science are, no doubt, often wrong. But at least they take the trouble to try to be right. Their greatest aim is to get at the truth, and they welcome whatever will lead them nearer to that goal. They will even willingly learn from Mr. Brett if he has anything to teach them, though he laughs them to scorn, and derides them as "scientific Johnnies," "lovers of jargon," makers of "real gibberish," by whom various "forms of silliness are palmed off as science disguised in Greek or Latin." If the meteorologist turns for suggestions to Mr. Brett's essay, he there learns that "the fundamental phenomena of evaporation have always been misrepresented," and that he and his gaping fellow-students of Nature will learn more about clouds from the pictures of a well-known landscape-painter "than from all the Transactions of the Royal Society put together." If the geologist inquires what Mr. Brett has to say for his consideration regarding the "laws of the rocks," he is told that water is a "recent formation," that upheaval is a "childish conception," and that geologists "ignore the moon." If the astronomer in turn asks what the author of "The Commentaries" has to say in his department of knowledge, he is informed that Mr. Brett defies him "to point out a single instance of a volcano or a volcanic crater in the whole disc" of the moon. The "jargon" and "real gibberish" of modern science not only afflict the artist's own soul, but they disturb the peace of his family. "One professor the other day," he indignantly exclaims, "learnedly instructed my boy that aqueous vapour was formed by evaporation!" Hapless youth! Let us hope that his father has found time to instruct him in "the fundamental phenomena of evaporation."

After such a tirade against scientific men, one might suppose that Mr. Brett would be disposed rather to avoid them, or at least not to show himself ostentatiously in their company. And yet the reader will be amused to discover him, in the midst of these rabid denunciations, contriving to find room for a statement that he himself has written a scientific paper which has been published in a scientific journal, and that this important fact may not be missed, he quotes the paper in a footnote! Is Saul also among the prophets? There would be something pathetic, were it not so ludicrous, to see the proud paternal way in which the artist brings forward his feeble little scientific bantling. We should not be surprised if he thought more of it than of some of the pictures that have made his fame. His contempt for "lovers of jargon" and "real gibberish" is apparently equalled by his profound satisfaction with his own achievements. Not content with indicating the artistic value of his work, he claims that, "if these sketches have any distinct peculiarity worthy of notice, it is that they are optically correct, or at least are intended to be so, and that intention, strange to say, is new in pictorial art"! It would be interesting to hear the painter's defence of the "optical correctness" of some of the pictures. Did he ever see, for instance, a castle standing as he has depicted one in No. 22? Of his peculiar greens and blues we need not speak. They are part of his "confirmed mannerism," to use his own phrase, and are characteristic of his canvas, no matter under what skies and among what seas and rocks he may paint.

The pamphlet to which reference has been made in this article would not, of course, have been noticed here but for the name of its author. Science owes much to art, as art in turn lies under many obligations to science, and it should be the aim of each to help forward the other. That a man of Mr. Brett's artistic attainments should have gone out of his way to pen this "form of

silliness" is to be regretted chiefly for his own sake. He has injured his reputation for common-sense, and this even a great genius cannot afford to do.

THE NATIONAL SCIENCE COLLECTIONS

THE following Report of a Committee appointed by the Government to consider the housing of the objects illustrating the physical sciences belonging to the nation has recently been printed and circulated. The Committee consisted of Sir F. Bramwell (Chairman), Lord Lingen, Colonel Donnelly, C.B., and Mr. Mitford, C.B. :—

1. We, the Committee appointed by the Lords Commissioners of Her Majesty's Treasury to consider certain questions that have arisen in regard to the Scientific and Technical Collections at South Kensington, now beg leave to present to their Lordships our Report thereon.

2. The appointment of the Committee included the name of Sir Francis Sandford, K.C.B. ; but this gentleman, in consequence of the pressure of other public business, has been unable to attend any of our meetings, and he has authorised the other members to proceed with the inquiry, and to report, in his absence.

3. Our instructions were conveyed in a letter, dated January 14, 1884, and a memorandum accompanying it, from Lord Richard Grosvenor to the Chairman, and were to the following effect :—

"It will be the duty of the Committee (1) to consider and report upon the scope of the Scientific and Technical Collections, including the Patent Museum, and the space required for them, immediately and prospectively ; (2) to suggest plans for housing these Collections in the existing galleries to the south of the Horticultural Gardens, or in new galleries to be built upon their site, and the adjacent ground now the property of the Government."

