A MAP OF ST. KILDA.*

By J. NORMAN HEATHCOTE.

When I first contemplated making a map of St. Kilda, I was under the impression that it would be an easy place to survey, but I have since come to the conclusion that it is not the best sort of country for a tyro in cartography to commence upon. The absence of level ground makes the measurement of a base-line a matter of considerable difficulty, and the precipitous nature of the cliffs renders an accurate delineation of the coast-line practically impossible. With the exception of Village bay, there is no point where it is possible to reach the sea-level from above without a more or less difficult climb, and many parts of the coast cannot even be seen from a height without some peril to life and limb. The alternative of mapping the shore from a boat is made more troublesome by the never-ceasing swell. I twice rowed round the outside of Soay, an expedition taking some five or six hours, and on both occasions the swell was so heavy that it was dangerous to come near the rocks in many places, and the tossing of the boat added materially to the difficulty of drawing. Probably an old hand at surveying, with luck, might take all necessary observations in a fortnight, but what with delays caused by wind, rain, and mist, which sometimes hung about the hills without intermission for a week or ten days, and what with loss of time in learning the idiosyncrasies of the theodolite, and mistakes due to ignorance or carelessness, I found that I had to work pretty hard to get everything done in two months.

My first idea was to measure a base-line on the sandy shore in Village bay, but as the sand is covered at high tide, the station points had to be placed among the large boulders above high-water mark. This made it difficult to make an accurate measurement, and as I found that there were comparatively few points of importance visible from both ends, I practically only used this base to determine a few heights, and made the map from a base on Mullach Sgail. Here there is a large expanse of nearly level ground, and by measuring two sides of a triangle and the angles, I was able to get a base-line of 700 yards, one station point overlooking Village bay, the other commanding the glen. I measured this twice with a steel tape, made the correction for difference of altitude, and took angles with the theodolite to cairns which I had erected on the top of Connacher and Oisaval from all three points of the triangle. My principal station points were on Connacher, Oisaval, Ruadhval, Mullach Bith, Mullach Mor, Cop a's àirde, and Cambargh; but I also took angles from several other places, so as to be able to fix the principal points all round the coast.

As landing is always a risky business owing to the incessant swell, and the ascent of Soay or Boreray entails a difficult climb, I did not attempt to get the theodolite ashore on those islands, but took angles to all

* Map, p. 204.

conspicuous points on Boreray from Connacher, Cambargh, and Oisaval, and in the case of Soay, from Cambargh, Mullach Bith, and from a point between the two. Then by calculating the distances from both bases, *i.e.* Connacher to Cambargh, and Connacher to Oisaval, and finding that the results agreed near enough for practical purposes, I considered that I should get the shape of the islands with sufficient accuracy by sketching in the other sides from notes, sketches, and photographs taken on land and from a boat.

With regard to altitudes, I took double readings of the vertical angles from all the station points, and in the case of the main points worked out the height from the calculated distance, but in some cases depended on the measured distance on the map. I used the first base on the shore to ascertain the height of the station point on Mullach Sgail, and for the peaks of Dun, and tested them by measuring very accurately a base entirely on the sand when the tide was low. Finding that my estimate of the height of Connacher did not agree with the Admiralty chart, I was careful to test it in every possible way, but as in every case my results came about the same, I feel confident that my estimate is not far wrong. The natives were not actually hostile to my surveying efforts, except that I occasionally found a cairn pulled down; but they thought there was something uncanny about a theodolite, and never seemed particularly anxious to give me any assistance.

As might be expected in an island so remote, they are a primitive people, with simple habits, charming manners, and no vices; but I am afraid the march of civilization is tending to demoralize them. Visitors in yachts, and tourists, who go in considerable numbers every summer in steamers, have always given them presents. Well-meaning people from the south have sent boats, furniture, fishing-tackle, and all sorts of things at various times, and the result is that they distrust strangers and try to get as much out of them as possible. They look upon presents as a right, and are beginning to think that not only need they not pay rent, but that meal, potatoes, and other necessaries of life should be supplied by MacLeod of MacLeod, the landlord, without payment. Until recently, they were quite ignorant of the value of money, and even now all transactions with the landlord are carried out by barter. One has to break through this crust of antagonism to find out their good qualities. To people they know and like they are charming, pleasant companions, anxious to please, perfectly honest, and not at all grasping. Their houses are not always models of cleanliness, but they are clean in their persons, absolutely sober, and as industrious as most people who are not compelled to work. Their principal occupation is fowling. A fat, oily fulmar petrel is their favourite food, and large numbers of young fulmars and gannets are salted for winter consumption. In the intervals of bird-catching they cultivate a little ground, catch a few fish, and look after their sheep, while in the winter months they weave a considerable quantity of home-spun cloth.

