

THE "POLARIS" EXPEDITION

Narrative of the North Polar Expedition U.S. Ship "Polaris," Captain Charles Francis Hall, Commanding.

Edited under the Direction of the Hon. G. M. Robeson, Secretary of the Navy, by Rear-Admiral C. H. Davis, U.S.N. U.S. Naval Observatory, 1876. (Washington : Government Printing-office, 1876.)

THIS is a handsome record of one of the most memorable, and in some respects most successful of Arctic expeditions. Though dated 1876, a note dated March, 1877, is prefixed, stating that the concluding chapters have been prepared by Prof. J. E. Nourse. We have already (vol. viii., 217, 435 and *passim*) given so full details concerning this expedition that we need do little more now than notice the publication of this record by the U.S. Government. It contains a full general narrative of the expedition drawn up not only from the official records of the responsible officers, but from the diaries kept by many of the subordinate officers and men, many of the latter being unusually intelligent. Indeed it formed part of the instructions to the expedition in its outset that as many of the officers and men as were able should keep diaries, which were to be handed over to the U.S. Government on the return of the expedition, a praiseworthy feature, we think, which might be advantageously copied by all similar expeditions.

Captain Hall himself is spoken of justly in the narrative in the highest terms of praise. His enthusiasm for Arctic exploration had become almost a religion with him, and had he lived there seems little doubt that much more would have been accomplished than even there was. He had qualified himself by two long residences among the Esquimaux for enduring all the hardships incident to Polar exploration; and while his main aim was geographical discovery he had a sufficient knowledge of and love for science to induce him to do all in his power to look after its interests in connection with his expedition. To quote the work before us, Hall "possessed judgment and sagacity altogether too large and comprehensive not to be fully alive to the importance of its promotion; and not to know that every accession, whether of law or fact, to its domain, tended to the benefit of mankind." We believe that the narrative of Hall's second residence among the Esquimaux will shortly be published for the first time.

The present work will correct some misconceptions that became current at the time that the news of the fate of the *Polaris* expedition reached this country. It was stated, for example, that the ship was not well fitted for her work; but the fact is that everything was done to strengthen her and otherwise adapt her for the special work she had to do that the United States naval authorities could suggest. Hall himself said that no better equipped expedition ever set out for the Pole. The expedition was in every sense a government one, 50,000 dollars having been appropriated for it, and it was governed by the naval discipline of the United States. True, this latter point does not seem to have been rigidly carried out, Hall himself not having been a naval officer, and perhaps a little too soft to be so strict as he ought to have been. Explicit, but sufficiently elastic instructions were given him, and the scientific instructions prepared by the United States National Academy are given in the

Appendix. The latter are exceedingly detailed and carefully drawn up, and embrace every department of science. The scientific results of this expedition are, we believe, of very great importance, and we are glad to learn that a portion of them, at least, have just been published by the chief of the scientific staff, Dr. Emil Bessels.

The idea of the expedition was due solely to Capt. Hall, and it was only through his enthusiastic agitation that the United States Government were persuaded to equip it. His death was a great loss to the cause of Arctic exploration, and we may say to science; and it is a relief to find that after rigid inquiry on the part of the Government it has been concluded that his death arose from purely natural causes. Our readers may remember that a handsome tablet was placed at the head of his grave by our own recent expedition.

The present volume, we have said, is a handsome one, and compares favourably with the unattractive blue-books issued by our own Government in similar cases. There are a large number of attractive illustrations and maps, the former, however, executed by a very roundabout process; they are wood-engravings painted in oil from original sketches by Mr. Emil Schumann and Dr. Bessels, photographed on wood and engraved. One may be inclined to fear that their truthfulness will be apt to suffer during this long process. A very fine life-like portrait of Capt. Hall forms a frontispiece.

POLLUTION OF RIVERS

A Treatise on the Law Relating to the Pollution and Obstruction of Watercourses, together with a Brief Summary of the Various Sources of Rivers Pollution.
By Clement Higgins, M.A., F.C.S., Barrister-at-Law.
(London: Stevens and Haynes, Law Publishers, Bell Yard, Temple Bar, 1877.)

THE pollution and obstruction of rivers by sewage and the refuse of manufacturing processes is, in a country like this, densely populated and depending mainly on its manufactures, a matter of the gravest importance, justifying indeed, a saying of Earl Beaconsfield's, which has met with a good deal of ridicule, that the motto of his government should be *sanitas sanitatum omnia sanitas*. We have on the one hand to preserve as rigidly as possible the purity of our streams, and on the other to interfere as little as can be with those manufactures which are so great an element in the production of our national welfare.

It is now some years since the Government issued a Royal Commission to inquire into the best means of carrying out the problem, and that the matter is now in a fair way to solution is mainly due to the labours of the late Commission, of which Dr. Frankland was the chemical member.

The five Reports presented by it to Parliament, take rank, indeed, as a classical research into the subject, and have an interest to countries other than our own. The Rivers Pollution Act of 1876 is based on the recommendations of the Commission, and it is not too much to say that without them legislation would have been impossible.

The Act in question constitutes four classes of offences as follows:—To pass into any stream (1) any solid matter so as to interfere with its due flow, or to pollute its waters;