

rious old Benedictine Congregation. From the commencement of the suppression of monasteries by Henry VIII., some seventy years before, three hundred Benedictine communities had been dispersed. Some of the members suffered martyrdom, notably amongst them being the Abbots of Glastonbury, Reading, and Colchester; others died in exile, others again in prison, and many of want and private suffering. In the Gatehouse prison in London was known to be still living a venerable monk of Westminster, who had been professed during the temporary resuscitation of the Congregation by Abbot Feckenham, in the reign of Queen Mary. His name, to be held in perpetual remembrance, was Sigebert Buckley. He had been in prison for nearly fifty years. Some Benedictine fathers had now arrived in England from Italy, and they sent for two priests who had completed their novitiate to come over from Italy, in order that they might receive their profession habit, and make their vows at the hands of the venerable Confessor. On the 21st of November, 1607, the good work was achieved. The good old patriarch met them at the prison door, received their vows, and admitted them to all the rights and privileges of the old Benedictine Congregation, and thus the succession was secured, and remains so till the present day.¹ The 21st of November, in honour of this happy event, is always marked in the English Benedictine Calendar, as *Dies Memorabilis*. The next important move was the establishment of monasteries for the Congregation thus restored. This leads us to the introduction of the name of Father Augustine Bradshaw, founder and first Prior of St. Gregory's, of whose good work we shall tell in our next number.

THE FORMATION OF A COLLEGE MUSEUM.

It was observed by one of the most fascinating of English writers on local natural history, that if the natural productions of every district had their local historian, our knowledge of the fauna and flora of this country would become more perfect than by any other means; and everyone knows how agreeably and how perfectly the author of that sentiment carried it into practice.

¹ Similar to this happy event has been the providential resuscitation of the Scottish Congregation, lately aggregated to the English Congregation through the means of one surviving father, Dom. Anselm Robertson, sometime conventual at our new monastery of Fort Augustus, Inverness. See the "Album Benedictinum," p. 56.

Living in a remote village in Hampshire, before the days of railways, with few neighbours of education to exchange ideas with, and but few books of reference on his favourite subject (for few then existed), he was thrown almost entirely on his own resources; and yet he found abundant occupation for many years in examining the productions of his own parish, and in collecting materials for those agreeable Letters on Natural History which have fortunately been preserved to us, and with which everyone is, or ought to be, familiar. As an English classic, every student should read Gilbert White's "Natural History of Selborne," and it will be surprising if he be not first attracted, soon amused, then deeply interested, and finally filled with a curiosity and longing to observe and examine for himself some of the many remarkable things in nature which are therein only partly unfolded.

If it be true that a poet is born, not made, the same cannot be said of the local natural historian. His occupation is not to conceive beautiful ideas and clothe them with equally beautiful words; but to arrive at great scientific truths by a course of patient and careful investigation, and the judicious collecting of natural objects illustrative of such truths.

Of the first part of such a course we need not here speak; our present purpose is to offer some suggestions on the second; and in so doing we cannot dwell too emphatically upon the value of a local museum when containing well-arranged and properly-named collections of the natural productions of the district in which it is situated.

The late Professor Edward Forbes expressed the opinion that it is to the development of provincial museums that we must look in future for the extension of intellectual pursuits throughout the land. Well-arranged museums of every kind are now, in fact, an educational necessity in every highly civilized State; and many such exist. But in how few of these do we find any portion of the museum set apart to illustrate the productions of the district! The very feature which of all others would give interest and value to the collections, which would render it most useful for teaching purposes, has in most instances been omitted, or is so treated as to be altogether useless.

Unfortunately, many country museums are little better than raree-shows. They contain an incongruous accumulation of things curious, or supposed to be curious, heaped together in disorderly piles, or neatly spread out with ingenious disregard of their relations. In nine cases out of ten the only label attached to a speci-

men is "Presented by Mr. So-and-so;" the object of the presentation having been either to cherish a glow of generous self-satisfaction in the bosom of the donor, or, under the semblance of doing a good action, to get rid of rubbish that had once been prized, but latterly had stood in the way.

