

own species, such as actually have been or almost certainly will be found in these provinces, and the work should be for all three combined, for from a natural history standpoint the three are one. Each volume should be prefaced by such a sketch of the anatomy, habits, etc., of the group as a whole, as will suffice for the clear understanding of the contents of the work, and no more; further information of this sort can be found elsewhere. Each volume should contain a key to the species, so that one can be identified as easily and quickly as possible, for very many would use the work for this purpose only, and the scientific ones will get the scientific detail without being forced to it by a key, and each should have a bibliography containing the titles of these standard works which treat more fully of each division of the subject. Then should come an account of each species, under which there should be treated the following topics:

(I.) *Names.* These, some people who should know better, pretend to despise the study of. But not only is the name a necessary preliminary to a further acquaintance with a plant or animal, or to communicate with others about it, or to finding out what men have discovered and written about it; but it is also to many a pleasure in itself. It is surely as legitimate a pleasure to have a wide speaking acquaintance among plants or animals as among men, and if the acquaintance ripens into some friendship, so much the better; but it is not a bad end in itself.

Our natural history should give (a) that full scientific name which is sanctioned by the latest conservative authority; (b) a synonymy just full enough to allow other local works to be understood; (c) the common names by which it is known, widely and locally; (d) vernacular, Acadian French and Indian names; all these expressed concisely and yet without confusion, by tricks of typography.

(II.) *Distribution.* In general terms should be expressed concisely (a) its habitat and range over the world in general, (b) its habitat and exact range in our three provinces, including its relative abundance and exact localities where very scarce.

(III.) *Description.* This should always be two-fold; (a) one scientifically complete and technical, as are those in Gray's Manual, family, generic and specific, each in its proper place in the system; and (b) a concise popular description which all can recognize, at least for the more common forms.

(IV.) *Habits.* Very few indeed are the books anywhere which properly treat this division of the subject. Plants, as well as animals, should be treated as living beings, with needs like ourselves of adapting themselves to their surroundings, and with peculiarities of structure to enable them to do it. This is the key-note of our whole system of scientific natural history teaching, that structure and habit are inseparably linked, change but together, and mutually determine each other. The importance of this principle has only of late years been fully recognized.

(V.) *Illustration.* Of the principal forms, good figures should be given. Fortunately good processes of reproducing pictures are becoming cheap. The less important forms do not need them, as they can be described by comparison with the more important.

(VI.) *Economics.* By this is meant the relation of a species to man's good or injury. Forms important for food, in medicine, in the arts, etc., should be fully treated with references to technical works on the subject; and so also should these that are poisonous or otherwise injurious.

(VII.) *Interesting historical or other local associations, etc.*

At first sight it would appear that a work upon this plan, even if treating of a very small group, would be bulky and otherwise tiresome. In reality it would not be so; thus the great majority of wild animals and plants have but a single scientific and no common names, no uses to man, no historical or other important associations, and we know nothing of their habits. Hence this great majority would receive necessarily but brief treatment. At the same time this very brevity would prove a stimulus by showing how much remains to be done.

Natural histories upon this plan are not an experiment altogether, for England and other European countries have them, and not only are they of the very highest value to all scientific men, but they make possible among the people the study of nature in its most favorable aspect. In the Maritime Provinces, the series proposed above must have equally beneficent results.

If it appears that such works would tell too much and thus remove an incentive to original study, it is only necessary to answer that from the earliest times, good natural histories have stimulated the highest kind of scientific study, and the better and more complete they are, the more marked and excellent has been their influence in this direction.

We do not overlook the objections to our plan; they are altogether of a practical nature. It is true, the cost would be great; but there are three provinces to bear it. It would be difficult to get them well-written; but there are men in the provinces to-day fully capable of preparing some of them, and in time there will come others. In fact, it is chiefly a question of money; if this were supplied, the rest would follow.

W. F. GANONG.

A Christmas Prayer.

O Lord! who wast a little child like me,
Make me a holy child, like Thee,
All my life long a simple child to be,
For such the Father's face can see.

—Wide-Awake.