years ago. Now the number is only 30 to 40, and it is to be found almost exclusively in the mountain regions of Norrland. The lynx is also being exterminated ; it is still found in the greater part of northern and central Sweden, at least as far south as Lake Vener. On the other hand, foxes have of late increased, at least in certain parts of the country, and are common everywhere. The glutton also is by no means rare in the mountain regions of Lapland. The destruction of cattle caused by beasts of prey, especially in the north, is not inconsiderable, the loss being estimated at about 2500 reindeer and from 9000 to 10,000 sheep and goats annually.

Not without influence on the number of the smaller beasts of prey are the singular migrations of the mountain Lemming *(q.v.),* which has its home on the higher mountains above the tree- limit, whence in certain years it migrates in countless numbers to the lower forest regions and lowlands, doing great damage to the vegetation wherever it goes. After the last migration in 1883 the number of the foxes was found to have increased in the regions through which the lemmings had passed.

Of eatable game the elk lιolds the first place. It has increased in numbers and range of late years, and is pretty common in the forest tracts of central Sweden. The roe-deer, which has its proper home in the southmost parts of Sweden, has also increased of late, and has been seen as far north as Örebro län and Vestmanland. Hares occur in great abundance. Seals are found round the coast; they are hunted chiefly in the Baltic and the Gulf of Bothnia. Besides the larger beasts of prey, martens, weasels, otters, and squirrels are hunted for the sake of their skins, but not to any great extent. The beaver is now probably extinct. Some of the mammals (the bat, hedgehog, dormouse, badger, bear) hibernate ; most of the other animals are in winter covered with a thicker coat of hair, and some change their colour to white or grey.

The wood-grouse is the most valued winged game. Its favourite haunt is the great lone forests. Although it has been obliged to retreat before advancing cultivation, it is still pretty common in suitable places. More numerous and almost as much liked is the black grouse, which has somewhat the same distribution as the wood-grouse, but is less particular in the choice of its abode. In the forests of central and especially of northern Sweden the hazel- grouse is numerous in many places, and on the mountains above the tree-limit the ptarmigan is common everywhere. In the birch and willow regions we find the willow-ptarmigan, which above the snow-line is superseded by the common ptarmigan. In winter a great deal of game is exported from Norrland to the southern provinces. The partridge, probably introduced about 1500, with difficulty endures the rude climate of Sweden, and great numbers often perish in winter for want of food. Still it is distributed all over southern and central Sweden as far north as Jemtland, and of late its numbers have increased. The number of woodcock and snipe is, like that of *Gratiæ* in general, decreasing. Numerous sea-fowl are found on all the coasts. Some are killed and eaten, but as a rule they are not much relished. Their eggs are collected for food by the inhabitants of the seaboard. The eider-duck is common on both coasts. Among the birds of prey the hawk is the most destructive and the most hunted. The gyrfalcon and the golden eagle are found in Norrland and Lapland, and the sea-eagle throughout the country, especially on the coasts. Some kinds of falcons and owls are very common, the latter especially in north­ern Sweden. In the interior the most characteristic birds are swallows, sparrows, the birds of the crow family, and the singing- birds, among which the lark, the chaffinch, the thrushes, and the many species of *Sylvia* are most noticeable. The northern nightin­gale is rare in southern Sweden. The cuckoo is heard everywhere, especially in the forest regions. The mute swan is found in great numbers in a few places in southern and central Sweden. The whooper swan frequents the marshes and lakes of Lapland. The white stork is found in Skåne and Halland, and herons are found in great numbers here and there in Skâne and Blekinge. Cranes are distributed all over the country. Characteristic of the wild forest tracts of Lapland is the Siberian jay. Upwards of 250 species of birds may be considered as belonging to the Swedish fauna, most of them birds of passage, scarcely 40 remaining over winter in their summer resorts. In spring and autumn Sweden is visited by great flocks of the birds of passage of the extreme north, especially geese and snipe.

The reptiles and amphibians are few (3 snakes, 3 lizards, 11 batrachians).

