

While it is undoubted that the impulse to migrate is inherited, many ornithologists are of opinion that the ability to do so is not hereditary, but has to be acquired, and is, in fact, the result of the education of the young by old and experienced birds. This theory might be accepted as an explanation of the wonderful faculty which enables them to find their way over the thousands of miles which sometimes intervene between their summer and winter homes if all birds were gregarious at the time of migration, and if the old and young united and made the journey together. Some species do this, but in other cases the adults migrate before the young, and there are still other species the individuals of which strike out singly and perform the whole journey alone. Birds of this latter class must have inherited the ability to migrate as well as the impulse.

A striking example of individual migration is afforded by the Ruby-throated Humming Bird. These little creatures migrate by day, so their movements can be observed. In the spring they reach Southern Ontario early in May, the males preceding the females by a week or more. Through June they are occupied in nesting, and early in July the adult males abandon their mates and young and go south. In September the females and young gradually take their departure. Just at this season dozens of them in a day may be seen flying swiftly from east to west along the shore of Lake Ontario, following the route taken by all our migrants here, though this course is not so invariably followed by them as by all other day-flying species, for I have, on several occasions, seen a little Humming Bird strike out over the lake flying directly from north to south, the distance here from shore to shore being about thirty-five miles. Humming Birds when migrating always fly low, so that it is impossible for them to gain any knowledge of their course by the exercise of their vision. It seems evident, then, that as they have no opportunity to be educated as to the route they should follow, and that even their acute sight cannot be of very great service in guiding them over a course which may in some individuals extend from Hudson's Bay to Brazil, they must be possessed of a peculiar faculty which enables them to act upon their inherited impulse to migrate when the season for flight arrives.

Of this wonderful instinct which plays so important a part in migration there is, I think, but one explanation to be given, viz.: That, as nature provided the periodical migrations of certain forms of life for the purpose of maintaining an equable distribution of those forms over all parts of the earth during the seasons best fitted for their maintenance, the necessary faculties to enable them to carry out this provision were developed with the impulse which induces the movement of dispersal.

HAWKS AND OWLS.

Among the most injurious pests of the farmer and fruit grower are the small animals commonly known as rats and mice; individually they are insignificant; but where permitted to increase, their productiveness soon renders them formidable.

It is very difficult to make anything like a correct estimate of the average damage inflicted upon the country by these creatures, but every farmer knows by sad experience that he continually suffers from their work.

The enormous amount of grain they destroy and the young trees girdled and killed by them are visible to every one, but the perpetrators of the mischief, owing to their nocturnal habits and secretive lives, are comparatively seldom seen. Their enormous increase of late years, and consequent capacity for serious mischief, is, of course, owing to the fact that man has seriously interfered with the balance of