ity and prudence of Captain James Ross, Captain Crozier, and their gallant companions intrusted with the command and direction of the undertaking, are above all praise; and the reciprocating steadiness and devotedness of the crews of the two vessels are no less creditable to the national character. Three fine fellows were lost by accident within the four years; but such was the effectual care and management bestowed during all that time, under every circumstance of toil and danger, that the first natural death occurred at Rio on the homeward voyage, and the first and only corpse was there committed to the earth. Highly as we must think of what has been done in other respects, the attention paid to the comfort and welfare of the men, and thus restoring them to their country in robust health and vigour, must, in our opinion, demand the warmest tribute of applause, and redound most signally to the honour of their leaders.

But we will not detain our anxious readers any longer by introductory remarks from the account of this expedition, which we have the good fortune to be able to lay before them.

The Erebus, Captain James Ross, and the Terror, Captain Crozier, left England on the 29th of September, 1839, and made observations at Madeira, Porto Praya, St. Paul's Rocks, and Trinidad. On the last day of January, 1840, the expedition reached St. Helena, Captain Ross having been desirous, in taking this course, to determine the important point of *minimum* magnetic intensity, and the nature of the curve connecting those points in which that intensity is weakest. This he accurately accomplished; and we may note, that the large space of Atlantic Ocean so traversed possesses the least magnetic intensity of any like portion of the surface of the globe. The position of the line, presumed to be proceeding towards the north, being thus ascertained, it will be easy in future time to mark its progress, and establish a certain law upon the subject. (*Vide Transactions of the Royal Society for* 1842.) The position of the line of no-dip or magnetic equator was also determined, and fixed grounds laid for subsequent observation of the changes to which it may be liable.

The magnetic observatory at St. Helena having been set on foot, and the officers and instruments landed, the expedition sailed again on the 8th of February, and on March 17th arrived at the Cape of Good Hope, where similar services were performed. A series of daily experiments was made on the temperature and specific gravity of the sea, at the depths of 180, 300, 480, and 600 fathoms, and at length soundings at the bottom of the ocean were struck by the plummet; from all which the physical condition of this element will come to be better understood.

April 3.—The Cape was left behind, and the system of magnetic observation sedulously and zealously continued, to connect the voyage with the observatories established in other parts of the world. Kerguelen's Land was reached on the 12th of May; and on the 29th (the day previously fixed for simultaneous observations) the magnetometric instruments were noted every 2½ minutes, for 24 hours; and fortunately one of the magnetic storms which have been noticed in various parts of Europe occurred, and its affecting the instruments, as at Toronto, afforded complete proof of the vast extent of magnetic influences, pervading the earth's diameter with a velocity equal to light or electricity.

Geological and geographical investigations were carried on here. Large fossil trees were found in the lava, and indicated the igneous origin of these islands. Extensive seams of coal were also imbedded in the volcanic mass, which may, with great benefit, be employed for the purposes of steam navigation in this quarter of the world, and be of immense importance to the commerce of India.

### FIRST YEAR.

From Hobart-town, Van Dieman's Land, the expedition proceeded to Auckland Islands, and completed a perfect series of magnetic observations on the important term day of November, 1840. The anticipatory attempts of the American Lieut. Wilkes, and the French Commodore D'Urville, having become known to our countrymen, Captain Ross wisely used his discretionary power in altering his route from that originally intended. He accordingly directed his course for the utmost south, at about the 170th degree of east longitude, by which the isodynamic oval and the point exactly between the two *foci* of greater magnetic intensity might be passed over and determined directly between the tracts of the Russian navigator Bellinghausen and our illustrious Cook. He then proposed to steer S. W. towards the pole, rather than attempt its approach directly from the north on the unsuccessful footsteps of preceding voyagers.

On the 12th of December he quitted Auckland Islands, touched at Campbell Island, and passing through numerous icebergs to the southward of 63 lat., made the pack edge, and entered the Antarctic Circle on the New Year's-day, 1841. This pack was not so formidable as represented by the French and Americans, but a gale and other unfavourable circumstances prevented the vessels from entering it at the time. A gale from the northward blew them off: and it was not till the 5th that they regained it, about 100 miles to the eastward, in lat. 66 45 S., and long. 175 16 E., when, though the wind was blowing and the sea running high directly upon it, the entrance was achieved without the slightest injury to either ship. After advancing through it a few miles, they were able to make their way to the southward with comparative ease and safety. Thick fogs, however, ensued, and with light winds, rendered their course more difficult as well as tedious: and constant snow-showers impeded their operations. Whenever a clear glimpse could be obtained, they were nevertheless encouraged by seeing a strong water-sky to the S. E.; and on the morning of the 9th, after sailing above 200 miles through the pack, they gained a perfectly clear sea, and bore away S. W. fo the magnetic pole!

January 11, lat. 70 47 S., and long. 172 36 E., land was discovered at the distance of nearly 100 miles, directly in their course between them and the pole—the southernmost known land ever discovered, though somewhat nearly approached by the Russians 20 years ago. As those who accomplished this honour for their country approached, it was seen to rise in lofty mountain peaks of from 9,000 to 12,000 feet in height, entirely covered with eternal snow, and the glaciers projecting from the vast mountain brows for many miles into the ocean. By and by exposed patches of rock were visible; but the shore was so lined with bergs and pack-ice, with a heavy swell washing over them, that a landing could not be effected. They therefore steered to the S. E., where there were several small islands; and on the 12th Capt. Ross landed, accompanied by Captain Crozier and a number of officers of each ship, and took possession of the country in the name of our gracious Queen Victoria. The island is composed altogether of igneous rocks, and lies in lat. 71 56 S., and long. 171 7 E.

