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978-1-108-06986-1 - Observations in Natural History: With an Introduction on Habits of Observing, as Connected with the Study of that Science

Leonard Jenyns

Excerpt

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INTRODUCTION
ON
HABITS OF OBSERVING,
AS CONNECTED WITH THE STUDY OF
NATURAL HISTORY.

Naturæ divitiæ planè sunt inexhaustæ, nec cuiquam post mille secula nato deerit quod scrutetur, et in quo se cum laude exerceat.—RAII *Epist.*

Nature, enchanting Nature, in whose form
And lineaments divine I trace a hand
That errs not, and find raptures still renew'd,
Is free to all men ——— universal prize.
Strange that so fair a creature should yet want
Admirers, and be destin'd to divide
With meaner objects ev'n the few she finds !

COWPER.

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INTRODUCTION.

(1.) NATURAL HISTORY has been said by some to be a study of facts; by others, a science of observation. Each of these statements is to a certain extent true: it is only by observation that we can acquire a knowledge of the facts upon which all ulterior views must be based. But neither does this, nor any other science, rest satisfied with the bare recording of isolated and independent phenomena. It seeks to classify these phenomena, and to comprise them within certain general principles, established by inductive reasoning, to the influence of which they may all ultimately be referred. Doubtless this is taking an extensive view of the subject, and, when we contemplate the immensity of nature, entering upon a field which it may require years to travel over, and which we may never be able to measure in its full dimensions. Yet that there are such principles as we allude to, is next to certain. Looking only to the analogy of other sciences, we might predicate their existence; when, however, we regard further the frequent attempts which have been made of late years to discover and fix them, and the

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present aspect of the science compared with what it exhibited a century or two back, we can hardly entertain a doubt on this point. And though we may never attain to a complete knowledge of them, they form as it were the main aim and object of the science, to which the labours of the scientific naturalist are ever directed, and to which at least he makes a nearer advance, the more he investigates the relations existing amongst the various matters that present themselves to his notice.

(2.) What has been said may seem, at first hearing, to discourage the labours of a certain class of observers, who take the greatest delight in watching nature, but who can never hope to undertake any such investigations as those above alluded to. It may be thought to subject them to the charge of resting satisfied with first steps, without caring to advance in the true path of scientific research. This, however, is far from what is intended; and it is rather in especial reference to these persons that the remarks we are about to offer will be brought together. A man may never aim at being anything more than a mere observer, and yet employ his time usefully to others, as well as agreeably to himself. He may restrict himself to simply noting and recording what falls under his own *autopsia*,* and unconsciously be laying the foundation of the most important generalizations. For observation, though not itself the true end of the

* This word was particularly used by White, to signify the observing things for oneself and with one's own eyes.

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science of Natural History, is nevertheless a means to that end; and, whatever principles we ultimately arrive at, it is only observation that can have insured their correctness or permanence. Hence the facts and observed phenomena collected by such persons may be of much value to others, though the observers themselves make no immediate use of them. And it has not unfrequently happened, that the profoundest naturalists, whilst engaged in the higher departments of the science, have expressed themselves indebted to some retired observer for the knowledge of a fact which has proved of the greatest importance to their views, and been one of the main supports of the theory they were seeking to establish.

(3.) Of course it is presumed that the observations we propose making in any department of nature should be correct, which is all that is necessary to give them value and importance; and, without this, they will have no value at all. It is essential to premise this, because some persons, who are not habituated to observing, may fall unintentionally into errors, and, being first deceived themselves, may afterwards mislead others. Further on it will be our object to lay down a few rules, and to suggest certain hints, that may prove of service in this matter, and by attending to which, young observers may be put upon their guard, and withheld from needlessly sacrificing both their time and their labour.

(4.) But further; it has happened in most sciences that the collecting of facts, and the deducing

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from them any such important generalizations as may lead to a comprehensive theory, have been the work of different individuals. In sciences, indeed, which have made any considerable advance, such division of labour becomes unavoidable. The observer, therefore, need not be discouraged, because he is not possessed himself of those attainments necessary for proceeding to the investigation of such principles as his observations may assist in establishing. He may leave this to others, and content himself, if he will, with a more subordinate part. And in Natural History especially it is almost necessarily the case that the observer and the theorist should be in some measure separated. For the facts here required are of such a kind as cannot all be procured at will, or in any situation we please. Many of them call for opportunities of a very peculiar nature; and those who enjoy such opportunities are not unfrequently, by that very circumstance, shut out from making any application themselves of the knowledge they have acquired to the furtherance of the general interests of the science.

