

of pastors who insist that music should not form the chief attraction of the service. But the ministers are right in this matter. We have all seen churches where for a little while attractive music seemed to augment the number of worshippers. There is not a case on record where this device did not ultimately fail. Nothing but the Word of God, preached by one able and consecrated, ever did or ever will permanently fill the church. Setting aside, however, all the claims of worship, the pastors are still in the right on simple grounds of courtesy and common sense. A plain parallel case is this: How would we like to have them step upon our concert platform and insist upon reading the liturgy or even the Bible as the chief attraction of the concert? No; we are not to forget that music in the church is a means, and not an end. We weaken our cause when we claim too much for it.

Eugene Thayer.

Is Arctic Exploration Worth its Cost?

A FULL affirmative answer could be made to this inquiry; its outlines only can be laid down within an open letter. The reply may run counter to a widely entertained feeling, yet it is justified by history, and is due to the interests of science. Sympathy with the losses sustained by the De Long and Greely expeditions is sincere, deep, and wide-spread. But sympathy with the sufferers, and with the bereaved, cannot dim the value of the results secured by the sufferings of the lost and the living. Their work is a compensation for at least something of the severe sacrifices made, and history shows that the well-being of man has ever been and will be advanced by sacrifice.

To meet the inquiry fairly, is to recall the true objects and gains of Arctic exploration; its history, like that of other experimental progress, begins with a single object which, in the logic of events, evolves other and far more important issues. Its gains have been made with a remarkably small loss of life, for the whole number of deaths occurring in all the Arctic expeditions from the year 1819 to 1875 was but one and seven-tenths per cent. of officers and crews, while in carrying on the work of the fourteen meteorological stations of the past two years, but two deaths have occurred outside of Greely's party of Lady Franklin bay. With the sufferings of Greely's men before their minds, people are heard to exclaim: "Four miles nearer the Pole! Is this worth nineteen lives?" Forgetting the true objects of Arctic exploration, they lose sight of all but the polar problem alone, and they deal inconsiderately with even this, the origin of more important issues.

The first point in the inquiry here is to recall the fact that the search for the Pole itself was begun, three centuries ago, in no motives of mere curiosity or even of theory. The impulse was of the most practical character, to find a new commercial route from northern Europe to Asia. Columbus and De Gama had opened up the world West and East, but seemingly only for the two nations Spain and Portugal; these two powers promptly setting up for themselves the exclusive right, not only to the new lands found and to be found, but to the navigation of the great oceans. As they were then able to maintain their claim by

force of arms, northern Europe soon set about the search for a safer and a shorter route to the rich lands of Asia.

The history need not be traced in full. It began with the voyage of old Cabot, in 1497, and was closed only in 1847 with the discovery of the passage by the drifting and crushed ships of Franklin. The north-west passage will not be pursued. Sir Allen Young's latest disappointment in the *Pandora* (1876) closed the question even for the curious. Tortuous and shallow channels, if found, could, indeed, offer no advantages except for the small exchanges carried on by whalers. Nor is it likely that for years to come national aid will be given for further attempts to push through any one of the supposed gate-ways to a theoretical "open Polar sea," found by Koldwey, Payer, Hall, Nares, De Long, Ray, and Lockwood, to be sealed up as ever by the paleocrycitic masses.

Have, then, the labors, exposures, and patient endurance, of Arctic exploration, been profitless and discouraging to future effort? By no means. They have teemed with incidental results in value immeasurably greater than could have been gained from success in their first object. They are a record of extensive geographical discoveries, of large additions to scientific knowledge, of material gains for navigation, commerce, and industry and of moral lessons taught by these examples of heroism. It is something to learn the true boundaries of the land and water surfaces of the globe on which we live; it is yet more to have eliminated from the sphere of human attack the absolutely unconquerable of nature's forces. Lockwood's latest daring advance has again done much in both of these directions.

A true estimate of what Arctic exploration has gained will, in part, be reached by a comparison of the knowledge of our own continent half a century ago with that shown upon the school-boy's map of to-day. The maps of 1825 exhibited for our northern coastline Baffin's Bay only on the east, and westward, dots only for the mouths of the Mackenzie and Hearne Rivers, up to the icy Cape of Cook and the Behring Sea,—all which was then known except the new sweep of Parry's voyage in the far north. The charts of to-day accurately delineate the zone of land and the coast-lines within the 60th and 130th degrees of west longitude, up to Cape Parry, latitude 71° 23', a region now largely frequented by the trader. To these add the explorations in the Eastern Hemisphere by the Russians, Danes, Austrians, Dutch, and Swedes, crowned by the circumnavigation, first in the world's history, of northern Asia. And now Lockwood has extended the line of North Greenland.

Again, no Arctic expedition has been fruitless of commercial and scientific gains. Cabot failed to find the passage, but he established the claims for our inheritance of English liberty and law. The first attempt to find the passage by the north-east brought from the ill-fated Willoughby news like that from our De Long:

"He, with his hapless crew,
Each full exerted at his several task,
Froze into statues."

But Willoughby's second ship made the discovery of Russia's wealth—"a new Indies"—for England, the beginning of maritime commerce on the north.