Curiosities from the South Seas, relics worthless in themselves, deriving their interest from association with persons or localities, a few badly-stuffed quadrupeds, rather more birds, some snakes in spirits, a stuffed alligator, part of an Egyptian mummy, a few Indian gods, a case or two of shells (the bivalves single, the univalves decorticated), a sea-urchin, without its spines, a few common corals, the fruit of a double cocoa-nut, some mixed antiquities, partly local, partly Etruscan, partly Roman and Egyptian, and a case of minerals and fossils—such is the inventory and about the scientific order of their contents.

The result of such an association as this of articles which have no sort of relationship with the rest, is to convert the whole into *rubbish*, using the word in the Palmerstonian sense of being "matter in the wrong place." We do not mean to say, however, that such museums are absolutely useless. In default of better, they are useful, just in proportion as they encourage the collecting instinct in the beholders. But it will be admitted by those who are best able to judge that the only way to make a college museum what it should be is to decline with thanks all offers of foreign curiosities, and objects of which no history has been preserved, and to which, consequently, no value can attach, and to confine attention to the collection of natural objects procurable within a certain radius (*e.g.* five or ten miles) of the college.

It is useless to attempt to vie with larger and older museums by accepting everything that may be offered; for not only would such a collection probably never rise above mediocrity and would occupy a great deal more space than would be required for the arrangement of locally collected objects, but from an educational point of view it would never be so valuable as a well-arranged series of minerals and fossils, animals and plants, collected within what may be termed the college area.

If for special reasons it should be deemed desirable to preserve within the museum walls other objects than these (such, for example, as collections made abroad by former students of the college, manuscripts relating to the history of the college, historical medals, and so forth), they might be arranged in a separate department, and kept quite distinct from the educational series.

At the last meeting of the British Association, held at Swansea in August, 1880, Dr. Günther, in his presidential address to the Biological Section, referred in marked terms to the value of provincial museums when properly designed and arranged.

"The direct benefit," he observed, "of a complete collection of the flora and fauna of the district in which the provincial museum is situated is obvious, and cannot be exaggerated.

"The pursuit of collecting and studying natural history objects gives to the persons who are inclined to devote their leisure hours to it a beneficial training for whatever their real calling in life may be; they acquire a sense of order and method; they develop their powers of observation; they are stimulated to healthy exercise. Nothing encourages them in this pursuit more than a well-named and easily accessible collection. This local collection ought to be always arranged and named according to the plan and nomenclature adopted in one of the numerous monographs of the British fauna and flora in which this country excels; and I consider its formation in every provincial museum to be of higher importance than a collection of foreign objects."

After such an expression of opinion from so high an authority as the Keeper of the Zoological Department in the British Museum, it will be unnecessary to dwell further on this part of the subject, although we may add briefly that such a museum, well carried out, is especially helpful to science in fixing a date to the fauna and flora of the district determined on, and in giving the material means of contrasting it with the condition of both at a later period in the ever-changing circumstances of an increasing neighbourhood.

As to the mode of forming and arranging such collections as those contemplated, opinions will doubtless differ. The following suggestions are offered for consideration:—

In addition to such antiquities as may be discovered in the neighbourhood, and secured from time to time,¹ the three chief divisions or departments of a museum will correspond with the three great kingdoms—the Mineral, the Vegetable, and the Animal.

The MINERAL department may be arranged according to the successive strata, or layers, of which the soil consists. The several kinds of peat, sand, gravel, clay, &c., may be preserved in glass jars, and the various fossils which may be from time to time

¹ Of such antiquities as are not to be obtained for the museum, drawings, or photographs, might be procured.

discovered may be arranged according to their position in the scale of animated beings.

