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HERBERT INGRAM.

THE
REV. J. G. WOOD

HIS LIFE AND WORK



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J. G. Wood

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BY THE

REV. THEODORE WOOD F.E.S.

*Author of "Our Insect Allies," "Our Insect Enemies," "Our Bird Allies,"
"The Field Naturalist's Handbook,"
&c. &c. &c.*

With a Portrait

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P R E F A C E.

As it may fairly be claimed for my father that he was the first to popularise natural history, and to render it interesting, and even intelligible, to non-scientific minds, it has been thought advisable that some account of his life and labours should be prepared and published while his memory is yet fresh in the minds of those who have read his books or listened to his lectures. In the following pages, therefore, I have endeavoured to describe his three-fold work as clergyman, author, and lecturer, and at the same time to give a short account of his public and private life from his early boyhood to the closing days of his life.

Unfortunately for the labours of a biographer, the diaries which he left behind him—and which are by no means continuous—are extremely scanty, and often for many weeks together there is nothing but the barest entry of work done and letters written, without amplification or details of any kind. By the aid

of family information, however, I have, I think, been enabled to fill in the gaps; and I have only to ask that indulgence which all may crave who attempt the most difficult task of giving to the world the account of a father's life.

T. W.

BALDOCK, HERTS.

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THE REV. J. G. WOOD.

CHAPTER I.

BIRTH AND EARLY LIFE.

Birth—Parentage—Youthful Delicacy of Constitution—Juvenile Precocity—Spelling and Art—Lack of Mathematical Talent—First Attendance at Church—Removal of the Family to Oxford—Outdoor Life and its Results—Aquatic Gambols—How to catch Crayfish—Boyish Escapades—A Juvenile Naturalist and his Ways—Pets—First Visit to the Ashmolean Museum—School Life—A Stern Discipline—Natural History again—Snake-racing—Outdoor Sports—An Accident in the Cricket Field—Painful Experiences—Subsequent Accidents—Matriculation at Merton College, Oxford—College Pets—Caterpillar Breeding on a Large Scale—Snakes again—Recreations—An Unexplained Mystery—Whose was the Poker?—A Night Assault—Repulse of the Assailants—B.A. Degree—Love for Classics—“Horace” Reviewed—Classical Proprieties *versus* Scientific Nomenclature—Tutorship at Little Hinton—Return to Oxford—Anatomical Studies—Work with the Microscope—Ordination.

THE REVEREND JOHN GEORGE WOOD, clergyman, author, and lecturer upon Natural History, father of the writer of this memoir, was born on the 21st of July, 1827, in Howland Street, London. His father, John Freeman Wood, a surgeon, and for some years Chemical Lecturer at the Middlesex Hospital, had three years previously married Miss Juliana Lisetta Arntz, a young lady of German parentage upon the father's side, who, having passed the first fourteen years of her life at Dusseldorf, had then completed her education, and finally settled in

England. The first child of the marriage was still-born; and my father, who came next, was thus practically the eldest of a family of fourteen. Of these, however, several died in infancy, and two more only lived to early womanhood.

My father himself was a weak and sickly child from his birth, and for several years, indeed, it was never thought that he could possibly live to reach maturity. He suffered principally from violent attacks of croup, which recurred at frequent intervals, and, until he was eleven years of age, obliged him to be kept under constant supervision at home. Yet the child managed to pick up a wonderful stock of knowledge in spite of his delicate state of health, and was always occupied in learning something, in some of the thousand and one ways which presented themselves to his ever-active mind. Partly by instruction of the ordinary character, and partly by a species of self-tuition peculiar to himself, he learnt to read with wonderful rapidity and facility, and at four years of age was thoroughly familiar with the historical portions of the New Testament, and was manifesting the first signs of the extreme fondness for books which afterwards characterised the whole of his life. He could not be kept from them. A book, merely *as* a book, had an intense fascination for him, and he read with avidity almost everything that came in his way, and not only read, but remembered it. Indeed, he always had a most wonderful memory, except for dates and names, which he could seldom recollect at all. To the end of his

life he could cite *verbatim* long passages from books or poems which he had not read for many years, and apt quotations from all sorts of sources seemed to come to his lips without any effort of recollection whatever. And much of his success in literature was no doubt due to his marvellous power of extracting, as it were, at a single reading, the pith from the numberless books which he perused, and storing it up in some pigeon-hole of his mind until required for use.

Spelling, too, like reading, came naturally to him, for he possessed that curious side-shoot of artistic talent which enables one to *see* any required word in the mind's eye, without depending for the letters which compose it upon any mere effort of memory. Strangely enough, however, there were two words which always puzzled him, and to the end of his days he could never spell "cheque" without the addition of an unnecessary c, or "niece" without transposing the second and third letters. And, with regard to these two words, no amount of correction ever made the smallest difference.

Arithmetic, even in its simpler forms, was always beyond him. He did, no doubt, know that two and two make four, but I very much question whether he ever mastered the multiplication table. And certainly a piece of mere ordinary calculation was utterly outside his powers. Possibly this was in great measure due to the character of his early training. Mathematics, in the days of his youth, were little regarded, and sound classical knowledge was generally considered as the one

end and aim of education ; and the arithmetical talent, if not cultivated in childhood, seldom attains to any degree of perfection afterwards. So that when my father had any sums to do, he always did them by deputy. Euclid, however, he liked, and often worked at it merely for the interest that he managed to extract from it. But that was the only branch of mathematical science of which he ever picked up more than the merest rudiments ; and I have always had a shrewd suspicion that he kept no account of receipts and expenditure for the simple reason that he distrusted his own power of adding up his columns.

At four years of age the boy was taken to church for the first time ; and there an amusing incident happened. He does not seem to have received any preliminary instruction in the Liturgy, and did not at all know what to expect when he entered the building. He behaved very well, however, and joined in the Lord's Prayer, which, of course, he knew by heart, with much reverence and devotion. By-and-by, however, the Lord's Prayer was repeated again, and this time he seemed a little bored, and took his part in it only under protest. But when the Litany drew near to its close, and the same Prayer was said for the *third* time, his patience came altogether to an end, and, rising from his knees, he sat down with an air of great determination, and a very audible remark to the effect that he "couldn't stand this no more !"

In 1830 it was deemed advisable, for more reasons than one, that the Chemical Lectureship at the Middlesex

Hospital should be given up, in order that the family might remove to Oxford. And there a house was taken in the High Street, which was subsequently vacated for another in Holywell Street, and that again in its turn for a third in Broad Street.

As the boy still continued very delicate, his father saw that the only chance for him was to keep him at home for the present, and to allow him to live as healthy and natural a life as possible. Outdoor exercise and amusements, therefore, were strongly encouraged, and the child learned to run and swim and climb with a facility which few boys of his own age could equal. In the water, more especially, he was always perfectly at home, and would tumble in backwards, or head foremost, and dive for eggs and three-penny pieces, and even play a sort of aquatic leap-frog, as readily as though the river were his natural home. Indeed, he spent much of his time on its banks or in its waters. There were trout to be tickled, crayfish to be caught, and creatures innumerable to be watched, and perhaps brought home for the aquarium. The spirit of emulation was rife, and every boy tried to do better than his fellows. And so each and all came to be as familiar with the water as with the dry land, never from the first having learned to consider it as an element to be dreaded.

The crayfish were caught in rather a primitive fashion. Paddling along in the water by the banks, the boys would carefully investigate every hole, until the long antennæ of the crayfish were felt projecting.

Then a sudden "grab" was made, the creature seized behind the great claws, so as to deprive it of the power of employing those formidable weapons upon the unprotected hand, and forthwith *transferred to the cap*, which in those days was a roomy article of attire, capable of holding several crayfishes without danger of overcrowding. The presence of half a dozen of these creatures moving about upon the head, and occasionally giving a sharp pull to the hair, does not seem to have been regarded in the least, the great beauty of the arrangement being, of course, that it left the hands free, while there was little or no danger of the captives escaping.

My father had many amusing stories to tell of his early boyhood. One of an organised attempt to excavate a subterranean passage from the garden to the river-bank (half a mile away), which resulted in the removal of huge quantities of earth, and the discovery of the scheme by the higher powers just in time to prevent the probable burial alive of the whole enthusiastic party. Another of a great plan for the purchase of a donkey by means of the gradual accumulation of halfpence; which plan seemed so feasible, and so certain of fruition, that a big pair of scissors were surreptitiously removed from the maternal workbox, and the lawn diligently cropped, in order that a store of hay might be laid up for the prospective animal's requirements. And a third of the queer code of honour which forbade the plucking of apples from the trees in the orchard (where windfalls were

recognised as common property), but did not militate against the employment of boys from outside to pelt the fruit with stones, by the bribe of a commission on the profits. "*Quod facit per alium, facit per se*" was a motto clearly unregarded by the youthful moralists.

Very early in the boy's life the bent of his mind manifested itself; and he himself could never recollect the time when he was not constantly poking, and probing, and prying, here, there, and everywhere, in the endeavour to discover some of the manifold secrets of Nature, and to learn the ways and doings of the multitudinous living creatures that garden and river and woodland afforded.

In this he was much encouraged by his father, who, on Sunday afternoons, would lend a microscope and a pocket magnifying-glass to the children, and join eagerly with them in examining the numerous wonders which a few minutes' search in the garden would always turn up. Pets, of course, were numerous and varied. Bats, toads, lizards, snakes, blindworms, hedgehogs, newts, dormice, insects even of various kinds, all were kept in turn. And so the boy laid the foundation of that store of knowledge which afterwards served the man so well. He learned to love animals of all kinds, and to study with the deepest interest and minutest care every detail of their life-history. And at the same time he was unconsciously teaching himself how to observe, and learning the lessons, myriad and diverse, which Nature is always ready to impart to those who strive to search out her secrets.

Soon followed another step, and a most important one, in the pursuit after knowledge, for at a very early age the young naturalist found his way to the Ashmolean Museum, and almost immediately succeeded in getting upon unusually friendly terms with the kind-hearted old curator, who sympathised most heartily with the boy's keenness and wonderful thirst for information. Any help that he could give was freely given, and soon "Johnny Wood" was a constant visitor to the Museum, and as constant an enquirer of the curator, who, so far from being annoyed by his persistence, said that his questions were so apt and sensible that it was a real pleasure to answer them. For several years these visits were kept up, and even after school-days had begun the boy's first visit at the beginning of every holiday season was always to the Museum, in order that he might discover all the new specimens, carefully examine them, and find out whatever there was to be learnt concerning them.

So passed the time until 1838, by which time eight years of active, outdoor life, with unlimited exercise in the way of running, swimming, climbing, and exploring woodland, hill, and dell, had so strengthened the boy's constitution that it was deemed that home study might profitably be exchanged for the severer discipline of a school. He was therefore sent to Ashbourne Grammar School, in Derbyshire, over which his uncle, the Rev. G. E. Gepp, presided as head-master; and there he remained for the next half-dozen years.