The east coast of the mainland tended to the southward, and the north took a north-westerly direction; and Captain Ross resolved on penetrating as far as he could to the south, so that he might, if possible, pass beyond the magnetic pole, which the combined observations had placed in 76 S. nearly, and thence proceed westward till he completed its circum-navigation. They accordingly steered along this magnificent land; and on the 23d of January reached 75 15 S., the highest southern latitude that had ever been previously attained.

Here strong southerly gales, thick fogs and perpetual snow-storms impeded them; but they continued to examine the coast to the southward, and on the 27th again landed on another island in lat. 76 8 S., and long. 168 12 E.; like the former, all of igneous rocks. On the 28th a mountain 12,400 feet above the level of the sea was emitting flame and smoke in grand profusion; which splendid volcano received the appropriate name of Mount Erebus. Its position is lat. 77 32 S., long. 167 0 E.; and an extinct crater to the eastward of it was named—though not quite so fitly—Mount Terror.*

Continuing to follow the mainland in its southern trending, a barrier of ice, stretched off from a prominent cape and presenting a perpendicular face of above 150 feet, far above the mast heads of the vessels, shut up the prospect of further advance in that direction. They could just discern, beyond, the tops of a range of very lofty mountains towards the S. S. E., and in lat. 79 S. This barrier they explored to the eastward, till on the 2d of February they reached lat. 78 4 S., the highest they were at any time able to attain; and on the 9th, having traced its continuance to the long. of 191 23, in lat. 78 S., a distance of more than 300 miles, their further progress was stopped by a heavy pack pressed closely against it, and the narrow lane through which they had hitherto found their way being now completely covered by rapidly forming ice, nothing but the strong breeze which they fortunately had with them put it in their power to retrace their course. At a distance of less than half a mile they had soundings on a bed of soft blue mud, with 318 fathoms. The temperathre was 20 deg. below the freezing point; and aught more here being impracticable, they bore away for the westward, and again reached lat. 76 S. (that of the magnetic pole) on the 15th of Febrnary. They found the heavy ice partially drifted away, but its place supplied by more, recently formed, through which they got a few miles nearer the pole—lat. 76 12 S., and long. 164, the dip. 88 40, and variation 109 24 E.,—thus only 157 miles from the pole. The nature of the coast rendered it impossible to lay up the ships and endeavour to reach this interesting point by land; but it is satisfactory to know that it was approached some hundreds of miles more nearly than ever it was before, and that from the multitude of observations made, in so many different directions, its position can be determined with almost as much certainty as if the spot had been actually visited.

The advanced period of the season in this high latitude now rendered return advisable; but yet they made another effort to land on the north part of the coast, which was defeated by the heavy pack-ice. They found it terminate abruptly in lat. 70 40 S., and long. 165 E., trending considerably to the southward of west, and presenting an immense space, occupied by a dense pack so firmly cemented together by the newly formed ice, as to defy every attempt to penetrate it. The whole southern land thus traced extends from nearly the 70th to the 79th degree of latitude, and was distinguished by the name of our beloved Sovereign.

Their way hence lay near the chain of islands discovered by Balleny in 1839, and more extensively explored by the American and French expeditions in the following year. On the 4th of March they recrossed the Antarctic Circle, and being necssarily close by the eastern extreme of those patches of land which Lieutenant Wilkes has called "Antarctic Continent," and having reached their latitude on the 5th, they steered directly for them; and at noon on the 6th, the ships being exactly over the centre of this mountain range, they could obtain no soundings with 600 fathoms of line; and having traversed a space of 80 miles in every direction from this spot, during beautiful clear weather, which extended their vision widely around, were obliged to confess that this position at least, of the pseudo-antartic continent, and the nearly 200 miles of barrier represented to extend from it, have no real existence!! †

Continuing to bear westward, the expedition approached the place where Professor Gauss supposed the magneiic pole to be, which was proved, by extended investigation, to be erroneous; and they then, April 4, departed for Van Dieman's Land.

No disease or casuality of any kind attended their first labours, and there was not one individual in either ship on the sick list. Sir John Franklin, too, the estimable friend and arctic companion of Ross, was still at the opposite pole, ready to welcome and entertain him. It was doubtless a happy meeting.

(*To be concluded next week.*)

* The volume of smoke ejected by the volcano was in sudden jets, and attained an altitude of 2,000 feet; the diameter at the crater's mouth was about 300 feet; and it gradually assumed the shape of an inverted cone till it was 500 or 600 feet in diameter at its highest elevation. The smoke then gradually dispersed and left the crater quite clear, filled with intensely bright flame flashing even in the face of the meridian sun. The permanent snow extends to the very edge of the crater, and no appearance of lava streams could be detected on the surface—Ed. L. G.

† Lieutenant Wilkes may have mistaken some clouds or fog banks, which in these regions are very likely to assume the appearance of land to inexperienced eyes, for this continent and range of lofty mountains. If so, the error is to be regretted, as it must tend to throw discredit on other portions of his discoveries which have a more substantial foundation.—Ed. L. G.