(5.) That we may see this the more clearly, let us stop to take a general view of the descriptions of facts which are wanted by the naturalist to enable him to proceed in his inquiries into the general principles upon which Nature seems to have based her system. For this purpose he must have under his view all the different species and varieties of animals with which this earth is peopled; and he ought to be able to inspect them, not

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merely in the dead or preserved state, but in the living or at least recently-killed. Without this he can never closely investigate, or fully understand, many parts of their structure, the knowledge of which is sometimes essential for forming even the most distant idea of their true affinities. Besides this, there are many tribes of animals, especially among the lower classes, which, from their delicate organization, are scarcely capable of being preserved at all. To study these, therefore, and to obtain even the most general view of their organization, it will be necessary for him to resort to the spots where they are found. But further; in addition to a knowledge of structure, the naturalist requires a knowledge of habits. The former, indeed, is always connected with, and more or less subordinate to, the latter. And though he may sometimes infer a particular habit from a given structure, yet such inference can only be the result of having first actually observed their co-existence in a large number of instances. After all, what is more varied than the habits and instincts of different animals? How multiplied are the resources of Nature in compassing her ends! How often do we find the same object attained in as many different ways as there are cases in which the object is sought! Again, how strangely are both habits and structure sometimes modified by accidental circumstances, and by conditions affecting certain particular localities! — So that it is at once obvious, that, in order to become acquainted with all the phenomena of Natural History, a man must leave the retirement of

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his study, and pursue Nature into her own haunts, amid fields, waters, woods and mountains, (to say nothing of travelling to foreign climes,) or else he must have a large proportion of such facts collected to his hand by others, upon whose accuracy he can depend.

(6.) This circumstance has given rise to a distinction between (as they have been sometimes called) *in-door* and *out-of-door* naturalists. Every one who has read White's Selborne, is aware how its estimable author uses this latter term in speaking of himself, not professing to be anything more than a close observer of nature, and leaving to others to compare and classify the facts so obtained, and to build up systems in their own closets at home. Neither is this distinction a bad one. There is a great deal, as regards the real advancement of the science of Natural History, which can be done only at home, where there is quiet and leisure, together with ready access to a well-stored library; and there is a great deal likewise, as we have just seen, that can be done only abroad. And it is absurd for either of these two classes of naturalists to throw contempt and censure upon the other, as sometimes has been the case; seeing that they both work together for the good of the science, and labour in a common cause, although in different ways. The *in-door* naturalist cannot do without the *out-of-door*; and the latter, one might suppose, would never undervalue the inquiries of the former, which tend to increase the importance of his own researches.

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(7.) Each of the above habits of life has its peculiar advantages; but the out-of-door naturalist, with whom alone we have to do in these pages, has this in his favour, that he is never at a loss for the means and opportunities of carrying on his favourite pursuit. He is, as it were, independent of circumstances; and he can scarcely be so situated as to be altogether shut out from observing nature, and adding to the store of facts which it is his amusement to collect and note down. All places offer something worthy of his attention, though certain spots may be more favourable in this respect than others. And here we shall make a remark which may be of service to young naturalists, viz. that they should avail themselves of the particular situation in which they may happen to be placed, for studying whatever that situation offers. We mean, that they should be guided by it in their choice of the particular department of Natural History to which they intend mainly to confine their researches. They should take what comes to hand, and bestow their chief time on what falls directly under their eye. They will often thus have it in their power to supply facts for the more scientific naturalist, which others, differently circumstanced, have no means of ascertaining. For almost every locality has its peculiarities; and we should endeavour rather to turn these to account, than to be on the constant search for what our neighbourhood is not calculated to afford. We like the remark made by White in one of his letters to Pennant, that if he had been by the sea-side he would have turned his attention to

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Ichthyology.* Can there be a question as to whether that observant naturalist, had he been so situated, would not have given us just as entertaining and instructive a volume, as that he has left us in his *Natural History of Selborne*? It was not the exact locality in which he was placed, but the inquisitive turn of his mind, and the ardent zeal with which he devoted himself to the study of Nature, that enabled him to glean those materials, which have afforded so much delight to the present generation. He himself observes in another passage of his book, “that that district produces the greatest variety, which is the most examined;”† and few, who reflect on the many novelties constantly occurring in certain districts, where there happen to be more observers than elsewhere, will be disposed to question the general truth of this statement.

(8.) It is doubtless in a great measure owing to the influence which White’s *Natural History of Selborne* has exercised on the present generation, that the science has had so many followers in this country of late years. It is not that his work carries us any great way in unravelling the mysteries of Nature, but it is the spirit which it breathes that so strongly recommends it to our notice. He has induced others to follow up the same sort of life which had such charms for himself; and to him we are indebted for many volumes besides his own, of which the authors, by their own acknowledgment, were first excited and trained to habits of observing,

* *Nat. Hist. of Selb.* Lett. xxi. to Pennant.

† *Id.* Lett. xx. to the same.