The school was conducted on old-fashioned principles,

all offences, great and small, being impartially visited with the rod, while the daily routine would now be considered as stern and rigorous to a degree. And the head-master, dreading to be accused of favouring his own nephew, was far more strict, and even merciless with him than with any of his fellow-pupils. Yet the six years which were spent there appear to have been by no means unhappy on the whole. There was plenty of time for outdoor exercise; the neighbouring country afforded every opportunity for the manifold forms of recreation in which the souls of boys delight; and, pleasantest of all, the natural history studies could be carried on almost as freely as at Oxford. Soon the boy collected about himself a band of kindred spirits, who used to scour the neighbourhood in search of specimens and trophies, and come home laden with spoil, both living and dead. Grass snakes more especially were in great request by way of pets. Almost every boy had quite a number of them, and would carry them about in his pockets, tie them round his wrists and neck, or cause them to run, or rather glide, races with those of his companions. A very favourite amusement, too, was to visit certain deserted stone quarries in the neighbourhood where standing water was always to be found, and there to make the snakes swim by the simple expedient of throwing them into the middle of a pool, and leaving them to find their way to land. Sometimes a snake would become obstinate, and lie sullenly at the bottom without attempting to swim; and then stones had to be thrown in such a manner as

to fall close to it without injuring it. Sometimes even this plan would fail, and then there was nothing for it but to leave the snake master of the situation, and to go home without it. But generally there was little or no trouble of this kind, and snake-races could be conducted in the water almost as easily as upon dry land. The snakes very soon learned to recognise their masters, and to refrain from making use of the highly disagreeable odour with which Nature has gifted them as a means of protection against their foes. And, even when illicitly taken into school, they would lie quite quietly in the pocket without attempting to escape, or in any way giving notification of their presence.

I do not know that my father ever joined with any degree of enthusiasm in the ordinary out-door games of a schoolboy's life. He was something of a cricketer at one time, but, after his usual unlucky manner, contrived one day to catch his foot in a hole only a few inches deep, and, in the fall which resulted, to break his right leg rather badly and to dislocate his ankle. This involved confinement to bed for several weeks under peculiarly disagreeable circumstances, of which he gives a graphic account in his "Insects at Home," when speaking of that unpleasant creature, the common flea:—

When I was at school (he says), I had the misfortune to suffer a simultaneous dislocation and fracture of the ankle, and was conveyed to the infirmary, a large room at the top of the house. Now, this room had been without tenants ever since I remembered it, and I believe that for at least seven years no human being had entered the room, except to open the windows in the morning

and shut them at night. The room was kept most scrupulously clean, and no one ever imagined that a flea was in it.

That the room was tenanted by these insects I found to my own proper cost. No sooner was the candle put out than a simultaneous attack was made on me in all directions. From every part of the room fleas came in battalions. There was a nurse in the room, who was one of those persons that are either impervious or objectionable to fleas, and she escaped them entirely, while they concentrated all their energies on me.

Now a damage such as I had suffered is not conducive to rest, even with all appliances. The limb swells, until the skin feels almost unable to resist the tension, and the burning heat is as if melted lead were being continually poured over the joint. Fever rages through the frame, and the first endeavour of the surgeon is to subdue it as much as possible. Under such circumstances, it may well be imagined that the ceaseless attacks of the flea armies were not calculated to produce quietude; and, indeed, had the occupier of the bed been in perfect health and strength, one such night would have sufficed to drive him into a fever. The only portion of the skin that escaped was that which was covered with the bandages, and even there the dreadful little insects had found out the junctions of the bandages, forced themselves under the edges, and driven their beaks into the skin, so that, when the bandage was removed in the morning, its course could be traced by the rows of flea-bites.

The insects had never enjoyed such a chance of a banquet in their lives, and naturally made the most of it.

After this highly unpleasant experience my father never seems to have taken any but a very occasional part in the game of cricket, although he retained his interest in it to the end of his life, and always studied the cricketing news in the daily newspapers with some degree of care. This accident, by the way, was the first of a long series. Seldom, I suppose, was there a man who injured himself more often, or with

less permanent effect. He broke, at different times during his life, his right arm, his right leg, his collar-bone (twice), six ribs, almost all the bones of his right hand, and his nose. He cracked several other bones without actually fracturing them. He dislocated his ankle and several of his fingers. And yet the only lasting damage resulted from the injury to his right hand, which was of so serious and complicated a character that the only marvel is that he should ever have recovered the use of the member at all.

Remaining at school until he was seventeen years of age, he then returned to Oxford, and shortly afterwards matriculated at Merton College. In the following year he tried for and obtained the Jackson Scholarship; and partly by the aid of this, partly by taking pupils in his spare hours and during the vacations, he entirely supported himself throughout his university career.

In spite of his two-fold labours, however, he still contrived to keep up his natural history studies, both indoors and out. His rooms were full of cages, and nets, and boxes of all kinds. At one time he was studying the development of the tiger moth from the egg to the perfect insect, and had between five and six hundred of the "woolly bear" caterpillars simultaneously feeding in an enormous breeding-cage specially constructed for the purpose. This was so arranged that the stems of the food-plants passed through holes in the floor into a tank of water beneath; so that while the caterpillars could not by

any possibility suffer an untimely death by drowning, their food was kept fresh and wholesome. Yet, twice a day, so enormous was the appetite of the insects, an accommodating scout had to be despatched into the neighbouring lanes to bring in as big a bundle of dumb-nettles as he could carry. And this continued day after day, until all the caterpillars which remained were "full-fed," and ready to pass into the pupal or chrysalis state.

By this time, however, their numbers had been considerably diminished, for at regular intervals of a couple of days a certain number had been carefully bottled in spirits of wine; and so, when their growth was at an end, my father had a complete series in preservation, in all the stages from birth to maturity. These he subsequently dissected, and thus began his acquaintance with the very important and extensive subject of insect anatomy.

Other pets he had, too, at the same time: grass-snakes again, which had a way of escaping from their cage and lying up in all sorts of nooks and corners, to the great dismay of the "bed-maker" and the scout; bats, and various other creatures. About this time, also, he made a somewhat extensive collection of insects, principally consisting of butterflies, moths, and beetles, and worked the surrounding district very thoroughly, paying particular attention to Bagley Wood, which was always one of his favourite haunts. But yet he found time to join in many of the recreations of his fellow-students. He was very fond of

boating, and spent a good deal of his time on the river. He was a most enthusiastic gymnast, and became the most proficient member of the university, as far as the bars, and ropes, and trapezes, and vaulting-horses were concerned. He was fond, too, of fencing and single-stick, and became no mean proficient in the art of self-defence. Swimming, of course, was kept up, as of old; and in the winter, when the fields were flooded and the frost came, he was on the ice at every available moment, practising diligently at all the manifold varieties of figure-skating, until he became an acknowledged expert in every branch of the art.

He had many stories to tell of his college life; a very strange one in particular, involving the disappearance of a poker, which, I believe, rests to this very day deep down in the ground in the centre of Merton "Quad." The adventure in question was as follows:—

He was engaged in putting together the mechanism of a small model steam-engine, and, finding himself in difficulties, went off to ask counsel of a friend. The friend gave the requested advice, and came out of his door to wish his visitor farewell. No sooner had the two crossed the threshold, however, than the "oak" closed with a bang, and shut the occupant out of his rooms. Having left his latch-key inside, there was nothing for it but to pick the lock; and this, after twenty minutes' hard labour, the two contrived to do. Upon entering the room, to

their utter surprise, they found it so full of tobacco-smoke (which the occupant of the apartments cordially detested) that it was impossible even to breathe or to see until the window had been unfastened and opened, and the fumes gradually expelled. Then, of course, a search was instituted, and the puzzled investigators found on the hearth a huge heap of the coarsest and strongest tobacco, upon which was laid a poker, which had evidently been lately heated to redness. No sign was to be found of the mysterious person who had placed it there. No one was in the room; no one had passed out. The windows were closed and fastened, of course on the inside. The chimney was far too small to admit of the ascent or descent of a human being, to say nothing of the fact that a fire was burning in the grate. And there was not even a water-pipe by means of which an accomplished gymnast might have climbed up the wall. The matter was a perfect puzzle. For some time the two stood talking the mystery over, discussing every possible expedient by which the practical joker might have obtained admission to the rooms, and left them again before the rightful occupant could return; and each in turn was rejected as wholly impracticable. Thus half an hour passed away, and again my father was accompanied by his friend to the head of the staircase for a last parting word.

No sooner had the two men passed the door than the same programme was exactly repeated! The

oak slammed-to as before, fifteen or twenty minutes were occupied in picking the lock, and when admission was gained the windows were closed and fastened, and the room was once more full of smoke. When the smoke had cleared away, the smouldering pile of tobacco and the heated poker were found exactly as before. Not the smallest sign was to be found of the perpetrator of the mysterious joke; not a trace could be discovered of the manner in which he had made his entry and exit. The two men were completely at fault.

Then an idea struck the aggrieved owner of the rooms. *Whose was the poker?* It was a very ordinary poker, with nothing whatever distinctive about it; but it was not the poker which belonged to the room. *That* was lying in the fender as usual, and had not been meddled with. Clearly the proper thing to do under the circumstances was to send a scout round the college on some pretext or other, in order to find out whose fireplace was without its poker. No sooner said than done. A scout was entrusted with the commission, and visited every room; *but every room had its poker.*

A council of war was then held, and it was agreed that the owner of the mysterious implement should never see his poker again. So at midnight there set out a solemn procession of two, one bearing the poker, and the other the necessary tools for its interment: to wit, a crowbar, a wooden mallet, and a heavy coal-hammer. With the crowbar a deep hole

was made in the very centre of the college quad, and the poker placed upright therein. Then, with the mallet laid upon the top, in order to deaden the sound, it was driven deeply down by repeated blows of the hammer, until even the head was fully eighteen inches below the surface. Then the hole was carefully filled in, and the operators went off to bed. But no one ever applied for the poker, and nothing was ever heard of the clever joker who had laid his plans so carefully and so well.

On another occasion a siege was laid against my father's own rooms, which were quite at the top of the college, and approached only by a narrow and tortuous staircase. From an anonymous quarter, however, he received previous notice of the intended attack, and made all his preparations accordingly. First he laid in a large stock of grey peas, and a few long glass tubes, with a bore sufficiently large to carry them. Then he opened both the windows, so as to expose only half the surface of glass, protected that as well as possible, and finally procured a large "demi-john," filled it with water, and placed it at the head of the stairs; and then he sat down to read.

About twelve o'clock sundry whisperings in the quad warned him that the attack was about to begin; so he put out his lamp and waited. Next moment came a volley of stones, which were repelled by his fortifications; and then he set to work with his pea-shooters. A little preliminary practice had made him a fairly expert marksman, and as soon as an assailant showed

hand or face, that hand or face was smartly struck with a pea. The adversaries, too, laboured under the disadvantage that, although they could not see their intended victim, whose room was in darkness, their intended victim was perfectly well able to see them by reason of the lights round the quad. So after a while the enemy's forces were drawn off, a hurried consultation was held in a protected corner, and then a sudden rush was made for the stairs. But on reaching the last flight the expected victim was seen calmly waiting, with the demi-john of water at hand, ready to deluge the first besieger who should be bold enough to approach. The leader of the attacking party paused and took in the situation; and then, with a laugh, he remarked, "You fellows, I think we had better go back." "I think you had," said my father; and the enemy departed in confusion.