PRESENT DISPOSAL OF THE SCIENCE COLLECTIONS

4. Before we enter on the consideration of these questions, it will be convenient to explain how the collections are at present housed.

They are contained in five buildings which are shown on the accompanying Plan, Drawing No. I., and are marked A, B, C, D, E ; whereof A, B, C, and D are on the west, and E is on the east side of Exhibition Road.

The buildings A, B, E, coloured yellow on the plan, and their sites, are the freehold property of the Government ; the buildings C, D, coloured blue, and their sites, are the property of the Royal Commissioners of 1851, from whom they are rented by the Government.

5. C is a block forming the centre portion of the galleries to the south of the Horticultural Gardens. It is about 292 feet long, 55 feet wide, and two stories high. It contains 22,000 square feet of available floor-space.

This building is the property of the Royal Commissioners of 1851, and is at present leased from them by the Government for 1500*l.* per annum. The lease terminates in 1890 or 1897, with a power up to January 1888 of purchase for the sum of 30,000*l.*, or, at the option of the Commissioners, for such sum, not exceeding 35,000*l.*, as may be fixed by the President of the Institute of British Architects.

6. A and B are the southern wing-galleries, the former on the east, and the latter on the west side of the central block C, and having short returns or spurs, A' and B', to the northward, at their external ends.

These wing-galleries extend about 280 feet in length on each side of the central block ; they are about 26 feet wide, and two stories high.

The returns at each end are each 72 feet long, and one story high.

The whole contain about 29,500 square feet of available floor-space.

These buildings, and their sites, are the property of the Government.

7. D is a building known by the name of the Western Gallery. It is 600 feet long, 33 feet wide, and two stories high. It contains about 36,560 square feet of available floor-space.

This building is the property of the Royal Commissioners of 1851, and is at present rented from them by the Government for the sum of 2000*l.* per annum. We believe, however, it is desired to give up the tenancy if possible.

8. E is a temporary building one story high, abutting on the south end of the permanent buildings of the Museum on the eastern side of the Exhibition Road. It contains 7500 square feet of available floor-space.

It is the property of the Government, but we understand it must be pulled down before long, to make way for more permanent erections.

9. These buildings are not altogether devoted to the Science collections.

The National Portrait Gallery at present occupies 19,040 square feet, partly in the two floors of the eastern wing A (a portion of the freehold), and partly in the eastern section of the central block C (the leasehold portion), of the south galleries. A space of 7500 square feet in the upper floor of the central leasehold block C, is also reserved for examination-rooms.

A portion of the ground floor of the western gallery, D, has been, up to the present time, occupied by the Pitt-Rivers Loan Collection, but this collection is in course of removal to Oxford.

10. The Science collections are now contained in the western part of the ground floor of the leasehold central block C ; in the ground floor and in part of the upper floor of the western freehold wing B ; in the northern end spurs A' and B' ; in the two floors of the western gallery D ; and in an unsightly wooden passage K.

This passage runs outside the southern wall of the south gallery, and forms the only approach from Exhibition Road to the Science collections, it not being possible to allow the public to use the Portrait Gallery as a thoroughfare.

The "Patent Museum" is contained in the temporary building E.

11. The total floor-space now occupied by the Science collections is therefore about as follows :—

	Square feet
Total space in C	22,000
" " A, B, and A', B'	29,500
" " D	36,560
" " E	7,500
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	95,560
Deduct Portrait Gallery	19,040
" Examination-Rooms	7,500
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	26,540
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Total occupied by the Collections	69,020

12. The Drawing No. I. also shows (marked G and coloured red) the area of land which belongs to the Government south of the present south galleries, which land is implied in our instructions to be available for buildings to house the collections.

SCOPE OF THE COLLECTIONS, AND SPACE REQUIRED FOR THEM

13. We may now proceed to report on the first subject submitted to us, namely :—

The scope of the Scientific and Technical Collections, including the Patent Museum, and the space required for them, immediately and prospectively.

14. A Museum of Science was contemplated as an integral part of the Science and Art Department from its creation in 1853.