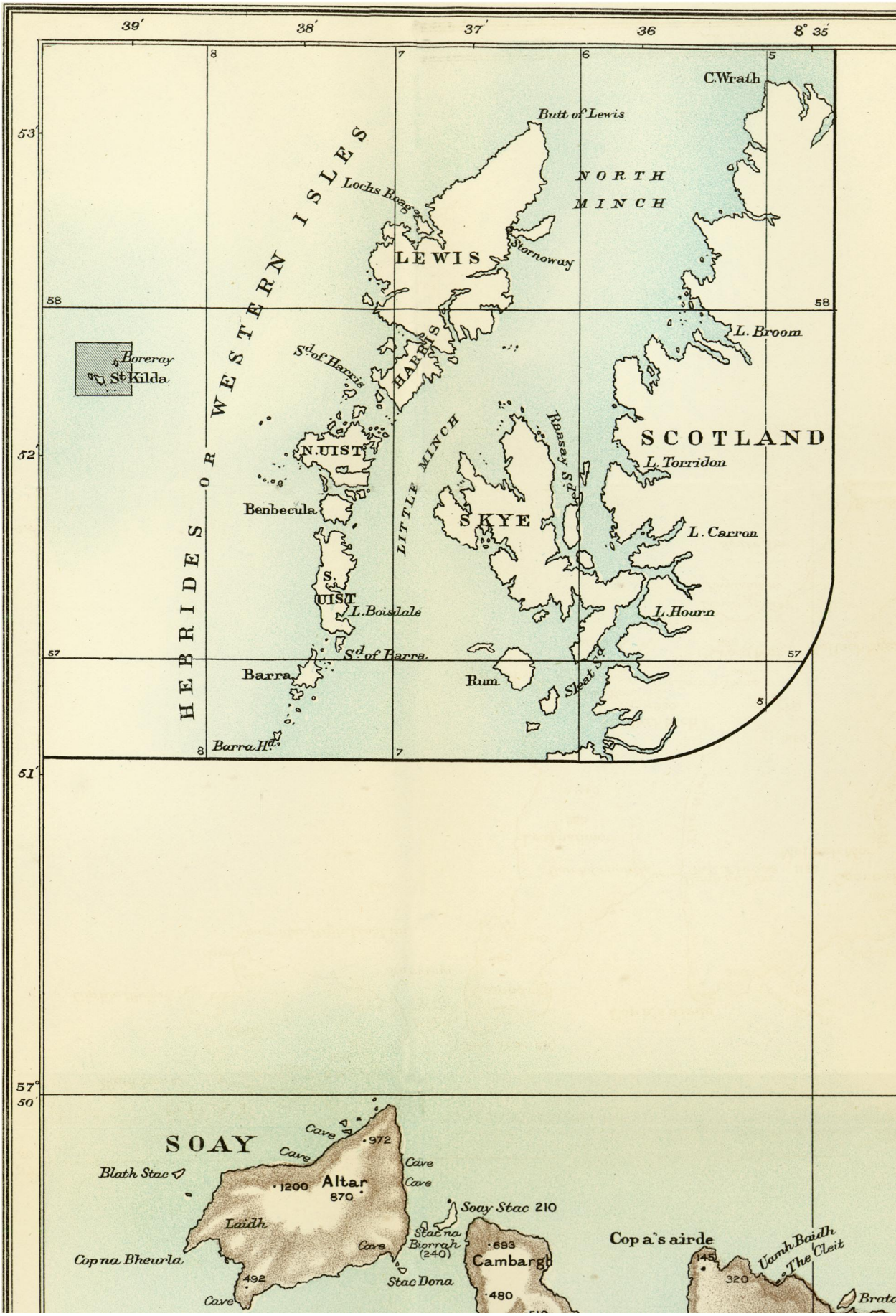
St. Kilda was inhabited at a very early period. There are several underground houses similar to those made by the aborigines of Scotland, and the legend recorded by Martin, of the warrior queen who hunted deer on the land between St. Kilda and Harris, points to the possibility of men having found their way there at a time when the island still formed part of the mainland of Scotland. The present inhabitants are descended from emigrants from Skye or the outer Hebrides early in the last century, when the island was repeopled after being devastated by small-pox. They are seventy in number, but though there has been little or no importation of fresh blood, they show no signs of deterioration caused by in and in breeding. They are a fine, powerful race, sound in mind and body, and the children all look remarkably healthy. There used to be great mortality among newly born babies, but this was due to improper treatment, and the eight-day sickness, as it was called, is no longer known in the island.