The three years of the ordinary college course came to an end, examinations were safely passed, and in 1847 the future naturalist, still barely twenty years of age, took his degree of Bachelor of Arts. Although not a brilliant scholar, he had passed through his university career with credit, and had imbibed a love for classical learning which never left him to the end of his life. Scarcely a day ever passed in which he did not read at least a few pages of a Latin or Greek author. Horace was always his favourite poet, and he was always picking up copies of his Odes at second-hand bookstalls, at prices ranging from a penny upwards. Most of these Odes he knew by heart, and would repeat them

to himself over and over again when lying awake at night. And he never lost an opportunity of advising others to read them, or of descanting with enthusiasm upon their manifold beauties.

Here is an old letter of his upon the subject written to one of my sisters. It was written from Boston, U.S.A., and is dated Christmas Day, 1883:—

As to the Horace, I have picked out some of the gems. They are tolerably easy, and it will be better for you to work at them instead of taking up the entire book.

Book I. Odes 1, 2, 3, 4, 5, 9, 20, 21, 22, 30, 37, 38.

Book II. Odes 13, 14, 16.

Book III. Odes 3, 9, 13, 26, 30.

They are songs *with* words—the delight of scholars, and the despair of imitators, the sublimest audacity concealed under a mask which is “childlike and bland.” Now, I particularly want you to love Horace, as you have begun to love Shakespeare, and I hope you will love Chaucer and Spenser. As a rule, women get along well enough with Virgil, who was the Latin Tennyson; but Horace is too much for them. He took his measures chiefly from Alcæus and Sappho, and his Latin survives their Greek. Boil together Chaucer’s “Romaunt of the Rose,” Spenser’s “Faery Queen,” Shakespeare’s Sonnets (with a few fiery flashes from “King John,” “Henry V.,” and the “Midsummer Night’s Dream”), Keats’ “Eve of St. Agnes,” bits of Shelley’s “Mab,” Swinburne’s classic odes, and Morris’ “Earthly Paradise,” and you may get a faint idea of the infinite variety, the unerring selections of unexpected epithets (not a “nice derangement of epitaphs”), the dainty choice of words, the burning patriotism, the gracious dignity of the scholarly gentleman, too proud to conceal his lowly origin; the self-respect of the poor man who could rebuke as well as praise Cæsar and Mæcenas, knowing that his life depended on the one and his living on the other—who, like “Hamlet,” has no fault but that of being “made up of quotations.”

My father’s respect for the classical proprieties also showed itself occasionally in the strong protests which

are scattered throughout his writings against the extreme looseness with which the terms used in scientific phraseology are often framed. Take, for example, the following, from his "Insects at Home":—

I really do not like to translate such a word as *subapterus*, which is a repulsive hybrid between Latin and Greek, and—with all respect to the eminent entomologist who first manufactured it—ought not to be accepted in its present form. What, for example, should we think of such words as eightagon, twelvehedron, dreiangle, petiscope, telesseer, insectology, etoilonomy, erdology, and the like? Yet there is not one of these words which is one whit more ridiculous than *subapterus*. Should we be allowed to talk, much less write, of a hemiglobe, an egg-positor, a chaudmeter, a baromeasurer, a virful deed, or a megananimous sentiment? But, if we are to retain the one word, there can be no reason why we should not employ the others. . . .

Had the offending entomologist used the word *subalatus*, or "partly winged," no one could have objected to it, as both words are Latin. Apart from other reasons, it is a prettier-looking word than *subapterus*, and much easier to say. But when he employs the word *sub*, which is Latin, as a prefix to the Greek *pteron*, I do not see that we should be called upon to excoriate our own ears and those of future generations with such an atrocious compound.

I believe that brown sugar and oysters are considered incompatible, as is salt with strawberry cream. There is, perhaps, not one in ten thousand who would not feel direfully aggrieved by having any such mixtures forced on him as part of his daily diet. And there is really no more reason for offending our eyes, ears, and mental taste by *subapterus*, than our mere palates by the above-mentioned mixtures.

During the whole of his university career my father had studied with the special intention of taking Holy Orders; but as he had matriculated so unusually early, he was still barely twenty years old when he proceeded to

his degree as Bachelor of Arts, and was consequently obliged to wait at least three years longer before he could apply for Ordination. He therefore accepted a situation as tutor in a school of which the then rector of Little Hinton, in Wiltshire, was headmaster. Here he continued for two years, and was very successful in the work of tuition, while he imbued many of the lads with a taste for natural history. The half-holiday afternoons were commonly spent in long rambles over the downs, and in these two years he added considerably to his own zoological knowledge, and made many a note and observation which afterwards proved of the highest interest and importance.

In 1850 he left Hinton and returned to Oxford, in order to read for Ordination. Much of his time, however, was devoted to a private pupil, and as he was also working sedulously in the Anatomical Museum at Christ Church, under Sir Henry—then Dr.—Acland, the Regius Professor of Anatomy, two more years passed away before he was actually ordained. During these two years, to his great subsequent benefit, he went through a complete course of research in comparative anatomy, himself dissecting representatives of all the important families of the animal kingdom, and making numberless careful and valuable preparations, of which many remain in the museum to this day. Insect anatomy, in particular, received special attention at his hands, and he thus acquired an intimate knowledge of every part of an insect's structure, which afterwards stood him in more than good

stead. During these two years, in fact, was laid the foundation of his future eminence as a naturalist. He had previously, both as child and man, learned what to observe in the way of outdoor zoology, and how to observe it; he had gained a stock of personal acquaintance with the ways and doings of birds and beasts and reptiles and insects, in which at that time he had few if any equals; and he had imbibed a true love for the study of living nature, which drew him to it purely for its own sake, and not by reason of the future emolument which it might possibly bring in. And now was gained the equally important knowledge of anatomy and classification. He learned to understand on what principles animals are separated into classes, and tribes, and orders, and families, and for what reason those principles were chosen. He learned to trace common characteristics in creatures which to all outward seeming are separated far as the poles asunder. And, above all, he came to understand the great and all-important law, that Structure depends upon Habit, which afterwards formed the keynote to so much of his writings. Without these two years of careful study, he would never have been the writer and naturalist that he afterwards became. Probably he would never have taken to authorship at all, unless, perhaps, as a writer for boys in boys' periodicals; and certainly he could never have ventured upon the large and important works which principally brought his name into prominence. And the museum itself also benefited considerably by his labours, of her

ORDINATION.

enriched its shelves with many a delicate and exquisite preparation, which perhaps brought out some detail of structure never before understood, while he also helped very largely in the systematic arrangement of its contents.

About this time, also, he was working very steadily with the microscope, in the use of which he became quite proficient, as evidenced by his "Common Objects of the Microscope," written some years later. For his insect dissections, of course, this instrument was absolutely necessary; and during these and the few following years he prepared many hundreds of slides, and introduced several improvements of his own into the art of microscopic mounting.

In spite of all his zoological labours, however, and also of his literary work (for his first book—the smaller *Natural History*—was published in 1851), he kept up his reading, and in 1852, having obtained a title for the parish of St. Thomas the Martyr, in the outskirts of Oxford, he was ordained deacon by Bishop Samuel Wilberforce, who was at that time presiding over the diocese of Oxford.

CHAPTER II.

CLERICAL LIFE AND WORK.

Parish work—The Boatmen's Floating Chapel—Ordination as Priest—Resignation of Curacy—Chaplaincy to St. Bartholomew's Hospital—Marriage—Removal to Beldere and resignation of Chaplaincy—Honorary Curacy at Erith—Old-fashioned services—An Explosion and its results—Organising a choir—"Aggrieved parishioners"—A burning in effigy—Presentment to the Archbishop—Cessation of opposition—Sole charge—Death of the Vicar of Erith—Subsequent clerical work—Style of preaching—Sermon notes—Maps and blackboards in the pulpit—"Flower Sermons"—Complaints of nervousness—Stammering cured—Last sermon—The Funeral Reform Association—Hatred of "mourning"—Work for the cause.

IMMEDIATELY after receiving ordination in 1852, my father threw himself heart and soul into his new work. His parish, which was situated in the poorest part of the city, was far from being an attractive one, but in a few months' time he had come to know every man, woman, and child residing within it, and was busily engaged in all the diverse labours which a parish of such a character entails. Besides serving as curate in this parish, too, he accepted the chaplaincy of the Boatmen's Floating Chapel, an institution in which he took the deepest interest, but which, of course, necessitated a good deal of additional labour. In consequence of all this heavy work (the services at the church were almost incessant, and all the curates were expected to attend them all), his application for priest's Orders had to be postponed until the end of the second year of

his ministry ; and then he received full Orders at the hands of the same bishop.

Shortly afterwards, however, owing to a variety of causes, he felt himself obliged to relinquish his curacy. The stipend attached to his office, in the first place, amounted to no more than sixty pounds a year, and out of this he was supposed to pay the interest upon the clothing club, and to make up the deficit in the salary of the schoolmistress, if the children's pence failed to amount to the stipulated sum. The laborious character of the work, and the necessity for constant visiting, prevented him altogether from adding to his income by the use of his pen ; and so, in 1854, he retired temporarily from active clerical work, and went back to his literary labours.

For the next two years he took occasional duty only, often relieving a brother clergyman at one of the numerous Oxford churches. Early in 1856, however, he was advised to apply for the appointment of chaplain to St. Bartholomew's Hospital, which was then vacant, and with which was held also a readership at Christ Church, Newgate ; and having done so, and interviewed several of the governors, he was shortly afterwards appointed to the post. On April 28th of that year he brought his long residence at Oxford to a close, and travelled up to London ; and on Ascension Day, May 1st, he began his active work at the hospital.

There he remained for the next six years, during which he also carried on literary work with but little interruption. The duties at the hospital were not

arduous, save that they necessitated his residence within five minutes' walk of the building, and that he was of course always liable to be called upon to minister to the spiritual needs of the dying at any hour of the day or night. And so he contrived to find sufficient spare time for his writing, without encroaching upon that which was required for the duties of his sacred office.

Early in 1859, the monotony of his life was broken by his marriage. In February, 1854, having come up to town to attend a meeting of the Linnean Society, of which he had just been elected a Fellow, he had met Miss Jane Eleanor Ellis, fourth daughter of John Ellis, Esq., of the Home Office, and a member of the Yorkshire branch of the family. An engagement soon afterwards followed, but was protracted for more than four years. On February 15th, 1859, however, the wedding took place; and my father always plumed himself greatly on the fact that no single member of the hospital staff knew anything at all about the matter until it was all over. He simply left his rooms early one morning, and returned a married man.

In 1861 he began to think seriously of giving up his hospital appointment, and taking up his residence permanently in the country; this for more reasons than one. A child—a daughter—had been born a year previously, and had died at the age of ten months. A second child, born in 1861, was still-born. My mother's health was in a very unsatisfactory state, and he himself was far from well. Twice, indeed, he had been visited with a species of blood-poisoning. On

the first occasion, serious mischief had been averted by the timely use of the Turkish bath; but on the second, an obstinate and painful gathering had formed on the left hand, which did not show signs of healing until a visit had been paid to Margate, supplemented by a further, but shorter, trip to the New Forest. It was evident enough that city life suited neither; and so, in 1862, just six years after coming to the hospital, he sent in his resignation, and at midsummer migrated to Belvedere, near Woolwich; where he remained for rather more than fifteen years.