The VEGETABLE department may have two leading divisions, the first comprising the non-flowering plants, as Lichens, Fungi, Mosses, and Ferns, sometimes called *acotyledons* (without *cotyledons* or seed-leaves) or *cryptogams* (concealed fructification, or seedless), because they do not bear manifest flowers, nor produce seeds containing an embryo, as do the great classes of *dicotyledons* and *monocotyledons*.

The second division comprising the flowering plants, may have two leading subdivisions, illustrative of the two great classes into which flowering plants are to be found grouped in nature. These subdivisions are named, according to the manner in which the wood is formed, *Exogens* and *Endogens*.

Exogens (producing outwards), so called from the new wood being formed in rings placed outside the old, are also called *dicotyledons*, from the seed having two rudimentary leaves, the plants in their early condition, while yet enclosed in the seed, nearly always having two (sometimes more) small opposed lobes or leaflets. In this subdivision the parts of the flowers are most frequently in *fives* or *fours*, and the small veins of the leaves are usually irregularly netted, as *e.g.* in the oak and the beech.

Endogens (producing inwards), so called because the plants, having woody stems, form bundles of wood which do not usually increase in thickness year by year; once formed, they remain unaltered in diameter, scattered through the pith-like substance of the stem. In this class (also called *monocotyledons* from the seed having only one rudimentary leaf) the parts of the flowers are usually in threes, and the veins of the leaves, excepting in a few orders, are parallel, or if diverging are not irregularly netted, as *e.g.* in wheat, grass, reeds, and rushes.

In the arrangement of the ANIMAL kingdom the two leading divisions will be the *Invertebrata* and the *Vertebrata*—animals without and animals with vertebræ, or spinal columns. The Invertebrate animals may be arranged in three classes—namely, the *Radiata*, *Articulata*, and *Mollusca*. The Vertebrate animals will comprise the Fishes, Reptiles, Birds, and Mammals.

With regard to the mode of preserving the various specimens of animals and plants which may be collected, we cannot do better than quote from a letter of the late Professor Bell, addressed some years since to the secretary of a local natural history society, who was at that time engaged in projecting a museum.

“The quadrupeds which it would be necessary to preserve in any local museum are comparatively few and small. The Bats, which are especial objects of interest, should be skinned and slightly stuffed, and may be pinned or attached with thread to small pieces of thin wood or cardboard.

“Other quadrupeds, such as the smaller *Insectivora*, *Carnivora*, and *Rodentia*, should all be well and naturally stuffed, as well as the birds, and should be kept in closely glazed cases. Most of the Reptiles are better preserved in spirits. The skull of every quadruped should be preserved (by having the flesh removed, and being then macerated in cold water for some days), as well as the head and feet of the more remarkable birds.

“The Bats, Voles, and Shrews are objects of special inquiry, and collectors should endeavour to obtain specimens which would settle the question as to the identity or distinctness of several so-called species.”

Fish, like Reptiles, are best preserved in spirit,¹ and by having a thread passed under or through the gill-covers, may be attached to the stopper of a glass jar, and so suspended in an upright position.

“Land and fresh-water shells, like birds' eggs, are best kept in drawers, so as to protect them from the light, which would otherwise soon cause their colours to fade. The best way to free the shells from their inhabitants is to plunge them into boiling water and keep them therein long enough to insure death, when the animal is easily removed.

“With regard to the collection and preservation of Insects, every elementary work on entomology gives full directions.

“Plants should be dried between sheets of botanical drying-paper, which should be repeatedly changed during the process, and kept under pressure, and when dried, should be attached by narrow strips of gummed paper to stouter white paper of a uniform size—folio is best—and kept in portfolios, or drawers. Palæontological specimens should be kept in glass cases to be readily observed, and careful notes made of the locality in which they have been found.

