

The Nature Work at the House of Education.

BY A. C. DRURY.

THE character of the Nature Work at the House of Education is largely determined by Miss Mason's choice of Ambleside as her training centre.

Besides being in the midst of beautiful scenery with literary associations, Ambleside is rich in having a great variety and profusion of flowers within easy walking distance. There are plants of the meadow, mountain, bog, wood and water, northern species, rare and characteristically mountain species—to be climbed for on special occasions.

The extremely complicated but interesting geological formation affects the flora, which is remarkably different from that on a contrasting rock, the mountain limestone, near enough to be reached on half-term holidays. The soil of the valleys shows the effect of past glacial action which limits vegetation and farming operations, sheep-farming being the most lucrative on the fells.

Some of the cornfield weeds which are conspicuous by their absence were introduced by war-time cultivation and at least one has established itself.

The climate of the Lakes favours the growth of very beautiful trees, particularly of the Coniferae, and some of these are specially fine in gardens near Ambleside. The autumn colours are often glorious beyond description, and so are the fungi until the frosts begin. To my mind, the English mountains are never more beautiful than when covered with snow, and in winter they are often white when rain alone has been falling on the lower ground. The rain supports a wealth of mosses and liverworts, rare ferns are not unattainable, some of the rarest may be seen by climbers.

Though very seldom detected, such scarce animals as the badger and the pine marten, dwell in the Lake District, and I have heard from visitors that the otter is to be seen [sic] by following the hunt in the early morning.

The head of Windermere is a station for migrating birds.

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They land there for a few hours or days on their journeys north in spring, they come to Rydal for open water from the frozen north in winter, or linger on their way to feast on our beech mast or berries. The redwing and the brambling come to Scale How garden for this purpose.

In founding the House of Education in Ambleside, it was Miss Mason's intention that her students should become familiar with these beauties of Nature; and the Nature Note Book, which she designed, is the symbol of their knowledge: that precious green book with its red title, "House of Education, Students' Nature Note Book" which is the peculiar privilege of the student.

The inside of the book is nothing more than good drawing paper (for painting, without pencil outlines) until the possessor begins to make it the record of her own observations.

Every fine day (except on half-holidays) one or two small parties of students go out with members of the staff for Nature Walks and Bird Walks, or the whole number start off occasionally for a Geology Walk to find fossils or ice scratches, or in summer for weekly Geography Walks.

Miss Mason loved to see what “finds” the students brought back from their expeditions and to hear what birds they had seen or to tell what she had seen.

I remember how she talked about the cock-redstart at table and made us eager to notice the patch of intensely white feathers on his head contrasting with his black throat.

Out of doors the students learn to look and to watch that they may know creatures and plants by sight as they know friends; to recognise the birds by their song, flight, feathers and nesting places, and their time of arrival and departure; to observe the flowering seasons of all trees and herbs and the ripening of common spore-bearing plants such as horsetails and large liverworts; to note the reappearance of butterflies and dragonflies, stone-, caddis-, and may-flies, and to know some of their eggs and larvæ.

Each one records in her own Nature Note Book that which has interested her, and takes home something to paint. The effort of attention during the time given to painting the twig, flower or fruit, insect, chrysalis, shell or egg, fixes its form and colour in the memory. This is the [p 371]

way to get to know “its position as it grows, its trick of holding its head, the grace of its profile,” (as Ruskin says of a flower in words quoted in the *Parents’ Review* for February, 1923). The Nature Note Book becomes increasingly valuable when the records of one year and one locality can be compared with another; and a student generally feels that she is making more progress in her second year though she was unconsciously storing up first impressions in the early days of her training.

There is a delightfully casual element in Nature Walks. We simply choose which way to go and then “Nature” does the rest because Ambleside is an unrivalled spot to learn in. We like to be teased when the Nature Walk lingers to watch a dipper or a grey wagtail, or the Bird Walk finds the yellow Gagea or the marsh Cinquefoil, as if we were poaching on each other’s preserves! For the fact is that we take whatever comes, and the unexpected almost always happens.

The Rev. Alfred Thornley, who examines the “Seniors” Nature Note Books, testifies to the freshness and pleasure which this mode of Nature Study secures, and this spontaneous enjoyment was provided by Miss Mason when she taught us to gather the materials for science by studying Nature out of doors for ourselves and adding to our knowledge year after year.

We get a tremendous stimulus and answers to many of our queries when Mr. Thornley comes for his annual visit. A day spent out of doors with him acquaints us with many kinds of insects, their haunts, their food. We see an astonishing “number of things” in a few hundred yards of wood or of lakeside, and time passes like magic. To arouse wonder and admiration must be one of the teacher’s principal aims.