Soon after his arrival, he became acquainted with the clergyman who was acting as *locum tenens* to the vicar of the neighbouring parish of Erith, the Venerable C. J. Smith; the vicar himself, who had formerly been Archdeacon of Jamaica, being away from home for an indefinite period. A kind of tacit agreement was quickly entered into, in virtue of which my father began to act as a kind of honorary curate, the parish being a large one, and the duty somewhat too onerous to be successfully undertaken by one individual. Not, of course, that the ordinary week-day duties of a curate fell to his lot: for those he had no time. But he assisted in the Sunday and week-day services until the return of the vicar in 1863, and then continued to do so at the special request of the vicar himself.

The character of the services at this time was very deplorable. The clerk's wife played the harmonium, and the clerk did the singing. If a member of the congregation ventured to join in the responses, or to

utter an *Amen* above a whisper, the remainder of that body instantly turned and gazed with astonishment at the offender. The chancel was squalid and dirty to the last degree, the communicants at the monthly celebration of the Holy Communion averaged only five in number, out of a population of some six thousand, and the Church, to all appearance, was doomed to speedy extinction as far as the parish of Erith was concerned.

So matters continued until 1864, in which year occurred the memorable explosion at the Belvedere gunpowder magazines, which stood upon the river-bank about half-way between Belvedere and Erith. In addition to widespread and almost incalculable damage spread over a wide area of country, this explosion so wrecked the old parish church of Erith that, during the necessary repairs, Divine Service had to be carried on in the schoolroom. There music of a rather higher quality was instituted, and, before the return to the church, my father asked permission of the vicar to organise and train a regular choir, and to provide properly practised music at the Sunday services. The vicar gladly gave his consent, and my father set to work to get the choir together; no light task in such a parish, and with the small amount of time at his command. Shortly after the church was re-opened, however, a fully choral service was sung by a surpliced choir of fairly imposing proportions. The harmonium was replaced by an organ; the old slovenliness, formerly so painfully apparent both in building and service, was done away; and bright hearty services began to attract regularly to

the church those who had previously deemed it unnecessary to attend Divine worship at all.

My father's share in the work of the church was now as follows. On Sunday morning and Sunday evening he said the prayers or sang the service; on Wednesday evenings he did the same; and occasionally—but very occasionally—he preached. After service on Wednesday evenings came the choir practice; and as a general rule, after service on Sunday evenings the choir adjourned to the Lady Chapel, and there sang a selection of anthems, less for the sake of the practice than as a sort of additional service of praise. After a time this custom came to be known and appreciated among the members of the congregation, many of whom would always stay for the singing after service. And the arrangement was most popular with the members of the choir themselves, who were thus enabled to indulge their taste for choral singing of a somewhat more advanced character, without the usual effect of destroying the thoroughly congregational character of the church services.

Yet the “innovations,” as they were commonly styled, were not introduced without a great deal of opposition. Letters without number appeared in the solitary local newspaper of those days; the clergy were freely accused of ritualism and Popery; my father, as the originator of the surpliced choir, was even publicly burned in effigy. But the excitement gradually calmed down until the year 1867, when the malcontents were again aroused to indignation upon the occasion of a dedication festival.

This time the offending clergy were solemnly presented to the Archbishop, and were summoned to Addington Palace, where the proceedings—which ignominiously collapsed in the end—were enlivened by the laughter which followed the reading of one clause in the indictment: “offertory collectors *in coloured bags.*” After this little more was heard of the Erith “ritualism,” and the constantly increasing congregation testified to the favour with which the services were generally regarded.

During the whole of the eleven years which elapsed between his arrival at Belvedere and the death of Archdeacon Smith, my father rendered his services gratuitously, with two exceptions: the first for a period of some six months, during the prolonged absence of the vicar, who left him in sole charge; the second—in 1869-70—for the space of a year, while the vicar, owing to heavy family affliction, was travelling abroad.

On December 28th, 1873, Archdeacon Smith died, after only two days’ serious illness; and my father was again left in sole charge until the appointment of his successor. With this gentleman, unfortunately, he found it quite impossible to work, and their views indeed differed so radically and completely that he ceased even to attend the parish church, and migrated to a temporary district church which had lately been erected in another part of the town. Here he occasionally officiated; but his regular clerical work had come to an end for ever.

To the end of his life, however, he constantly exer-

cised his ministerial functions. While living at Norwood—from 1878 to 1885—he frequently assisted the clergy of S. Philip’s Church, Sydenham, and afterwards was always ready to take Sunday duty to relieve a brother cleric, and to give up his well-earned rest in order that he might, in some degree, lighten the labours of others. It was a common thing with him, while absent upon his lecturing tours, to preach for a friend upon the Sunday, wherever he might happen to be. And as his sermons always cost him a vast amount of care and anxiety, and, moreover, exhausted him very considerably, the sacrifice upon his part, when consenting to do so, was of no inconsiderable character.

His style of preaching was peculiarly his own, and his sermons themselves were never like those of anybody else. During the earlier part of his clerical life, he always read from a manuscript; but afterwards, gaining confidence by experience, he relinquished the practice altogether, and trusted merely to the scantiest of notes.

I give here the outline of one of his later sermons, exactly quoted from his notes; first, however, premising that those notes are utterly incomprehensible to myself:

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|---------------------------------|------------------------------------|
| “Matt. v. 14, & vi. i. | . . . Effect of words and |
| “United . . . Church . . . | deeds. |
| WORSHIP responsi- | “JUDGE. |
| bility. Not have to invent | “Rebuke; not young old; |
| . . . too much. Pharisees | child parent; <i>feel</i> awkward. |
| did. | “Certainly, not <i>elementary</i> |
| “Light united shine farther. | duty. |
| “LIFE. | “Keep away.” |
| “Quiet Face of Moses. | |

This is quite a fair specimen of the average style of his notes, which were generally written out in small handwriting upon half a half-sheet of note-paper, and upon which alone he depended as an aid to his memory while in the pulpit. How he even contrived to read them is a mystery, for he was very short-sighted, and could scarcely see at all without the aid of spectacles; how he managed to make anything of them when he *did* read them is a greater mystery still. But every single word in those brief jottings suggested some chain of ideas to his mind, which he had, of course, carefully thought out before, and which a "key-word," so to speak, would instantly bring before him again.

He was always very nervous in beginning a sermon; and generally the first few sentences, carefully prepared beforehand, were a little laboured and heavy. But then by degrees he would quite forget himself, and become wholly carried away by his subject; and the remainder of the sermon was always most instructive and striking. He well understood the use of those sudden, startling sayings which keep the attention of a congregation fixed, and cause them to hang on the lips of the preacher with a sort of breathless interest. I remember one occasion, for instance, in which he had been treating of the various phases of modern infidelity, especially as shown in the atheistical writings of a certain well-known platform orator; and his subject had led him to the question of the existence of the soul. "If," he said, "that man were to confront me, and to ask me whether

or not I thought that I possessed a soul, I think that I should astonish him not a little by my answer. For if that question were put to me, I should say, No." Of course there was absolute silence in all parts of the church. Every eye was fixed upon the preacher who could give vent to such an appalling doctrine; every ear was eagerly waiting for the next words; the clergy in the chancel stalls were obviously most uncomfortable, and wondering whether or not such a statement ought to be permitted to pass unchallenged. Then he went on with his sentence. "Man has no soul. Man *has* a body; man *is* a soul."

It was always a source of great regret to my father that the bonds of custom prevented him from using a black-board while preaching. He said that he could make himself understood so very much better if only he could illustrate his remarks with coloured chalks now and then as he proceeded, just as he did in his sketch lectures. He also longed at times to be able to hang up a map, and to have the pulpit formed rather after the fashion of a platform, so that he might walk up and down while delivering his sermon. Yet he was always one of the quietest of preachers, generally abstaining from even the slightest of gestures from beginning to end of his sermon, standing perfectly still, and seldom even raising his voice. He never ranted; he never declaimed; he never gave way to impassioned bursts of oratory. Just as in his lectures, he was plain and simple throughout; the charm lay in the freshness of thought, the aptness of illustration, and the novelty

which somehow he contrived to impart to the most familiar passages of Scripture.

He was, perhaps, especially happy in the "Flower" sermons which have so much come into fashion of late years; every member of the congregation being expected to bring an offering of flowers, which, after being presented at the altar, is sent off for the adornment of some hospital. His favourite text upon these occasions was Isaiah xl. 6, 7, 8. I quote the following from an account of one of these sermons preached at St. George's Church, Ramsgate, on August 2nd, 1885:—

The presentations having been completed, the Rev. J. G. Wood, eminent as a naturalist, delivered a brief discourse appropriate to the occasion. Selecting his text from Isaiah xl. 6, and the two following verses, the preacher first of all reminded his hearers of the beauty and perfume of flowers: God had filled the world with beauty, showing them that beauty was a part of the Divine Nature, so that they were bound in their little way to imitate God as well as they could. And they had no excuse for not making the services which they rendered to Him as beautiful as possible; for not giving Him their very best, whatever that best might be. It was right that they should fill their churches with beauty as far as they could, and so give back to God something of those mercies which He had showered upon them. Commenting on the words, "The grass withereth, the flower fadeth, because the Spirit of the Lord bloweth upon it," he said that they must remember that the Spirit which blew death into the flower was the same Spirit as that which breathed into it the breath of life. Then they must not forget that there was diversity of flowers; they saw all kinds of flowers, and yet the same Spirit had breathed the life into them all. Again they must remember that although the Spirit was the same, the means which were employed in clothing that Spirit in bodily form were *not* the same. This fact struck him very forcibly some weeks ago, when travelling from the Isle of Thanet to Manchester; he could not but

notice the extreme diversity of the flowers and plants in varying atmospheres and soils. Successful gardeners took the trouble to find out the soil which suited a plant best, and were careful to keep it supplied with that soil. They must also remember that flowers are not isolated. Why, it took all the laws of Nature put together to make one flower. It took all the laws of chemistry to begin with—such chemistry as the mind of man had scarcely dreamed of. Flowers even that grew in the same ground had great diversity among them. And what was the cause of that? It was the result of the extraordinary chemical powers of Nature, brought into beautiful form by a science which man had never been able to discover, and never would discover. The science was the breath of life which God had breathed into them. It took all the laws of light to clothe the flowers in their beautiful colours; and not only so, *but every ray of light from the sun to the flower was a band that tied that flower to the sun, and thus to the whole of the universe.* The smallest daisy of the field was not isolated, but was a necessary unit of the universe. Again, flowers had their work to do in the time given them, and they were useless unless they developed into the fruit of the future.