Among the direct or indirect gains of this kind for us have been the whaling grounds of the north-east and the fisheries of Behring Strait, a region rendered safe by the voyage and charts of the *Vincennes*, the explorations of the Coast Survey, and latest by the *Corwin* and the Signal Service. Alaska is now attracting immigration; but its shores seemed forbidding in the extreme before the surveys of Rodgers and the trial observations of Dall and others were charted for the guidance of the mariner. The increasing returns to the Government and to the merchant from the fur seal and the otter have shown the wisdom of the purchase.

Still higher results are associated with the hydrography of the great oceans; the observations needed for the further knowledge of the laws governing the origin and the course of storms; and magnetism, with its relation to the compass, the telegraph, and the telephone. "We shall never accurately know," says the President of our own Geographical Society, "the laws of aerial and oceanic currents, unless we know more about what takes place in the Arctic Circle."

Such research was made the special object of the stations at Point Barrow and Fort Conger. The chief of the Signal Service had justly reported that "the study of the weather maps of England and America cannot be fully prosecuted without filling up the blank of the Arctic region"; and among the results to be expected from the colony at Lady Franklin Bay, the act making the appropriations recited "a more accurate knowledge of the conditions which govern the origin and paths of the storms, the descent of polar waves of unusual cold, and *uncertain movements in the Atlantic*." The instructions of the Signal Service and the Coast Survey have now been carried out by continuous observations at Ooglamie during two years, and at Lady Franklin Bay for a yet longer period. A casual inspection, courteously permitted, of Ray's reports warrants an expectation of results of much practical value. They include, among many points of interest, long-continued observations of the temperature of the earth at great depths, and of the waters on the shores of the great ocean, with hourly observations of the magnetic force and dip, a reverse of the usual experience of these being observed in the increased force and dip at Ooglamie during the *morning* hours and a decrease in the afternoon. Ray's magnetic work, discussed by Mr. C. A. Schott of the Coast and Geodetic survey,—the same officer who discussed Kane's and Hayes's,—will form Appendix 13 of the Coast Survey report of 1882; the whole work at Ooglamie making a full quarto volume.

Of the labors of the party at Fort Conger it were premature to speak as yet with fullness; but enough has been reported by Lieut. Greeley to warrant the expectation at the Signal Office that the observations and the topographical work of Lockwood at this point, north of other expeditions, will develop themselves, when reduced, with a completeness and scope in advance of what has ever been attained before. The party were well housed for more than two summers, and were supplied with instruments such as neither Kane nor Hayes could in their day secure. When Ray's and Greeley's observations shall have been placed with those received from the other thirteen stations of the Arctic, they will form a full link in the series of

synchronous observations thus carried on for the first time around the northern zone.

If such investigations are worth pursuing, if the existing relations between all branches of science and between the individual facts of each be admitted, Arctic exploration will not be soon abandoned—not until the problems referred to are fully solved. Let such as henceforth go to the ice zones depend on native help more largely than in the past; two Esquimaux to every three or four white men, at least. Natives alone can provide sustenance in the extremities of want; they alone improvise the snow hut and capture the seal and the walrus. They saved Hall and the party of Tyson's ice-floe; they would have saved Franklin, and I believe would have preserved the Greeley party also.

J. E. Nourse.

The Bombardment of Alexandria.

REJOINDER BY STONE PASHA.

FLUSHING, L. I., August, 1884.

I HAVE read in THE CENTURY for August an open letter signed "C. F. Goodrich, Lieutenant-Commander U. S. N.," in which he discusses a letter of my own that appeared in the June CENTURY as an introduction to the "Diary of an American Girl in Cairo during the War of 1882."

Lieutenant-Commander Goodrich, over his official signature as an officer of the United States Navy, comes into print, "very reluctantly," to prevent the evil which might result from the promulgation of my opinion expressed in the introductory letter above referred to, *because*, as he writes, "this opinion involves serious charges against the British Government, as represented by its diplomatic and naval officers in Egypt." He says his observations lead him "to conclusions opposed to those advanced by Stone Pasha."

If the gallant officer finds it his duty, or his pleasure, to make himself, over his official signature as an officer of the United States Navy, the defender of the proceedings of the British Government in Egypt, it is no affair of mine. It is a matter for his own intelligence and taste to decide. But if in the discharge of his self-imposed duty he permits himself to make an utterly unprovoked attack upon me, who never attacked him, if he permits himself to misquote my written words and to misstate facts in reference to my own personal action in the management of my family, then he makes his paper my business. These things he has permitted himself to do.

He commences his open letter by giving several good reasons why my opinions should be respected. Then he gives the reasons why his own opinions should be respected. These latter are, to use his own words, as follows: "I happened to be in Alexandria prior to and during the bombardment, and afterward was accredited to Lord Wolseley's staff as military and naval *attaché*."

I was aware that he was, for a few days *prior* to the bombardment, on board a man-of-war in the harbor of Alexandria; but I seriously doubt his having been, *during* the bombardment, either in Alexandria or even in its harbor. He was, I believe, and his own letter would seem to indicate it, outside the bombard-