

7. Natural History.

Many centuries ago the British Isles formed a part of the continent of Europe. Where the waters of the English Channel now ebb and flow, there was dry land offering a free passage to the migration of plants and animals from Central Europe to this country. Such was the case when the palaeolithic hunters, the men who chased the mammoth and the reindeer with their rude stone weapons, lived in Britain. By neolithic times, however, when our primitive ancestors were using finely chipped and polished weapons of stone, the British Isles had become separated from the Continent, and Ireland was severed from Great Britain. The land-bridge existed after the disappearance of the

great ice-sheet from this country, and plants and animals from Europe migrated to Britain. The land connection, however, did not remain long enough for all the continental forms of life to make their way to Britain, for we find that there are fewer species in Great Britain than in Western Europe, and fewer species in Ireland than in Great Britain. For example, every one knows that there are no snakes in Ireland, and for this, Saint Patrick is generally given the credit; but an alternative hypothesis is that their absence is due to the breaking of the land-bridge before migration to Ireland could take place. The comparative poverty of animal species in Britain is most marked in the case of the mammals and the reptiles, since these do not possess the power of flight. Thus while Germany has about 90 species of land mammals, Britain has only about 40. There is not a single species of mammals, reptiles, or amphibians found in Britain that is not found on the Continent; and only one bird, the common red grouse of Scotland, does not occur in continental Europe.

The mammals of Renfrewshire are typical of Scotland as a whole. The common bat and the long-eared bat are frequently met with. Daubenton's bat is rare but has been found at Craigenfeoch, while the rare lesser horseshoe bat has been seen at Crookston. The hedgehog and the mole are abundant, the common shrew does not belie its name, but the water-shrew is rare. In most of the lowland counties of Scotland the wild-cat is now extinct, but a specimen was noted at Gleniffer in 1895. The pole-cat, however, has quite disappeared, the last recorded

occurrence being at Craigenfeoch about 1868. The badger and the pine-marten have vanished, but the fox, the stoat, the weasel, and, in suitable places, the otter, are still common. Most of the British rodents occur in Renfrew. As in the neighbouring counties, the harvest mouse is quite unknown, but strange to say, a nest was found at Kilbarchan in 1895. The old black rat is extinct. He has been everywhere pushed out of existence by his interloping relative, the brown rat. Mice and voles are everywhere common; and in many of the woods the brown, bushy tail of the squirrel may frequently be seen vanishing round a tree trunk. Rabbits and hares are ubiquitous. Three hundred mountain hares were killed during one season on the Misty Law Hills.

Many parts of Renfrew offer favourable opportunities for the study of bird life. It would be tedious to enumerate all the species of birds common in the county. It is enough to note that the diversity of land surface and the frequent occurrence of sheets of water are reflected in the variety and abundance of the bird life. On the high moors the mournful cry of the curlew or the lapwing can everywhere be heard, but the number of other species is comparatively small. Near the well-wooded banks of the Cart, however, the number not only of species but of individuals is remarkable. Along the coast south of Gourock sea-birds abound, although they do not nest so frequently as they do farther down the firth. The numerous lochs and dams of the county, again, are the favourite haunts of duck and teal, coot and moorhen, grebe and gull.

Compared with the Continent the reptiles and the amphibians of Britain are remarkably few in number. Most of the British species are found in Renfrewshire. There are two species of lizards, the lizard proper (*Lacerta vivipara*), and the blind-worm or slow-worm. The former may often be seen on a hot day frequenting dry, sunny places such as stone-heaps, walls, or ruined buildings. The latter is not so often met with, but may sometimes be seen among dead wood, decayed leaves, or stone-heaps, generally preferring a dry situation. The blind-worm is of course not a snake, as is often supposed. It is an inoffensive, timid, and perfectly harmless creature. When caught it becomes so rigid with fear that it easily breaks in two. It is from this fact that its specific name *fragilis* is derived. Of the true snakes the adder or viper is our only common representative. It is the only poisonous reptile in the country. To the healthy adult its bite is practically never fatal, although deaths have resulted in the case of children and infirm persons. The adder loves dry, warm places, among ruins, or under fallen trees, or on sunny banks. The frog, the common toad, and the newt are everywhere abundant.

The plants of Renfrewshire are fairly representative of the whole of Scotland. There is, however, no mountain of sufficient height to exhibit well the peculiar alpine flora of Scotland, found on Ben Lomond and other mountains in the lower basin of the Clyde. The old Caledonian forest probably existed over many areas that are now bare of trees. The existing woods of Renfrewshire have practically all been planted by man. Some of the finest

specimens of trees in all the west of Scotland are to be found in the grounds of Blythwood, Erskine, and Pollok. The uplands of the county are mainly moor and marsh. In autumn they are purple with the flowers of the ling and the heath. The milk-wort, the bog asphodel, and in wetter parts, the cotton grass, are abundant. In the marshes also the butter-wort and the sundew set their traps for unwary insects. All summer the grassy uplands are bright with the tiny, yellow flowers of the tormentil, and the gaily-coloured mountain-pansy. The sunnier slopes of the Gleniffer and Fereneze Braes are especially beautiful with these exquisite little flowers. The hedgerows of Renfrewshire are not nearly so rich as those of the border counties where the climate is more genial. In addition the low-lying parts of the shire are generally covered with boulder-clay, which gives a stiff, cold soil that is very unfavourable to variety of plant life.