Having thus spoken of the flowers, the preacher endeavoured to apply the truths thus drawn out. Children were the flowers of humanity—they were in the early stage of growth—and people were apt to look on them as they often looked on flowers, simply as pretty, engaging toys; and hence the number of what were called "spoiled children." Let them look on children as the men and women of the future, and remember that the responsibility rested with them as to what kind of men and women they would ultimately become. The flower faded because the Spirit of the Lord had blown upon it. How often did they say to themselves: "O that the flowers would not fade! O that children would remain children!" And how foolish they were! Only a few weeks ago the Kentish orchards were full of beautiful flowers, and they could but regret that the Spirit of the Lord blew upon those flowers, and caused them to fall and die. But they left their fruit behind them, and so performed the work for which they were sent into the world. So with children. The Spirit of the Lord blew upon them: the time was coming when they would put away childish things, and they, as parents, could not but feel

regret, for they missed the merry patter of childish feet, and the hearty childish laugh. But although the child ceased to be a child—ceased to be a blossom—and even though the petals fell away, the plant did not die, and the individuality of the child did not cease. And why? Because “the word of our God shall stand for ever”—that word which equally breathed the spirit of life into the plant and into the child. See here the responsibility of parents. They were not to look on children as pretty playthings for the time being, but should try to instil into their hearts the word of God, so that, although the flower should fade, the word of the Lord should stand for ever. The responsibility was great, and they all had it to some extent. Even children had it to each other, and those who were older much more than children; and they would fail if they forgot it. The little child, of course, could feel none; but when children grew older they began to think—What shall I do in the life before me? Later on, when they got into active life, the idea in their minds, supposing them to be conscientious, was—What am I doing now? Am I doing the work which God has given me to do? When they passed into old age, then they asked themselves, What have I done?—and in all these cases there was a spirit of responsibility. They could not but feel, when young, that they should fail; when older, that they were failing; and in old age, that they had failed. And what of that? They were all human beings; who was there who had not failed? But suppose they learned this lesson—that God had breathed into them the breath of life—and acted up to the responsibility which that entailed; then they would know that their work would never fail and could never fail, because “the word of the Lord shall stand for ever.”

This abstract is fairly complete and accurate; and yet it gives little true idea of the sermon. Its telling force depended so much upon the personal magnetism of the preacher; and no pen can transfer to paper the deep earnestness which made it what it was.

My father always used to complain that he was terribly nervous when preaching, but no one who did

not know him very intimately indeed would have imagined for a moment that such was the case. So, too, in his lecturing, with regard to which he made a similar complaint. But I do not think that his nervousness ever lasted very long. His first few sentences were generally a little stiff and formal, and had obviously been carefully thought out and formed before the sermon began. But then, as he warmed to his subject, these traces of formality would altogether disappear; and I do not think that he was ever nervous after that.

His delivery was never very good. His voice was naturally rather throaty and husky, and at no time was it ever really strong. And yet he had the great faculty of making himself plainly heard, even in the most distant recesses of the largest building. Even when standing on the steps leading from the nave into the choir of Canterbury Cathedral, as he had to do when conducting the rehearsals of the great choral festivals, and issuing his orders to the choristers, who were but just entering from the cloisters, those orders were distinctly heard. Probably this was owing to the fact that he took such remarkable pains with the due enunciation of his words.

He had at one time stammered terribly, and although he had undergone a course of treatment, and had been almost completely cured, there were certain words which he could never utter without great and obvious difficulty; and he was even at times compelled to exchange these for others, from pure inability to pronounce them. Therefore, I think, he was the more careful with all his

words; and certainly even his most distant auditors could always hear him quite easily and distinctly.

My father's last sermon was preached at Edenbridge, Kent, on February 17th, 1889, when he selected 1 Cor. ix. 9 as his text. Usually he placed the notes of his sermon in his pocket Greek Testament after delivering it; but as this sermon was preached after he had left home for the last time, I am unable to find the brief outline which he almost certainly wrote. And probably it was accidentally destroyed with other private papers.

Connected with my father's clerical labours, although not of them, was the work which he did in furtherance of the objects of the "Funeral Reform Association." He was himself a strong advocate of cremation, which, as he used to say, only brings about in a couple of hours the identical result which burial causes in a number of years. Sooner or later the body must be dissolved into gases, and he himself preferred that this should be done by a process which involves no injury to the living, and does away with some of the most repulsive circumstances associated in the popular mind with death. Cremation, however, not being advocated by the Association, which aims principally at the simplification of funeral ceremonies, and the speedy and true restoration of "earth to earth, dust to dust," he set himself diligently to work to further their aims; repeatedly speaking at their public meetings, organising such a meeting at our own house at St. Peter's, and losing no opportunity of enforcing their arguments both in sermon and in private

conversation. "Mourning," whether taking the form of black clothing, black-edged letter-paper, or the outward indications of woe which are usually so prominent at the modern funeral, was absolutely abhorrent to him. He could feel the loss of a friend deeply; but on religious, as well as upon other grounds, would never show his sorrow in the orthodox manner. And, long before he joined the Association at all, he wrote out careful directions for his own funeral, whenever it should come; expressing the very strongest desire that everything connected with it should be of the plainest possible description, that no lead coffin should on any account be used, and that no mourning should be worn for him by the members of his family.

This was a subject upon which he undoubtedly felt very strongly. It seemed so plainly evident to him that the more extravagant forms of mourning were utterly opposed to the spirit of the Christian religion—deeds giving the lie to words; and that the ordinary system of burial is merely a vain and reasonless attempt to delay that which is inevitable in the end. He recognised the sanitary side of the question, too, and urged the mischief often caused to the living by the unsatisfactory and illogical disposal of the dead. And so, as a question of religion, as well as one of plain common-sense, he did all that lay in his power to further the objects of the Association, and to enlist others in the cause.

Had his time permitted him, he would, I think, have taken up the question even more enthusiastically

than he did. There was nothing that he enjoyed more than working up some subject upon which the public in general needed enlightenment, obtaining all possible information upon the matter, and then imparting the results of his inquiry to others. And he was so deeply interested in funeral reform that he would have thrown his whole heart into the work, and have done his very best to bring that reform about.

CHAPTER III.

THE CANTERBURY FESTIVALS.

The Erith Church Choir—Dedication Festival at Northfleet—Dedication Festival at Erith—Choosing a Precentor for the Diocesan Choral Union—What the Precentorship involved—Compilation of the Festival book—Practising the Parish Choirs—Raising the standard of the Services—Some Cathedral spectacles—Enlarging the Choir—Fighting a Dean and Chapter—The Festival of 1869—Efforts to obtain a Processional Hymn—Attitude of the Dean—His final consent—An unlooked-for proceeding—The Dean obedient—Effect of the Hymn—Arrangements for the Procession—How the Hymn was “conducted”—The rehearsal in the Chapter House—An impressive incident—Brass instruments—Increase in the Choir—Resignation of the Precentorship—Summary of work accomplished.

In the year 1867 the choir of Erith Parish Church, which had then been for three years under my father's management and tuition, was at its best. There was one point in which it was almost unique. All the adult voices were those of gentlemen, and the result was a refinement in the style of singing quite beyond the attainment of the ordinary village choir. Then the constant practices; the minute attention paid to every detail of the service; and, above all, the regular anthem-singing on Sunday evenings: all these had contributed to raise the choir to an unusually high pitch of excellence, and to render the church an attraction to visitors for miles around.

In the early summer of this year a dedication festival was held at the parish church of Northfleet,

and both my father and his vicar were invited to take part. The preacher at the service was the Right Reverend Bishop H. L. Jenner, who had lately been consecrated to the See of Dunedin, but had not yet left England for his diocese. With him my father at once struck up a friendship, which afterwards ripened into intimacy; and Archdeacon Smith was so delighted with both the service and the sermon that he then and there resolved that a Dedication Festival should without delay be held in his own church at Erith, and that the Bishop, if possible, should again be the preacher. The Bishop, on being asked, at once consented, and in the following August the festival was duly held.

The music upon this occasion seems to have been unusually good, and the Bishop himself was very much surprised to learn that the very existence of the choir, as well as its excellence, was due to my father's labours. He was himself at that time the Precentor of the Canterbury Diocesan Choral Union, which held annual festivals—always on the Tuesday following Trinity Sunday—in the magnificent cathedral of the archdiocese; and to this he made a passing reference when speaking at the luncheon which followed the Dedication Festival. There was one subject, he said, upon which he—the Bishop—would like to say a few words. He had ever regarded as a pet child the Canterbury Diocesan Choral Union, and in order to promote its success he had, with his colleague, always endeavoured to extend its workings throughout the county. He had even proposed to himself visiting every district,

if possible, with a view to establishing branches. Other duties, however, had intervened which had prevented him from carrying out this idea in its completeness. He hoped that his remarks on this occasion would have the effect of inducing many of the parishioners of Erith to join this Choral Union, which could not fail to produce good results in perfecting the service of song in the house of the Lord. Then, after touching upon one or two incidental topics, he concluded his remarks by saying that there were very few country churches indeed in which would be found musical services conducted as they were at Erith.

Now, of course, the Bishop's rapidly approaching departure for his distant diocese involved the resignation of his post as Precentor of the Choral Union; and he was at this time searching for some duly qualified man who might succeed him. The vacant post, it is true, was temporarily filled, but the holder was very anxious to resign it, and had, indeed, signified his intention of doing so after the following festival. And so the idea occurred to the Bishop that, if my father could produce such a service in such a parish, he would surely be the right man to occupy the vacant position. Quite unexpectedly, therefore, he one day paid us a visit, and, with the full concurrence of the cathedral authorities, asked him to take up the work which he himself had been obliged to relinquish. My father, after due consideration, consented. And so, in 1868, he found himself responsible at the cathedral for the greatest service of all the year, with the musical department resting upon

him, and him alone. In other words, he had to select the music, arrange the order of service, communicate with all the choirs in the diocese, and then travel from one to the other for the space of eight or nine consecutive weeks, in order that each might receive the benefit of his own personal instruction. Then all the necessary arrangements had to be made at the cathedral, the order of service appointed, and the final rehearsals held in the Chapter House; so that, before the festival could be held, nearly three months had of necessity to be given up to the settlement of preliminaries, while an amount of labour was involved which very few already busy men would not gladly have avoided.

This, however, was by no means all, for, long before the first practice could be held, the festival book had to be compiled, and seen through the press. And this alone was an undertaking involving no little time and trouble. The music for two full services had first of all to be selected, with the requirements of the cathedral authorities, the choirs taking part, and the service itself kept well in view. Perhaps some special chants or hymns had to be procured, and arrangements made with composers. Then the organist of the cathedral had to be consulted, and perhaps also the precentors of some of the principal choirs of the diocese. Then, when all this preliminary business was over, the book had to undergo the process of examination and revision by the Dean and Chapter.

Generally, that body took exception to some part or parts of the book. Then came a wordy warfare

through the medium of the post, usually carried on with a good deal of spirit, but resulting generally in concessions on both sides. After his first experience, I may here mention, my father used purposely to make an insertion or two which he himself had no desire whatever to uphold, and which he knew perfectly well would never be allowed to remain by the Chapter. That august body, however, usually remained content with the assertion of their power shown in striking out the objectionable passages, and allowed all that my father really wished for to remain unchallenged. And so all parties were satisfied.

Then, after the book was printed and published, arrangements had to be made with every choir which was to take part in the festival for a private practice by the precentor himself; necessitating a vast amount of correspondence, and the expenditure of much time and ingenuity in making the different fixtures work in with one another. A good deal of expense would also have been involved, but this was in great part obviated by the liberality of the South-Eastern and London, Chatham, and Dover Railway Companies, who furnished the precentor with a free pass over the whole of their respective systems during the two months over which the preliminary practices extended.

But the mere necessary work attending the production of the festivals was sufficient to appal an already busy man, far more so one whose time was so greatly occupied as was that of my father. But he, nevertheless, went to work with his accustomed energy

and enthusiasm, and at once set himself to raise the standard both of the music and of the actual service itself.