Two years is but a short time to spend in preparing to read intelligently with Parents’ Union School pupils. So the Nature Walks are supplemented by lectures, the average time allotted to scientific subjects being three to four hours a week.

There are Natural History lectures on British wild animals, birds and their feathers, British insects, forest trees, spore-bearing plants, seed dispersion, autumn colours and the fall of the leaf.

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A course of Human Physiology in the first year gives a knowledge of the skeleton and vital organs, very useful for comparison in studying the animal kingdom, which is the special subject of the second year's Biology class.

Botany is taken by the first and second year students separately and concerns the detailed study and classification of flowering plants. So the Biology hour is chiefly devoted to Miss Arabella Buckley's wonderful books on the animal kingdom: "Life and her children" and "Winners in Life's Race." The books are illustrated in class by as many specimens as possible, fossils or shells from the museum, and such living species as the earthworm, snails, woodlice. We note in passing comparisons [sic] and contrasts between animals and plants, and attention is drawn to examples of laws common to the two organic kingdoms.

Blackboard summaries and classifications have not yet been dispensed with, although we seek to use the book as the principal part of the lesson and to approach the ideal set in the Parents' Union School. It is impossible to read "Life and her Children" through in two terms when three years is the time taken over it in Form II. Lord Avebury's "Flowers, Fruits and Leaves" is the kind of book that cultivates a scientific spirit of enquiry, but time forbids the Natural History lecturer to use more than a chapter of it. Books we should like to depend on: Scott Elliot's "Nature Studies," for example, go out of print, and in other cases, the right book for our use, has never been written. So we still lecture at the House of Education, and some of the science books of the Parents' Union School are unsatisfactory.

Half-a-dozen lectures on Sound, Light and Electricity with simple experiments are given to introduce the group of books: "The Sciences," "First Year of Scientific Knowledge," "Some Wonders of Matter," and "Scientific Ideas of To-day." The least acquaintance with these mighty mysteries makes us grateful for an occasional scientific lecture from an expert who opens up new lines of thought and subjects for wonder.

I think that the stupendous facts with which Geology and Astronomy deal, educate a scientific habit of mind most effectively. There must be a study of the reasons which lead Geologists and Astronomers to their conclusions, con-

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flicting arguments must be faced, inferences drawn from geological maps or from astronomical diagrams representing the movements of the heavenly bodies. In Astronomy we rely on Sir Robert Ball's "Story of the Heavens," which students who have been in Forms V & VI possess, although we can only take extracts in a course of about 15 lectures. Our object is to lead students to know the stars and to follow the movements of the moon and planets. Odd half-hours are seized on fine nights for learning the names of the stars and constellations, the monthly star maps in "*The Times*" being found useful.

Geology replaces Astronomy in alternate years, and begins with local Geology from the maps and papers of the Geological Survey and from Professor Marr's comprehensive book on "the Geology of the Lake District." As Miss Mason often said of all the science teaching, the most we can do in these lectures is to aim at arousing interest.

The peculiar fitness of Ambleside for the studies which Miss Mason initiated and developed there, is realised best of all in connection with Out-of-Door Geography. On all sides are the mountains, water-sheds, rivers, tributaries and lakes themselves, neither miniatures nor models. Distance is learnt by pacing, and direction, from the sun and the compass, in order to appreciate the making of maps to scale. The height of a tree or spire is measured by triangles,

the ordnance map is used, contours explained, and bench marks found on an up-hill road and checked by the aneroid barometer. This occupies six weeks of the summer term one year, and the next year we follow the more delightful of the two courses for Geography Walks worked out by Miss Williams (late Vice-Principal): that on the history of the Lake District, Westmorland, and Ambleside. Boundaries, old routes, places with significant names, old houses or sites of mills, famous remains like the Roman Camp at Waterhead and the Rydal Thing-mound, are visited or viewed from Loughrigg, and from them we learn of the different peoples who entered the country and the traces left of their occupation.

It is frequently said by students that their two years' training opened many windows for them. The windows that open on to Nature Study admit us to endless

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sources of happiness, explored at Ambleside if not first known to us there.

Most of us look back upon this result of our training, together with the practice of taking walks which it implies, as among the greatest of the benefits we owe to Miss Mason. And the pages of our old Nature Note Books recall, as nothing else can, the choicest walks we have had and our most cherished memories of birds and flowers.