“Every specimen, whether animal, vegetable, or palæontological, should have a ticket attached to it, on which its generic and specific

¹ In this view we have ventured to differ from Professor Bell, who suggested the preservation of fish by taking off half the skin, sticking it on board, and varnishing it—a course which, for many reasons, is objectionable.

names, locality, date, and name of the finder, should be legibly written; while any additional notes of interest should be entered in a book kept for the purpose."

One of the most interesting results of these local collections will be the light thrown upon the geographical distribution of plants and animals, and the relation between the geology of the district and its organized productions.

Having, then, briefly considered the uses and advantages of a local museum, and the simplest mode of collecting and arranging the objects to be preserved therein, it may not be out of place to offer some suggestions as to management, which will be best entrusted, perhaps, to a committee and an honorary secretary.

After determining the name of the society through whose instrumentality the museum is to be supported,¹ providing for the enrolment of members, and fixing the amount of the annual subscription which is to be paid, it will be found desirable to adopt some such rules (amongst others) as the following:—

1. That all specimens, which must be in a good state of preservation, and in a state calculated to keep well, shall be sent to the Honorary Secretary of the Museum Committee, accompanied by the name and address of the collector, the name of the object (if then determinable), the locality where, and the date when collected, with any other details of interest, legibly written.

2. That a record of facts interesting in natural science be preserved in the museum.

3. That a list of plants and animals found in the district be drawn up for future revision and publication.

4. That an accurate register of the daily reading of the barometer, thermometer, and hygrometer be kept in the museum.

5. That a descriptive catalogue be kept of the contents of the museum.

6. That by degrees, as the museum finances shall admit, a collection of works on natural science be formed and kept in the museum for the use of members and students visiting the museum.

Other rules besides those here suggested will doubtless occur to the committee, or become necessitated by circumstances which are not here considered. Enough has perhaps been said to pave the

¹ Some distinctive title, such as *The Downside Natural History and Antiquarian Society*, is desirable, in order that any "Proceedings" or "Transactions" which may hereafter be printed, may be catalogued and referred to amongst similar publications by other societies.

way for a careful consideration of the question whether the formation of a college museum is not well calculated to give students an additional source of improvement, healthy recreation, and worthy occupation.

RETROSPECT OF THE HALF-YEAR.

THE chief event which calls for notice in the past few months is the Exhibition. The halo which thoughts of the end of work, of vacation begun, and of home, cast over the Exhibition proceedings, has passed away, and allows us to recall our impressions of them in a more sober and trustworthy form.

The Feast of St. Benedict, Sunday the 11th of July, though not falling strictly within the charmed circle of Exhibition time, may be said to have commenced its celebration. The High Mass was sung by the Right Rev. Dr. Riddell, then visiting his Alma Mater for the first time since his elevation to the episcopate. St. Gregory's owes a double debt of gratitude to his lordship—firstly, for the generous tribute of loyal affection shown in the sacrifice of a week of his time so soon after his consecration; and, secondly, for the increase of enthusiasm and devoted interest which his genial presence has never failed to infuse into our annual meetings.

The sermon on the occasion, generally known as the "going-home sermon," was preached by the Very Rev. J. B. Murphy, sub-prior of St. Benedict's, Fort Augustus. The feast of the day offered him an appropriate theme. Taking the youth of St. Benedict, characterized by his flight from the dangers that lingered about the pagan shrines of Rome, he drew from it a practical lesson,—pointing out the dangers that beset youth on its entry into the world, and the duty incumbent on them, not only of combat, but of wariness and of flight.

The dawn of Tuesday, July 13th, aroused many an anxious cricketer. Eager eyes scanned the morning sky, to read in it anything that might presage the issue of the coming match. At 11.30 A.M. the fates of Past and Present began to unravel themselves before the eyes of a sympathizing group of spectators. The Present went to the wicket—J. Maher and M. Dunlea standing up to the bowling of the Revs. H. G. Murphy and S. B. Finch. Neither of the bowlers had been seen much upon the College crease during the season, but past achievements left the breasts