There was plenty of room for improvement in both. In 1868 my father attended the festival, and was much shocked to see the slovenly, and even irreverent, behaviour of those who, of all men, should have known better. Walking up the centre of the choir of the cathedral itself might be seen clergy, arrayed in full canonicals, carrying an ordinary tall hat in one hand, and with a gaily dressed lady on either arm. The alms at the festival service itself, instead of being presented at the altar, were deliberately and openly placed in a hat, and so carried off to the Chapter House. And all else was conducted on similar principles.

The combined choirs, again, numbered but some four hundred voices—a meagre show from a diocese comprehending more than as many parishes. And, finally, the festival service itself was of the most ordinary type; scarcely, in fact, superior to that which one may now hear upon every day in the week in almost every cathedral in England.

All this my father set himself to reform; but, of course, he had to go to work carefully, and to do what he wished to do by slow degrees. Cathedral corporations are proverbially conservative and difficult to move; and argument, entreaty, sarcasm, invective, and bitter scorn were all freely employed without bringing about very much in the way of results. Perseverance and patience did their work, however, and after a time one or

two members of the Chapter suffered themselves to be persuaded, and even took up the cudgels upon my father's side; and, although the warfare regularly broke out year after year when the approaching festival came up for consideration, most of the points for which he contended were ultimately conceded.

In the first festival which he conducted—that of 1869—he managed to secure a great accession of reverence from all concerned; and in that year, for the first time, the alms were duly and properly offered upon the altar by the present Bishop of Dover, who officiated.

His next step was to arrange for a processional hymn—an undertaking in which he met with great opposition. Hitherto the surpliced portion of the choir, after robing in the Chapter House, had straggled hurriedly into the choir, mutely and untidily, and a great and impressive effect had been allowed to slip. Now my father wished for a systematic procession, singing some good and solid processional hymn.

His chief difficulty in arranging for this lay in the attitude of the Dean (Dr. Alford), who, for a long time, could not be brought to see that ordinary decorum required an orderly procession, while such a procession was hardly possible unless it were permitted to sing upon the march. Neither would he agree for a while that the impressiveness of the effect was at all a thing to be desired. By dint of much perseverance, however, my father carried his point; and then incontinently followed up his victory by suggesting that the Dean himself should write a processional hymn for the occa-

sion, and compose the music also! The Dean, at first, was a little overcome by the audacity of the proposal, but finally consented; and shortly afterwards my father received a very admirable hymn, with the Dean's compliments. This, however, good as it was, was by no means the kind of hymn which he wanted; and so he wrote off again to the Dean, pointing out that the hymn, while excellent in its way, was not at all adapted to be sung upon the march. Would he kindly go into his cathedral, walk slowly along the course which the procession would take, and compose another hymn as he did so?

The good old Dean was not in the least offended by the unhesitating rejection of his work, and did as he was bid; and the result was that grand hymn beginning "Forward be our watchword," which, consisting of eight twelve-line verses, has since been added to "Hymns Ancient and Modern," though set to different music. The manuscript reached my father with a humorous little note to the effect that the Dean had written the hymn and put it into its hat and boots; and that my father might add the coat and trousers for himself. On looking at the music, he found, accordingly, that only the treble and bass had been supplied by the composer; and, fearing to employ his own imperfect knowledge of harmony in the attempt to supply the omission, he put the matter into the hands of Mrs. J. Worthington Bliss (Miss Lindsay), who kindly added what was necessary.

The effect of the hymn, when sung by the vast body of choristers, was almost overwhelming. From

the time when the leaders of the procession emerged from the cloisters into the north aisle to that in which the last of the long stream ascended the steps of the choir, nearly half-an-hour elapsed. And throughout the whole of this time the glorious strains of Dean Alford's hymn were taken up again and again by fresh bodies of voices, each pair of choristers joining in the chorus as they reached a specified spot, and ceasing as they set foot on the last step of the ascent to the choir, and passed under the screen to their seats within. The effect of such a hymn, sung by such a body of voices in such a building as the grand old Cathedral of Canterbury, was utterly beyond the power of words to describe. Scarcely a member of the congregation but was visibly moved, and long before the last of the five "brigades," into which the choristers were divided, had entered the choir, it was felt that no such festival had ever before been held within the walls of the stately Norman building.

Of course this magnificent result was not obtained without an infinity of preliminary labour. And even the arrangements for the procession itself were exceedingly complicated. The original four hundred voices had now risen to more than a thousand, a very large proportion of which belonged to surpliced choristers. All these had to be so arranged that throughout the procession the due balance of the parts might be preserved; and at the same time some plan had to be devised, by means of which no member of the procession might at any moment be out of sight of the precentor's bâton.

The first of these difficulties was overcome by the division of the choir into the five "brigades" before referred to, each being constituted as a single choir, with the various parts in their proper balance. The second requirement was more difficult to fulfil, for there was no one spot in the entire nave where a conductor could be simultaneously seen by the whole of the procession. After much thought and experiment, therefore, it was determined that, during the processional hymn, my father should be assisted by three lieutenants, each armed with a bâton, whose duty it should be exactly to imitate his beat. He himself stood at the top of the choir-steps, while they were so posted that each could see him, and also that one of the four, at least, was visible from every part of the course which the procession was to traverse. And so the difficult question of time was settled.

As the last part of the last brigade set foot upon the steps leading to the choir the hymn was hushed, and they passed to their seats in silence. And then, as the precentor ascended his conductor's dais near the lectern, the whole choir, surpliced and unsurpliced, broke out with one grand burst into the jubilant last verse, which was sung with full organ accompaniment.

In this year, for the first time, in view of the great strain upon the voices by the long service in the cathedral, and the preliminary practice in the Chapter House, the morning service was given up, and an afternoon service only held, beginning at four o'clock. Early in the day, however, there had been a choral celebration of the Holy Communion in St. Margaret's Church, the

preparations necessary for the afternoon service preventing it from being held in the cathedral itself.

The preliminary practice in the Chapter House—the processional hymn itself being of course rehearsed *in situ* and on the march—occupied nearly two hours, and obtained the honour of a special notice in one of the leading musical newspapers. “There can be no doubt,” writes the critic, “that, merely as a singing lesson, the practice in the Chapter House at Canterbury, under the auspices of Mr. Wood and Mr. Longhurst, was of untold advantage to the choirs. It was amusing to notice the astonishment of some of the rustics at finding out the real meaning of a ‘rest,’ and their evident satisfaction at the effect of the responses when sung with the proper pauses. It was clearly a new experience, a real revelation, to some of them. In like manner it is impossible to doubt that many young women were cured for good of their odious trick of ‘slurring’ one note into another by Mr. Wood’s clever caricature of them, which made the Chapter House ring with laughter.”

At one o’clock the assembled choristers were dismissed, to fortify the inner man against the fatigue of the afternoon; and at three o’clock the surpliced contingent again repaired to the Chapter House, in order to vest, while the remainder were ushered at once to their seats in the choir.

Towards the end of the festival service in this year a most striking incident occurred. The day had been a very dull and cloudy one, and, although no rain had fallen, the sun had never for a moment been visible.

The second of the two offertory hymns was that beginning "Saviour, blessed Saviour," and at the commencement of the sixth verse, just as the words, "Brighter still and brighter glows the western sun," were being sung, the sun broke out for a moment from behind the clouds, pouring through the great stained windows upon the mass of white-robed choristers, and flooding the choir with light. It was only for a moment; but the effect, coming just at that particular moment, and while those particular words were being sung, was striking and impressive in the extreme; and no one who was present is ever likely to forget it.

For the first time in the history of these festivals, no sermon was preached upon this occasion, an omission which provoked some amount of adverse criticism in the press. But circumstances had so altered from those of previous years that the change was rendered absolutely essential. When the choristers engaged only numbered three or four hundred in all, and the congregation together with the singers could easily be accommodated in the choir, a short address was right and proper enough; and Dean Alford, who was generally the preacher, had a peculiar knack of saying the right thing in just the right manner, while his clear penetrating voice was easily heard by all. But when the number of choristers was nearly trebled, and every corner of the choir was occupied by those who were actually taking part in the service, some two thousand people had to be accommodated with seats in the nave; and how was it possible that they should hear a sermon

preached in the choir? The omission of the sermon, in fact, was an obvious necessity, not a mere whim upon the part of either the precentor or the cathedral authorities, as some of the critics seemed to suppose.

Two years later my father managed to introduce another improvement into the festival, in the shape of brass instruments. These, however, were only employed during the processional hymn, and consisted of four cornets, the performers upon which led the procession, and, on reaching the choir-steps, stood aside, still playing as before, and allowed the long stream of singers to pass between them. Then they too entered the choir, laid aside their instruments, and joined in the choral music as ordinary singers. The chief object of the innovation was to support the voices, and to help in maintaining them at the proper pitch. In former years they had shown a tendency to become distressingly flat, as was perhaps only natural in a hymn of such length; and once, after beginning in the key of G, the processional was finished in that of F. This tendency the use of the cornets entirely obviated; and the hymn went better than ever before. In this year the choir numbered no less than twelve hundred voices, and the proportion of surplices had considerably increased.

In 1875 my father conducted the festival for the last time. He was beginning to find that he could no longer manage to give up the two months necessary for the preliminary practice, or afford the expense which, in spite of the liberality of the two railway companies, naturally attended the incessant travelling from place to

place ; and he therefore reluctantly sent in his resignation, which was as reluctantly accepted.

He had done much in his seven years of office. He had secured at least outward reverence before, during, and after the service. He had raised the general standard of the music. He had greatly improved the performance of that music. He had introduced the processional hymn, and the brass instruments. He had brought up the numbers of the choir from four hundred to three times that number. And, incidentally, he had raised the tone of choral music throughout the diocese, and indirectly facilitated its introduction in parishes where it had never been known before. In relinquishing his bâton, therefore, he could feel that he had done his work ; but I am sure that he deeply regretted the necessity of doing so, and that he would have been only too glad to continue that work if such a course had been at all possible.

CHAPTER IV.

LITERARY WORK.

First ideas of Authorship—Popular ignorance of Natural History—Scientists and Nomenclature—The smaller Natural History—Its leading principle—Translation of "A Tour Round my Garden"—First volume of "Anecdotes of Animal Life"—Its scope and character—Appearance of the second volume—"Every Boy's Book"—The Great Bird Question—"My Feathered Friends"—"Common Objects of the Sea-shore"—An amusing adventure—"Common Objects of the Country"—Astonishing success—A singular request—"The Playground"—Preparations for the larger Natural History—The labour involved—Character of the work—Destruction necessary for Preservation—True object of the study of Zoology—Natural History and Religion.

THE first idea of taking up literary work as at least a supplementary profession appears to have occurred to my father some time during the year 1850. At that time, having given up his tutorship at Hinton, he was residing in Oxford, and occupying himself partly in the tuition of a private pupil—with whom he afterwards paid two short visits of a few weeks each to France—partly in studying comparative anatomy under Doctor—now Sir Henry—Acland, the Regius Professor, and partly in reading for Holy Orders. Probably he felt that it would be well, if possible, to obtain some pecuniary profit from the work in which he was so much absorbed; and his rapidly increasing familiarity with the wonders of the animal kingdom gave him good ground to suppose that he could produce a book which would at least be accurate as far as the subject-matter

was concerned, and which might very possibly help to instruct the public upon a branch of science of which mankind in general then knew very little.

