

## Invertebrates of the Faroes\*

PUBLISHED at the expense of the Carlsberg Fund and accordingly sold at a very reasonable price, this monograph will appeal to a wide circle of workers interested in taxonomy and geographical distribution.

Most of the sections on marine Crustacea are by K. Stevenson and, of the Decapoda, twenty-nine species are now known from these islands. The majority of them seem to be rare, having only been taken a few times, or even a single time, and only six species are really abundant. Although the Faroes are only about 160 miles from the Shetlands, their Decapod fauna is comparatively poor, since the last-named islands contain forty-eight or forty-nine species. It seems that the deeps south-east of the Faroes are impassable to numerous littoral and sub-littoral species. Of the Amphipoda only twelve species were previously known, while the present work brings up their number to no fewer than sixty-one species. The greater number of these belong to the epi-fauna (living among algae or Hydroids, etc.) and the majority are common north-west European or arctic-boreal species. Previous records of the Isopoda and Tanaidacea are contained in works of H. J. Hansen (1913 and 1916). The present work contains only two species not listed by this author. Of the Mysidacea, Cumacea and Nebaliacea, only seven species are at present recorded, which is a very small number as compared with ninety-eight species for surrounding waters (Iceland, Shetlands (or Scotland) and Norway).

Of the Cirripedes it is noteworthy that six species were known from the Faroes so long ago as the year 1800 and, since then, only five have been added to that number. The marine Ostracoda have hitherto remained almost totally unknown and, in the present work, fifteen species are dealt with, but some of them could not be named with certainty. The majority are widely distributed and common. The fresh-water Crustacea are discussed by E. M. Poulsen, and

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forty-one species are enumerated : while they show features recalling the more arctic regions, those of temperate zones predominate.

Of other Arthropods, P. Hammer and K. L. Henriksen discuss the Myriapoda, of which seven species are identified : all these occur also in Britain excepting the Chilopod *Pachymerium ferrugineum*. Among the Insecta, K. L. Henriksen describes the members of several of the smaller orders. The only Thysanuran recorded is *Petrobius balticus*, a species often confused with *P. maritimus*. Of the thirteen species of Collembola the main part consists of Palaearctic forms, widely distributed on the Continent as well as in Great Britain. The only Orthoptera are *Forficula auricularia* and *Blatta orientalis*. The Mallophaga comprise thirty-one species, but this total is obviously incomplete since no parasites off the puffin are recorded. While dragonflies, mayflies and stoneflies are unrepresented, and there is only a single Neuropteron (*Boromia betulina*), seventeen species of Trichoptera are recorded. In the account of the Lepidoptera by N. L. Wolff thirty-two species are enumerated. The only butterflies are *Pyrameis atlanta* and the cosmopolitan *P. cardui*. None of the moths is endemic.

The concluding part of the volume is A. West's account of the Coleoptera, wherein some 156 species are enumerated. The Carabidae, with twenty-six species, and the Staphylinidae, with sixty-five species, are the only two large families at all well represented. A predominating feature is the close resemblance of the Coleopterous fauna of the Faroes with that of Scotland and Norway. Only five Faroese species have not been found in Scotland and only three have not been discovered in Norway, while sixty-three species do not, apparently, occur in the Shetlands. The last-named islands, however, have not been so thoroughly investigated as the Faroes. The orders Hemiptera, Diptera and Hymenoptera are not included in the present issue.

When complete the work will be published in three volumes, each in two parts. The whole is expected to be completed in 1938.

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## West Middlesex Main Drainage

THAT part of the county of Middlesex lying to the west of the Finchley and Barnet Ridge has an area of about 160 square miles and is drained by four main streams, the Colne, the Ash, the Crane and the Brent and their tributaries, all of which flow to the Thames above London. In the post-war years the population and industries of this district increased and developed so rapidly that the twenty or more local authorities acting individually were unable to keep pace with the requirements, particularly in respect of sewerage and sewage disposal. Mr. David Mowat Watson has given the history of the scheme which was adopted to deal with this problem, and a description of the works and their design and construction (*J. Inst. Civ. Eng.*, April), for which he has just been awarded the Telford Gold Medal of the Institution of Civil Engineers.

In 1921 the average density of population per acre was 4·8 and in 1931 this figure had risen to 7·5, the greatest density in this latter year being 25·5. For the purposes of design an ultimate average of 23 was assumed, and the maximum rate of flow provided for was 240 gallons per head per day. The Act of Parliament which authorized the scheme empowered the County Council to construct trunk sewers for a wet weather flow of this amount, to make the necessary connexions with local sewers, to provide for gauging the sewage flow from each of the constituent authorities, to build purification works at Mogden with outfalls to the Thames at Isleworth Ait, and sludge disposal works at Perry Oaks.

Owing to the abnormally rapid development of the area, the Ordnance maps were out of date, the district had to be re-surveyed and about seventy