The Swedish rivers and lakes are generally well stocked with fish. The objects of capture are chiefly salmon, eel, pike, different species of perch, burbot, and several species of the *Salmonidæ* and *Cyprinidæ.* The annual income from the fisheries in the lakes and rivers amounts to upwards of £135,800, of which the salmon fisheries alone yield £42,000. Of still greater importance, of course, are the sea-fisheries. In the end of last century the herring fishery in the “ skärgård ” of the west coast was the most important in Europe, and it is estimated that in one year 1500 millions of herrings were taken. Somewhat later, however, the great shoaΓs disappeared for a long time. In 1877 a new era began in the his­

tory of the west-coast fisheries, the take that year being 1,230,000 cubic feet. Since then the herring has returned every year in greater or smaller numbers. There are also captured on the same coast flat-fishes and cod-fish, mackerel, and sprats. The annual produce of the sea-fishery of the south and west coasts is valued at about £111,000. A smaller variety of the herring is found in great abundance on the east coast. In the Sound it is still 11 inches in length, in the Baltic only 6 or 8 inches. This variety is called “stromming,” and is the object of an important fishery, annually bringing in more than £175,000. About 140 kinds of fishes are constantly found in Sweden or along its coasts. Of these nearly 100 belong exclusively to the sea, and upwards of 10 are to be found both in salt and fresh water. The remainder are properly freshwater fishes, but many are found in the brackish water of the Baltic coasts. Here we find perch, pike, &c., by the side of purely saltwater fishes, as the “stromming,” the flat-fish, &c.

The species of Scandinavian insects number at least 15,000. Notorious among these are the Lapland gnats. The “skargârd” of the west coast has a rich fauna of lower marine animals, partly forms of boreal and arctic descent, partly immigrants from the south. The Royal Academy of Science has here a zoological station, Kristineberg, for the purpose of scientifically examining the marine fauna.

Compared with the fauna of the west coast, that of the Baltic is extremely poor. It consists partly of European boreal forms, which have immigrated from the west, partly of freshwater forms, which have been able to live in the brackish water. But other types also occur, which, though sparingly represented, are of the greatest interest to the naturalist,—namely, certain dwarfed forms,—two or three species of fishes, some crustaceans and other lower marine animals, belonging to a purely arctic fauna, which have immigrated when the Baltic during a part of the Glacial period communicated with the White Sea. They are wanting on the south and west coasts of Sweden, but are found in the Arctic Ocean. Some of them, the four-horned cottus and some crustaceans, are found in Lake Vetter and some other lakes of central Sweden, whither they had come when these lakes formed part of the arctic sea; they have since been shut in and have survived both the climate and the altered composition of the water. The arctic “ vikare” seal *(Phoea fοetida),* which is common in the north part of the Baltic but is not found on the west coast, and which is also found in Lake Ladoga, Lake Onega, and some lakes of Finland, is also considered as a survival of the fauna of the Glacial period. On the west coast lobster and oyster fisheries are carried on, the former being very productive. The common mussel is abundant, but in Sweden is only used as bait for fish. The crayfish is common in many places in central and southern Sweden. Pearls are sometimes found in the freshwater mussel *Margaritana margaritifera,* which is met with all over the country. (A. WI. )

*Extent and Population.—*Sweden takes rank among the larger countries of Europe. It contains 170,712·60 English square miles, of which area 3,517·29 square miles are occupied by the large lakes Vener, Vetter, Mälar, and Hjelmar, leaving 167,195·31 square miles, distributed among the counties as shown in the following table, which gives the areas and the estimated population in 1885 of the different administrative divisions (the capital Stockholm and the twenty-four “län” or counties) into which the kingdom is divided :—

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| --- | --- | --- |
| Län. | Square Miles. | Population. |
| Stockholm (city) | 12∙65 | 215,688 |
| Stockholm (rural) | 3,008∙45 | 148,841 |
| Upsala | 2,052∙75 | 116,406 |
| Södermanland | 2,630∙64 | 150,032 |
| Ostergötland | 4,272∙88 | 267,842 |
| Jönköping | 4,440∙51 | 197,392 |
| Kronoberg | 3,841∙51 | 166,881 |
| Calmar | 4,439∙06 | 240,507 |
| Gotland | 1'202∙97 | 52,570 |
| Blekinge | 1,164∙09 | 140,071 |
| Christianstad | 2,506∙97 | 226,787 |
| Malmohus | 1,847∙02 | 358,178 |
| Halland | 1,899∙45 | 136,973 |
| Göteborg (Gothenburg) | 1,952∙51 | 281,001 |
| Elfsborg | 4,948∙15 | 282,335 |
| Skaraborg | 3,283∙13 | 253,467 |
| Vermland | 7,345∙73 | 259,958 |
| Örebro | 3,502∙88 | 182,513 |
| Vestmanland (Vesterås) | 2,623∙14 | 132,056 |
| Kopparberg  Gef1eborg | 11,420∙8  7,418∙70 | 194,291  191,223 |
| Vesternorrland | 9,519∙92 | 184,884 |
| Jemtland | 19,603∙5 | 93,091 |
| Vesterbotten | 21,942∙4 | 113,541 |
| Norrbotten | 40,315∙5 | 96,241 |