For in those days the book of Nature was practically a sealed volume to all but the few who were able and willing to undergo a long apprenticeship before they could become acquainted with its marvels and its mysteries. It had been made a hard, dry science, teeming with technicalities and incomprehensible phraseology, and sesquipedalian and often unmeaning nomenclature. Classification was regarded far more highly than the study of habits and life-histories, and animals were looked upon, in fact, rather as cleverly constructed machines than as living beings made from the same clay as man himself. And consequently Natural History had come to be associated in the popular mind with all that was uninteresting and repellent, and the wonder-world of Nature, only needing the easily applied key of Interest to open it, was as yet almost wholly unknown.

So my father set himself to write a small Natural History for the general reader, in which technicalities and scientific phraseology should be either set aside altogether, or at least, when necessity compelled their adoption, be carefully and simply explained. From this principle, in fact, he never swerved throughout the whole of his literary career. Thoroughly familiar himself with the rules of classification, and perfectly at home in the tongue not "understood of the people," which was then almost invariably adopted by writers

upon Natural History, he could yet thoroughly appreciate the manifold difficulties which they presented to others, and especially to such as were but just entering upon the first rudiments of the science. And so he resolved, as far as his own writings were concerned, to use only simple and plainly intelligible language, which, with no parade of learning, should yet convey accurate knowledge upon the subject of which it treated. And I do not think that in any of his books or magazine articles there is one single sentence which could not easily be understood.

The book appeared in 1851, under the auspices of Messrs. Routledge & Co., and met with a sale which, if not phenomenal in its character, amply justified both author and publisher in undertaking further ventures. The first step towards popularising Natural History had been taken, and the public had responded, if not with ardour, at any rate with warmth. And my father began to feel that a literary career was before him, and a definite line of work laid down.

For some time after the production of his first volume, however, he was prevented by the force of circumstances from following up his success. His pupil naturally took up much of his time; his anatomical studies, which of course he could not regulate to suit his own individual desires, occupied still more; and to the preparation for his Ordination, which was now drawing near, he was obliged to devote several hours of daily labour. And all that he could do for a while was to collect material, and to write a few lines when-

ever he could contrive to find a little leisure-time. Yet he managed to translate from the French Alphonse Karr's charming "Tour Round my Garden," and to bring it out with divers editorial notes. This was in 1852, in June of which year came his Ordination; and then for two years he was busier than ever. The work of the parish took up almost the whole of his time; every hour of every day had its own special duties assigned to it. And literature had, of course, to go to the wall.

In the following year, however, appeared the first volume of "Anecdotes of Animal Life," which had been written mainly before his Ordination, and completed in odds and ends of spare time afterwards. The title of the work explains itself, as far as its general idea is concerned; but, so far from being in any way comprehensive in its scope, it was limited to some eight or nine animals only, which were treated at considerable length, in anecdotal manner, and discussed most thoroughly from different points of view. In 1856 appeared the second volume of the same work, in which the same system was adopted with another group of animals, both volumes meeting with a very fair measure of success. The two have since been published together under the less happy title of "Animal Traits and Characteristics."

His next literary work was the editing of "Every Boy's Book," for Messrs. Routledge & Co., a task for which his own skill in almost all outdoor and indoor sports eminently fitted him. And then—in 1854—he

began to find, as shown in the preceding chapter, that the arduous and poorly paid parish work must be given up for a time, and literature be regarded awhile as the crutch instead of as the staff.

The perennial "Bird Question" was now occupying his thoughts a good deal, and though he seldom, during his career as an author, approached Natural History from its economic side, he began industriously to collect information respecting the influence of birds on agriculture and horticulture, by way of supplement to his own experiences of very nearly twenty years. As a result of this study, he found himself able to champion the cause of the birds, and, towards the end of 1856, "My Feathered Friends" embodied the result of his investigations, and pointed out the extreme value of the smaller birds alike to gardener and farmer. Black-birds and thrushes, it was shown, although they eat a certain amount of garden fruit, amply atone for their occasional mischief by the vast amount of snails and noxious insects which they destroy. Some of the finches are fond of corn; but then, on the other hand, they feed themselves partially, and their young entirely, with some of the most troublesome and mischievous of all the farmer's foes. And so, though undoubtedly injurious at one season of the year, they are as undoubtedly beneficial at another. The rook steals walnuts and potatoes, and also visits the corn-stacks at times; but then the benefit which the same bird confers upon the farmer by the wholesale slaughter of wire-worms and other root-feeding grubs is simply

incalculable. The kestrels and the owls, in spite of the accusations so freely brought against them by gamekeepers and owners of poultry, are altogether invaluable benefactors, and alone prevent the produce of our fields from being entirely destroyed by mice. And even the much-vilified sparrow is not altogether so black as he is painted, but undoubtedly possesses more than the one redeeming virtue to qualify his thousand crimes. Such was the teaching of "My Feathered Friends."

In the following year—1857—Messrs. Routledge & Co., who had conceived the idea of publishing a series of shilling Handbooks on Natural History and kindred topics, requested my father to undertake one at least of the volumes; and he, therefore, set busily to work upon "Common Objects of the Sea-shore." The book was not a large one, and the actual writing was a matter of only a few weeks; but, as he did not care to describe any animal with which he was not thoroughly familiar, the preliminary investigations occupied some little time, and the small sum which he received for the copyright was certainly thoroughly earned.

The book appeared towards the end of 1857, and met with an immediate and marked success, the publishers being scarcely able to keep pace with the demand. It was quite a new thing for those who make holiday at the seaside to be able to learn something about the various creatures which they were daily finding in the rock-pools, or lying dead upon the shore; and the little handbook opened out quite a new

world, while the popular style in which it was written rendered it easily intelligible to all.

In connection with this book my father met with a rather amusing incident. Soon after its publication, he was hard at work among the rock-pools at Margate, a mallet and a chisel in his hand, his oldest coat on, and his trousers tucked up to his knees. Just as he was moving from one pool to another, a small company of fashionably dressed young ladies approached, deeply intent upon a copy of his own "Common Objects." Just as they passed they looked up, saw the enthusiastic naturalist in his working attire, shrugged their shoulders, elevated their noses, and murmured, "How very disgusting!" And then they returned to their book.

The success of "Common Objects of the Sea-shore" was followed by still more striking results in the case of "Common Objects of the Country," which appeared in 1858. The book took the public completely by storm. A first edition of one hundred thousand copies was prepared, and at the end of a single week not a copy was to be procured! Edition followed edition, and still the printers and binders could scarcely work with sufficient rapidity to meet the orders which still came pouring in. After a time, of course, the demand slackened; but from that day to this it has never ceased, and "Common Objects of the Country" is still a book which commands a yearly sale.

Most unfortunately, however, my father, when making arrangements for the production of these two

books, accepted the same terms which were offered to the writers of other books of the same series, and disposed of the copyrights for merely a small sum. He could not, of course, foresee the astonishing success with which the books would sell, and, looking rather to the length of time occupied by the actual preparation of the MS.—of course, only a very few weeks—than to the return which those books would bring in to the publishers, took what was offered him, and parted with all further interest in the publication. Had he retained the copyrights, there can be no doubt that he would have cleared a large sum of money; as it was, the actual remuneration which he received for each of the two handbooks amounted to only thirty pounds!

After the first of the two little books was published, a great number of letters reached him from readers, most of them asking for further information upon certain points, and some of a very amusing character. Perhaps the funniest was one dated from Cincinnati, U.S.A. The writer had read the Rev. J. G. Wood's interesting book with much pleasure; but, living so far from the sea as he did, many animals described therein were absolutely unknown to him. And, in particular, he had a great desire to examine a jelly-fish. *Might* he ask the Rev. J. G. Wood to forward him one by return of post?

About this time, appeared "The Playground," in which my father—I believe for the first and only time as far as book-work was concerned—adopted the *nom de plume* of "George Forest." The little volume in

question, too, represents his only venture in the direction of fiction, the book being a small tale of school life, so constructed as to give, in narrative form, much useful advice upon outdoor and indoor games, and athletic sports of various descriptions. In one of the characters—Edward Benson, eldest son of the headmaster—he depicts himself as he was when a young man; small and slight, and apparently weak and unhealthy, but with great power of endurance, and no little development of muscle. The book is so arranged as to include exactly a year of school-life; so that the sports and recreations adapted to the different seasons are all described in due succession. It has now, I believe, for many years been out of print.

The phenomenal success of the "Common Objects of the Country" led to arrangements for the production of a very much larger and more important work—the second Natural History. The preparations for this were made upon an unusually lavish scale. All the illustrations were to be drawn specially for the work, and only the best artists were to be employed. Type, paper, and all the other accessories were to be of the best description, and no expense was to be spared either in production or in advertising. Finally, the work was first to make its appearance in monthly parts (of which there were to be forty-eight in all), and, after the whole was completed, it was to be re-issued in the form of three bulky volumes, of large octavo size.

Of course the labour connected with the publication of this large and important work was very severe. Each

month my father was responsible for forty-eight pages of letter-press—due deduction being made for illustrations; and each month many hours had to be given up to personal interviews with the artists, correction of blocks and printer's proofs, and all the manifold details connected with the production of any work upon a tolerably large scale. Then every available source of information had to be sought out; all the leading authorities examined; new material obtained from those who had any personal knowledge of the rarer animals described; and almost daily visits paid to the Zoological Gardens in the Regent's Park, and the leading London museums. And all this in addition to the labour involved by the actual writing.

Into this book my father put perhaps his very best work. All who know the three stout volumes will be able to appreciate the careful labour bestowed on the description of every individual animal; but over and above this there is much of a higher quality, much in which a deeper note is struck, and in which some of the many problems as yet unsolved by man are brought forward, treated with reverent care, and finally put by with an evident sense of regret. Perhaps I may be permitted to quote the following by way of example:—

The attribute which we call Destruction ought to be termed Conservation and Progression, for without its beneficent influence all things would be limited in their number and manifestation as soon as they came into existence, and there would be no improvement in physical, moral, or spiritual natures. In such sad case, it would be possible to find a centre and circumference to creation, whereas it is truly as unlimited as the very being of its Creator.

Suppose, for example, that the huge saurians of the geological eras had been permitted to retain their place upon the earth, and that the land and water were overrun with megatheria, iguanodons, and other creatures of like nature. Suppose, to take our own island as a limited example, that the land were peopled with the naked and painted savages of its ancient times, unchanged in numbers, in habits, and in customs. It is evident that in either case the country would be unable to retain the higher animals and the loftier humanity of the present day, and that in order to escape absolute stagnation it is a necessity that old things should pass away, and that the new should take their place. How limited would the human race be were it not subject to physical death ! But a very few years and the earth would be over-peopled, setting aside the question of bodily nourishment, which requires the destruction of other beings, either animal or vegetable. The same rule holds good with regard to moral as well as physical improvement, for it is necessary that all mental progress should be caused by a continual destruction, a death of erroneous ideas, before the corresponding truths can obtain entrance into the mind.

