Arabs ("Arabiskt Familjeliv" (Stockholm: Åhlen and Söners förlag, 1939)), were written in Swedish. In common with other Scandinavian scholars, the Finns have developed the recording of their indigenous folk-culture to an extent that, in its literary aspect, is unmatched elsewhere, except perhaps in Ireland. (On the situation in Great Britain it is better to maintain an embarrassed silence.) Dr. Granqvist has equalled her fellow-countrymen's achievement in the superb contribution she has made to the study of a culture alien to her own. J. C. TREVOR

FOUNDATION OF GOOD ROADS AND RUNWAYS

Soil Mechanics for Road Engineers

(Department of Scientific and Industrial Research: Road Research Laboratory.) Pp. xxiv+541+90 plates. (London: H.M. Stationery Office, 1952.) 30s. net.

THE work of the Soil Mechanics Section of the Road Research Laboratory can be followed by interested persons in the many excellent publications issued, for example, in its 'technical papers' on compaction, soil survey procedure and pavement design, or in its 'road notes' on frost and drought damage, to quote only a few. In the volume under notice, these appear to have been collected together and carefully edited to form the most authoritative book on soil mechanics for road engineers at present available.

The book gives a complete picture of the soil mechanics knowledge that might be of use to a road engineer, from soil identification and classification, mechanical and chemical testing, soil stabilization and compaction, on to the ultimate goal of pavement design, each chapter being supplied with adequate references for further information. There are particularly interesting chapters on the movement of soil moisture and the investigation of foundation failures.

Each paragraph of the book is numbered, and this would lead one to suppose a good deal of cross-referencing. In fact, virtually none exists, except in broadest terms, and this is one of the weaknesses of the book. Each chapter can almost stand on its own, and this has led to a certain amount of repetition. For example, in one of the final chapters on bearing capacity, shearing resistance, Coulomb's equation and Mohr circles are referred to as if they had not been previously mentioned, whereas, in fact, there is a very full chapter devoted to shear strength, after which it is gratuitous to be told that "granular soils are more capable of carrying load if they are confined than if they are not".

The chapter on consolidation more logically comes before that on shear strength: then the $\phi = 0$ result for undrained shear tests becomes more understandable. Similarly, it would be more logical to treat bearing capacity before pavement design. These criticisms could be met easily by efficient cross-references.

It would have been helpful if, in the section on the determination of specific gravity, typical values for soils had been given. Later on, an implicit value of 2.65 is used indiscriminately for clays and sands alike.

The effect of pore water pressures on shear strength, although initially correctly stated, does not appear to have been fully understood. For example, in

saying that "the greater the drainage attained during a test, the greater will be the shearing resistance", the effect of the decrease in pore water pressure which takes place during an undrained test on a dilating soil has been overlooked.

Each chapter has its introduction, telling what is going to be said in it, and a summary telling what has been said. This is convenient for a technical journal where a number of different topics are treated; but here it would appear unnecessary. Again, the nine pages at the front devoted to figure titles seem unnecessary.

The diagrams and photographs are of a high quality, and the book is well produced apart from numerous printing errors which ought to be corrected before the next edition appears. K. L. NASH

BIRDS OF GREENLAND

Grønlands Fugle (The Birds of Greenland)

Text by Finn Salomonsen; Plates by Gitz-Johansen. Part 3. Pp. 349-608+plates 37-52. (København: Ejnar Munksgaard, 1951.) 3 vols., 42 dollars; £14 15s. 0d. Map of Greenland, prepared for The Birds of Greenland by Geodetic Institute and Finn Salomonsen. 40 cm. × 60 cm., 10 Danish kr.

THIS is the final part of an interesting work (for Vols. 1 and 2 see *Nature*, 167, 744 (1951) and 169, 48 (1952), respectively) and deals with the auks, birds of prey, owls and passerines. There is some evidence that the great auk bred in south-east Greenland in the sixteenth century. According to Greenland chronicles of Bjørn Jonsson, Lutra Clemens, an Icelandic, on a voyage to Greenland between 1580 and 1596, landed at Gummorjarn's Skerries, north-east of Angmagssalik, and loaded his boat with great auks. At a much later period, during 1768-74, this bird was a regular visitor in small numbers to west Greenland, and Fabricius tells us that they were killed for food by the Greenlanders, and the Danish inhabitants made blankets out of the skins. The last bird to visit Greenland was killed at Disko Island in 1821. The little auk, in contradistinction to its large namesake, is reputed to be the most numerous bird in the world, and Dr. Finn Salomonsen quotes one authority who estimates that in the Scoresby Sound district alone there are five million pairs. All the large breeding colonies are in the north, and those in the south are much smaller, sometimes only a few pairs. When the auk comes ashore to breed, they are preyed on by foxes, glaucous gulls and gyr-falcons, to say nothing of the numbers netted by Greenlanders for winter food. When at sea they run the gauntlet of seals, fish, and even whales, according to Salomonsen. Nevertheless, in spite of all this, there does not appear to be any signs of the birds becoming reduced in numbers.

Of the three birds of prey breeding in Greenland, the most interesting is the gyr-falcon, a circumpolar species. In the heyday of falconry the white form of this bird was in great demand and was usually only in the possession of kings, or very important people. Actually, in the pursuit of game it had not the dash of the peregrine, and Dr. Salomonsen's notes on the food and manner of hunting of these two birds is of great interest. He remarks also that the gyr-falcon is easily driven away by a pair of long-tailed skuas, or a pair of ravens, which would not be the case with the peregrine. The classification of the gyr-falcon