guillemot, kittiwake and herring gull. The fisheries include cod, ling and herring. The rainfall amounts to 56 in. for the year, and the temperature is fairly high, the mean for the year being 47° 5' F. Steamers call at Eigg at regular intervals and less often at Rum and Canna. Canna (pop. 49), an island of basaltic rock, is situated about 10 m. from the nearest point of Skye, and measures 4½ m. from E. to W. and 1¼ m. from N. to S. Potatoes, barley and a little oats are grown, and the pasture being good the cattle are larger than most of the Hebridean breeds. The harbour is screened from south-westerly gales by the isle of Sanday. The antiquarian remains include a weather-worn sculptured stone cross and the ruins of a chapel of St Columba. Compass Hill (450 ft.) on the E. is so named from the alleged disturbance of the compasses of vessels passing within its sphere of influence. Sanday (pop. 44), another basaltic island, lies close to the S.E. of Canna. It measures 1¾ m. from E. to W. and 3¼ m. from N. to S. Some 3¾ m. S.E. of Canna is the island of Rum (pop. 149), which is situated 8½ m. from the nearest point of Skye, and measures 8½ m. N. to S. and 8 m. from E. to W. Geologically, its northern half is composed of Torri- donian sandstone, with basalt at points between the West coast and the centre, of gabbro in the south-east, with a belt of gneis- sose rocks on its east seaboard and of quartz-porphyry in the south-west. It is mountainous in the south. Among the higher peaks are Askival (2659 ft.), Ashval (2552), Sgor-nan-Gillean (2503) and Allival (2368). On the north-west shore is a cliff where bloodstones are quarried. The mountains are a haunt of red deer. The harbour of the village of Kinloch, at the head of Loch Scresort, is resorted to during gales from the N.W. and S. Fully 4 m. S.E. and 7½ m. from the nearest point of the mainland lies the island of Eigg, or Egg (pop. 211), measuring from N. to S. 5 m. and from E. to W. 3½ m. It is in the main basaltic, but a band of quartz-porphyry runs from the centre in a north-westerly direction to the coast, and there is some oolitic rock on the north shores. On the north-east coast is a cave with a narrow mouth, opening into a hollow 255 ft. long. In it Macleod of Skye, towards the end of the 16th century, ordered 200 Macdonalds, inhabitants of the isle—men, women and children—to be suffocated, their bones being found long afterwards. The people are chiefly engaged in fisheries and cattle-rearing. Three m. S.W. is the island of Muck (pop. 42), which is about 1⅓ m. long by 2⅓ m. broad and lies fully 5 m. from the nearest point of Ardnamurchan. It is almost wholly basaltic, but has some oolite at the head of the bay on its north side.

**SMALLPOX,** or Variola *(varus, "*a pimple”), an acute infectious disease characterized by fever and by the appearance on the surface of the body of an eruption, which, after passing through various stages, dries up, leaving more or less distinct cicatrices. (For pathology see Parasitic Diseases.) Few diseases have been so destructive to human life as smallpox, and it has ever been regarded with horror alike from its fatality, its loathsome accompaniments and disfiguring effects, and from the fact that no age and condition of life arc exempt from liability to its occurrence. Although in most civilized countries its ravages have been greatly limited by the protection afforded by vaccination, yet epidemic outbreaks arc far from uncommon, affecting especially those who are unprotected, or whose pro­tection has become weakened by lapse of time.

Much obscurity surrounds the early history of smallpox. It appears to have been imported into Europe from Asia, where it had been known and recognized from remote antiquity. The earliest accounts of its existence reach back to the middle and end of the 6th century, when it was described by Procopius and Gregory of Tours as occurring in epidemic form in Arabia, Egypt and the south of Europe. In one of the narratives of the expedition of the Abyssinians against Mecca (c. 550) the usual miraculous details are combined with a notice of smallpox break­ing out among the invaders.@@1 Not a few authorities, however, regard these accounts as referring not to smallpox, but to plague. The most trustworthy statements as to the early existence of the disease are found in an account by the 9th-century Arabian physician Rhazes, by whom its symptoms were clearly described, its pathology explained by a humoral or fermentation theory, and directions given for its treatment. During the period of the Crusades smallpox appears to have spread extensively through Europe, and hospitals for its treatment were erected in many countries. But at this period and for centuries after­wards the references to the subject include in all likelihood other diseases, no precise distinction being made between the different forms of eruptive fever. Smallpox was known in England as early as the 13th century, and had probably existed there before. It appears to have been introduced into America by the Spaniards in the early 16th century, and there, as in Europe and throughout the known world, epidemics were of frequent occurrence during succeeding centuries.

@@@1See Nöldeke, *Geschichte der Perser . . . aus Tabari* (Leiden, 1879), p. 218. Nöldeke thinks that this notice may be taken from genuine historical tradition, and seems to find an allusion to it in an old poem.

The only known factor in the origin of smallpox is contagion— this malady being probably the most contagious of all diseases. Its outbreak in epidemic form in a locality may frequently be traced to the introduction of a single case from a distance. The most direct means of communicating smallpox is inoculation. By far the most common cause of conveyance of the disease, however, is contact with the persons or the immediate surround­ings of those already affected. The atmosphere around a small­pox patient is charged with the products of the disease, which likewise cling to clothing, furniture &c. The disease is probably communicable from its earliest manifestations onwards to its close, but it is generally held that the most infectious period extends from the appearance of the eruption till the drying up of the pustules. Smallpox may also readily be communicated by the bodies of those who have died from its effects. No age is exempt from susceptibility to smallpox. Infants are occasion­ally born with the eruption or its marks upon their bodies, proving that they had undergone the disease *in utero.* Dark-skinned races are said to suffer more readily and severely than whites. One attack of smallpox as a rule confers immunity from any re­currence, but there are numerous exceptions to this rule. Over­crowding and all insanitary surroundings favour the spread of smallpox where it has broken out; but the most influential con­dition of all is the amount of protection afforded to a community by previous attacks and by vaccination *(q.v.).* Such protection, although for a time most effectual, tends to become exhausted unless renewed. Hence in a large population there is always likely to be an increasing number of individuals who have become susceptible to smallpox. This probably explains its occasional and even apparently periodic epidemic outbreaks in large centres, and the well-known fact that the most severe cases occur at the beginning—those least protected being necessarily more liable to be first and most seriously attacked.

*Symptoms.—*While the symptoms of smallpox are essentially the same in character in all cases, they are variously modified according to the form which the disease may assume, there being certain well-marked varieties of this as of most other infectious maladies. The following description applies to an average case. After the reception into the system of the smallpox contagion the onset of the symptoms is preceded by a period of incubation, during which the patient may or may not complain. This period is believed to be from about ten to fourteen days. In cases of direct inoculation of the virus it is considerably shorter. The invasion of the symptoms is sudden and severe, in the form of a rigor followed by fever (the *primary fever)*, in which the tempera­ture rises to 103° or 104° Fahr. or higher, notwithstanding that perspiration may be going on. A quick pulse is present, together with thirst and constipation, while intense headache accompanied with vomiting and pain in the back is among the most char­acteristic of the initial symptoms. Occasionally the disease is ushered in by convulsions. These symptoms continue with greater or Jess intensity throughout two entire days, and during their course there may occasionally be noticed on various parts of the body, especially on the lower part of the abdomen and inner sides of the thighs, a diffuse redness accompanied by