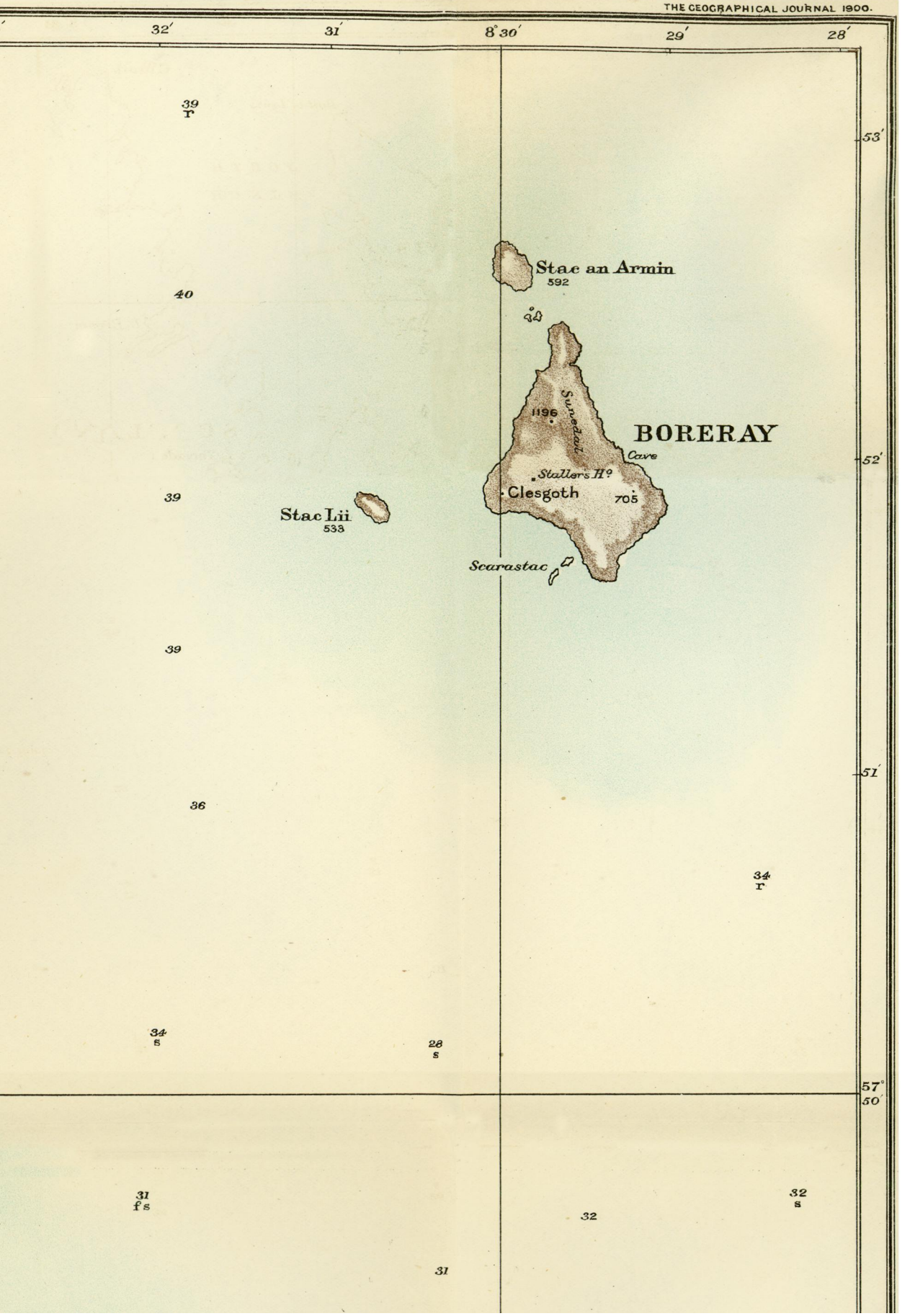
THE MASHONALAND RAILWAY SURVEY.*

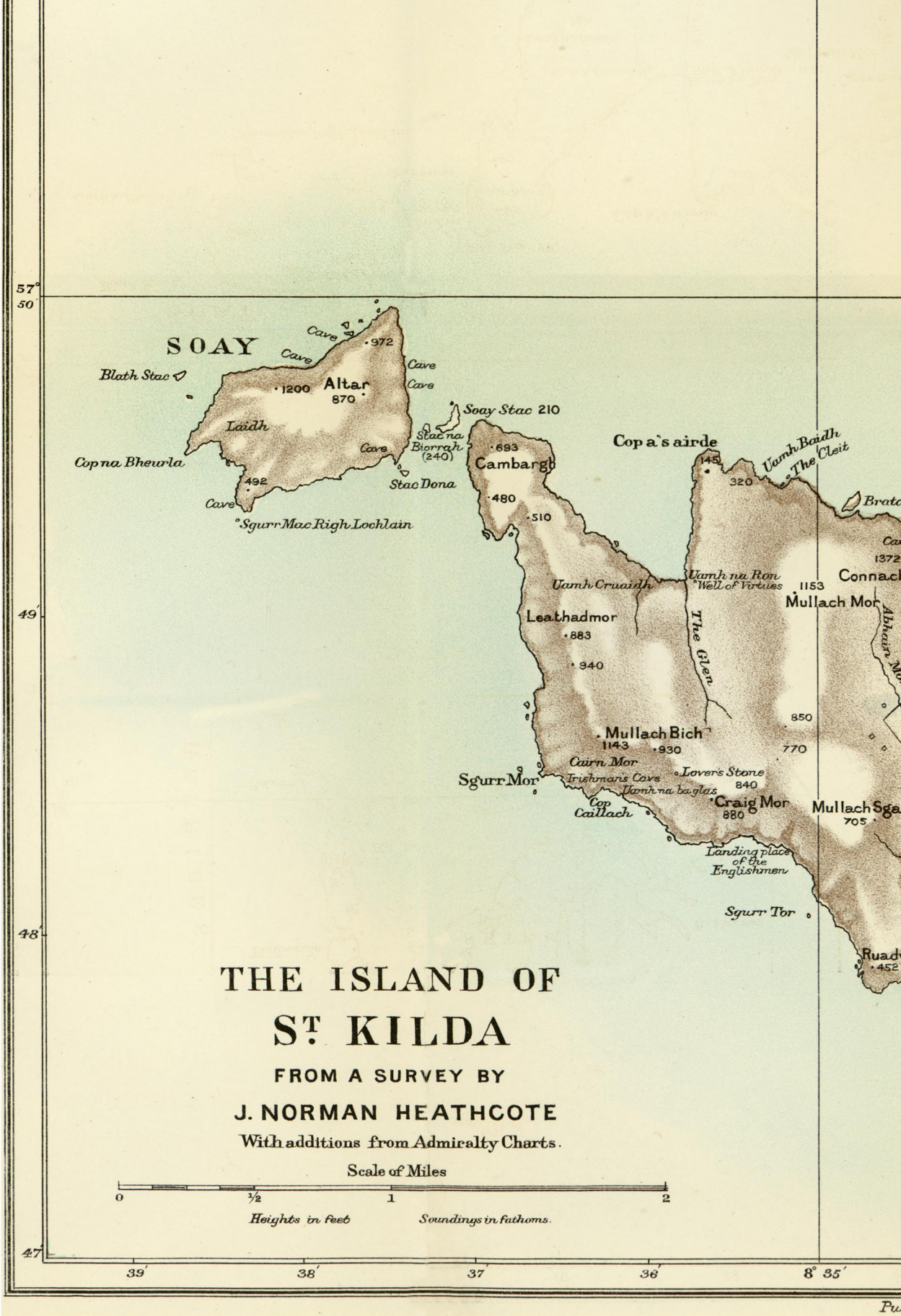
We have received from Mr. Harry Good the route-plan of the projected Mashonaland railway (reproduced in the present number of the *Journal*), based on a recently completed survey by theodolite and chain. The chain work was commenced from the 222nd mile-peg, which marks the terminus of the Beira railway. This railway, which was originally constructed on the 2-foot gauge, was to be relaid on the gauge of 2 feet 6 inches during the last dry weather. Mr. Good's original map shows the flood openings allowed at the more important waterways to be crossed by the Mashonaland railway, and thus gives an idea of the size of the streams during the rainy season. The largest of these all occur on the first part of the route from Umtali to Salisbury, on which the Odzi and other important branches of the Sabi are crossed. Beyond the Rusapi the route finally adopted deviates from the original line, which coincided roughly with the direction of Selous's road. By skirting the basin of the Sabi to the north, and so running mainly along the watershed between that river and the Zambezi, the crossing of large streams is here avoided.

Mr. Good remarks that the astronomical positions of Umtali and Salisbury have not been determined, but in the case of the former this has lately been done, as mentioned a short time ago in the *Journal*, by signals exchanged with Cape Town, the longitude obtained being 32° 40′ 18″. No doubt that of Salisbury will shortly be fixed by members of the Geodetic Survey; meanwhile the value recently given in a report of the South Africa Company, viz. 30° 49′, may be taken as approximately correct. It should be mentioned that the orientation of the map is not due north and south, Salisbury lying considerably north of Umtali.

* Map, p. 204.







THE ISLAND OF
St KILDA

FROM A SURVEY BY

J. NORMAN HEATHCOTE

With additions from Admiralty Charts.

Scale of Miles

0 ½ 1 2

Heights in feet *Soundings in fathoms.*

Published by the Royal Geographical Society