Apply the same principle to the entire creation, and it will become evident that the destructive attribute is essentially the preserver and the improver. Death, so-called, is the best guardian of the human race, and its preserver from the most terrible selfishness and the direst immorality. If men were unable to form any conception of a future state, and were forced to continue in the present phase of existence to all eternity, they would naturally turn their endeavours to collecting as much as possible of the things which afford sensual pleasure, and each would lead an individual and selfish life, with no future for which to hope, and no aim at which to aspire.

The popular error respecting the destructive principle is that it is supposed to be identical with annihilation, than which notion nothing can be more false in itself, or more libellous to the Supreme Creator of all things. Death is to every man a terror, an abasement, or an exaltation, as the case may be ; but, in truth, to those who are capable of grasping this most beautiful subject, destruction is shown as transmutation, and death becomes birth. Nothing that is once brought into existence can ever be annihilated, for the simple reason that it is an emanation of the Deity, who is life itself, essential,

eternal, and universal. The form is constantly liable to mutation, but the substance always remains.

In every pebble that lies unheeded on the ground are pent sundry gaseous substances, which only await the delivering hand of the analyser to be liberated and expanded; possessing in their free and etherealised existence many powers and properties which they were debarred from exercising while imprisoned in their condensed and materialised form. To the ordinary observer, the stone thus transmuted in its form appears to be destroyed, but its apparent death is in reality the beginning of a new life, with extended powers and more ethereal substance. Thus it is that physical death acts upon mankind, and in that light it is regarded by the true and brave spirit, with whom to live is toil, and death is a new birth into life, of which he is conscious even here. Death is to such minds the greatest boon that could be conferred upon them, for just as the destruction of the pebble etherealises and expands the element of its being, so by the death or destruction of the body the spirit is liberated from its material prison, and humanity is divinised through death.

And also the following, which I select because it embodies my father's great principle, that scientific phraseology is in place only in strictly scientific works written expressly for strictly scientific readers, and that in books written for the general public it may and must be dispensed with.

The observer can, in a minute fragment of bone, though hardly larger than a midge's wing, read the class of animal of whose framework it once formed a part as decisively as if its former owner were present to claim his property; for each particle of every animal is imbued with the nature of the whole being. The life-character is enshrined in and written upon every sanguine disc that rolls through the veins; is manifested in every fibre and nervelet that gives energy and force to the breathing and active body; and is stereotyped upon each bony atom that forms part of its skeleton framework.

Whoever reads these hieroglyphs rightly is truly a poet and a

prophet ; for to him the "valley of dry bones" becomes a vision of death passed away, and a prevision of a resurrection and a life to come. As he gazes upon the vast multitude of dead, sapless memorials of beings long since perished, "there is a shaking, and the bones come together" once again ; their fleshy clothing is restored to them ; the vital fluid courses through their bodies ; the spirit of life is breathed into them ; "and they live and stand upon their feet." Ages upon ages roll back their tides, and once more the vast reptile epoch reigns on earth. The huge saurians shake the ground with their heavy tread, wallow in the slimy ooze, or glide sinuous through the waters ; while winged reptiles flap their course through the miasmatic vapours that hang dank and heavy over the marshy world. As with them, so with us—an inevitable progression towards higher stages of existence, the effete and undeveloped beings passing away to make room for new and loftier and more perfect creations. What is the volume that has thus recorded the chronicles of an age so long past, and prophecies of so far-distant a future ? Simply a little fragment of mouldering bone, tossed aside contemptuously by the careless labourer as miner's "rubbish."

Not only is the past history of each being written in every particle of which its material frame is constructed, but the past records of the universe to which it belongs, and a prediction of its future. God can make no one thing that is not universal in its teachings, if we would only be so taught ; if not the fault is with the pupils, not with the Teacher. He writes His ever-living words in all the works of His hand ; He spreads this ample book before us, always ready to teach, if we will only learn. We walk in the midst of miracles with closed eyes and stopped ears, dazzled and bewildered with the light, fearful and distrustful of the Word.

It is not enough to accumulate facts as misers gather coins, and then to put them away on our bookshelves, guarded by the bars and bolts of technical phraseology. As coins, the facts must be circulated, and given to the public for their use. It is no matter of wonder that the generality of readers recoil from works on the natural sciences, and look upon them as mere collections of tedious names, irksome to read, unmanageable of utterance, and impossible to remember. Our scientific libraries are filled with facts, dead, hard, dry, and material as the fossil bones that fill the sealed and

caverned libraries of the past. But true science will breathe life into that dead mass, and fill the study of zoology with poetry and spirit.

Such digressions from the main principle of the work occur not uncommonly throughout the three volumes, generally at the close of a chapter—if such the divisions of the book may rightly be termed—where the leading characteristics of a group of animals are being summed up, and a few general conclusions drawn. And in most cases they illustrate one of the leading principles of his writings—of which he often spoke to intimate friends, although never formulating it in print—namely, that in writing books of such a character as his own, religious instruction, while it should never be brought obtrusively forward, could and should always be afforded by implication. More than once, when writing for magazines of an avowedly religious character, editorial additions were inserted after the proofs had passed through his hands, generally consisting of Scriptural quotations which seemed specially applicable to the subject under treatment. These always made him furious, and usually resulted in a strong letter of expostulation; for he was accustomed to say that, while he always endeavoured to teach religion in all that he wrote, he never attempted to force it upon his readers, but always left them to gather it half-unconsciously from the general tenor of his writings. *O si sic omnes!*

CHAPTER V.

LITERARY WORK (*continued*).

Appearance of the larger Natural History—"Common Objects of the Microscope"—The "Old and New Testament Histories"—"Glimpses into Petland"—Incredulous Critics—"Homes without Hands"—Review in *The Times*—A curious characteristic—Editorship of *The Boy's Own Magazine*—"The Zoological Gardens"—Failure of the publisher—An amusing correspondence—"Common Shells of the Sea-shore"—"The Fresh and Salt Water Aquarium"—"Our Garden Friends and Foes"—Commencement of "The Natural History of Man"—Preliminary investigations—Collection of savage weapons and implements—"Bible Animals"—How the double work was performed—The *raison d'être* of "Bible Animals"—Its completion and appearance in volume form—"Common British Moths," and "Common British Beetles"—"Insects at Home"—The "Modern Playmate"—"Insects Abroad"—Difficulty of obtaining information.

THE first part of the great Natural History was published in the month of March, 1859, and for forty-eight consecutive months the parts regularly appeared, until the whole animal creation, from the anthropoid apes down to the infusoria and the sponges, had been carefully and systematically described. The book was by no means a strictly scientific work, in the ordinary sense of the term. It was intended for the general public rather than for a special and limited class of readers, and aimed, as all its predecessors from the same pen had done, at making the study of zoology bright and interesting to those who knew little about it, while yet the need for accuracy was carefully kept in mind throughout. In fact, to quote the words of the preface

to the first volume, the work is, and was meant to be, "rather anecdotal and vital than merely anatomical and scientific." For my father always held that the object of the true zoologist is "to search into the essential nature of every being, to investigate, according to his individual capacity, the reason why it should have been placed on earth, and to give his personal service to his Divine Master in developing that nature in the best manner and to the fullest extent." And therefore he relegated the whole of the classificatory portion, consisting of an elaborate compendium of generic distinctions, to the end of each volume, in order that it might in no way interfere with the more popular portion of the work.

This Natural History, however, was not the only work undertaken during the years 1859—62, for besides various magazine articles, some of them of no inconsiderable length, the third of the "Common Objects" Series—"Common Objects of the Microscope"—made its appearance in 1861. In this little book, however—almost for the only time in the whole of his career—my father availed himself to some extent of the services of a *collaborateur*. Not in the actual composition of the book, for he wrote every word himself; neither was it a mere hasty compilation to suit the needs of the moment. But the great and incessant pressure upon his time led him to relegate the selection of the objects to be described to other hands; and so this part of the work was entrusted to Mr. Tuffen West, who employed the greater part of a year in col-

lecting specimens for that special purpose. Messrs. Baker, also, the well-known opticians of High Holborn, most liberally placed their entire stock of instruments and slides at my father's disposal; and so, the mechanical part of the labour being so greatly lightened, he was able to write the book in such odd moments as were not monopolised by the Natural History.

In 1862, as already mentioned, came the resignation of the chaplaincy at St. Bartholomew's Hospital, and the removal from London to Belvedere, better known at that time as Lessness Heath. And the following year witnessed the appearance of no less than three books. Two of these, however, were quite of small size, and, under the title of the "Old and New Testament Histories," consisted of a short and concise account of the Scriptural narrative, written in plain and simple language for the use of children. These two little books were perhaps the pioneers of Bible manuals for the young, and met with a tolerably large sale, although, as was usually the case, my father profited but little by their success.

The last of the three books was of quite a different character, and, under the descriptive title of "Glimpses into Petland," comprised short biographies of a number of pet animals, nearly all of which had been in the possession of my father himself. "Pret," the cat, and "Roughie" and "Apollo," the dogs, together with chameleons, chicken-tortoises, lizards, and butterflies, all were described in turn, in manner entirely anecdotal, and from the point of view of one who regarded them as

intelligent and even rational beings. The book encountered rather merciless treatment from some of the reviewers, who apparently could not bring themselves to believe that the stories recounted therein were true. But it met, nevertheless, with much favour at the hands of the public, and, just twenty years later, was reissued in a revised and extended form.

In 1864 my father began perhaps the most popular work which he ever wrote, and which has always been specially associated with his name—the well-known “Homes without Hands.” In this he set himself to describe the various habitations constructed by different animals for the use of themselves or their young, a task which he completed in a stout octavo volume of some six hundred and thirty pages. The work, however, which appeared under the auspices of Messrs. Longmans, Green, & Co., was in the first place published in monthly parts, just as the larger Natural History had been; and its publication in volume form did not take place until 1865.

The popularity of the book was soon assured, even if the previous issues of the monthly parts had not paved the way for its production as a whole. Only a few days after its appearance *The Times* devoted no less than four columns to a review of the work, and spoke of it throughout in the very highest terms. The other newspapers, daily and weekly, followed suit, and the consequence was that, perhaps putting “Common Objects of the Country” out of the question, “Homes without Hands” proved by far the most popular

and successful of all the numerous books which proceeded from my father's pen during his thirty years of literary life.

In this work I notice particularly that which was perhaps a characteristic of all his writings, namely, the utter absence of anything whatever in the way of a peroration, or even of a thought-out and carefully turned conclusion. He usually began both his books and magazine articles with a thoughtful introduction, comprising a statement of the subject which he intended to treat, and of the point of view from which he was about to consider it. Of this, in fact, he made a systematic practice, often saying that, after settling upon a title for a book or an article, the hardest part of the work was to find a suitable beginning. And I have frequently known him to expend at least as much time and thought over his prefatory paragraph as over the whole of the remainder of the article. But with regard to a conclusion he rarely seemed to trouble himself at all, and merely adopted the simple plan of leaving off when he had said all that he had to say upon the subject. Thus "Homes without Hands" concludes with the sentence—"As is the case with many of the illustrations to this work, the sketch was taken from nature." That is all; nothing more at all. "Common Objects of the Country," in like manner, ends with a sentence equally simple—"Figure 6 shows the curious Earth-star, chiefly remarkable for its resemblance to the marine star-fish." And so on. And