

morning, Mrs. Howe felt the pathetic yet rousing John Brown song ringing in her ears, and getting out of bed while it was still dark, she tried to put fitting words to it. What she indited in the dim twilight she subsequently deciphered and copied, and, on her return to Boston, handed the finished poem to James T. Fields, then editor of the *Atlantic Monthly*. In that magazine it duly appeared, but it was not for a considerable time afterwards that it awoke the popular enthusiasm with which it has long been associated. Mrs. Howe has received a welcome in Toronto worthy of her character and fame, and of a life spent in the cause of humanity.

OUR ECONOMIC RESOURCES.

In the *Montreal Gazette* for the 20th of August, 1827, the announcement is made that a society has been established in this city to promote the study of natural history in general and of these provinces in particular. The society was organized on the 16th of May in the year aforementioned for the purpose of directing attention to the great variety of productions with which nature had favoured Canada; to make illustrative collections and to afford a convenient centre for observation, inquiry and discussion. S. Sewell, Esq., was elected president; Cols. Hill and Mackay and Dr. Wm. Caldwell were chosen vice-presidents; Dr. A. F. Holmes and Mr. J. S. McLeod, secretaries; Mr. H. Corse was made treasurer; Mr. H. H. Cunningham, librarian and cabinet keeper, and Rev. H. Esson, Dr. J. Stephenson and Mr. J. M. Cairns were constituted a committee. The first report of this society—well known to many of our readers as the Natural History Society of Montreal—was extremely encouraging—the progress achieved in the early months of its existence exceeding the anticipation of its founders. During the long interval that has elapsed since its formation, the society has proved eminently useful in promoting the knowledge of our natural resources and by collecting and arranging specimens, affording an opportunity of determining their character and value. In this work, however, it has not been alone. The Literary and Historical Society of Quebec, though its name implies objects different from those just enumerated, did not reject contributions on natural science, nor did it fail to establish a museum which should contain examples of our natural wealth. It had already been in operation for three years when the Montreal Society began its career. Eastward the Nova Scotia Institute of Natural Science and the Natural History Society of New Brunswick, and westward the Canadian Institute, the Ottawa Field Naturalists' Club and Literary and Scientific Society, the Hamilton Association, the Winnipeg Historical and Scientific Society, and several other organizations in various parts of the country have devoted attention to the investigation of our physical geography, rocks, soil, fauna and flora. Our Geological and Natural History Survey, which will soon be celebrating its jubilee, has undertaken officially the task in which the societies have been voluntarily engaged, and the provincial governments have contributed in diverse ways to extend the knowledge of our natural resources. The Agricultural and Horticultural Societies and Fruit Growers' Associations and the Central and other Experimental farms may be mentioned as contributing to the same result. On the whole, therefore, there is no lack of agencies, both public and private, for promoting the knowledge of Canada's manifold products. All over our portion of the continent hundreds of persons are occupied in researches into the mineralogy, the botany, the zoology, of the successive districts, and every year fresh gains are added to the data already acquired. From as far north as Hudson's Bay, and even the Arctic Ocean, expeditions of inquiry have brought back valuable information touching the yield of both land and water, while from Atlantic to Pacific there is not a tract of country whose natural capabilities have not been fairly ascertained.

What is still needed, however, is a comprehensive

showing of the economic worth of all the productions of Canada that are conveniently accessible for purposes of manufacture and trade, with an enumeration of the uses which they may severally serve. In Ontario, for instance, or British Columbia or New Brunswick, there must, in all probability, be products of mine or forest, of field, river or lake, which have never yet been turned to profitable account in the arts and industries. Statements have doubtless been published again and again in which such products are incidentally mentioned. But those statements may have come under the notice of only a limited number of readers and may have escaped the observations of the very persons to whom some of the articles in question would be of practical interest. This is not a merely hypothetical case, but one of which Canada has unhappily had frequent experience. Chance has occasionally revealed to a tourist, engaged in manufacture, a Canadian mineral which just met his actual wants. But for Mr. Henry Moore, who visited Canada not long since, the bulk of the English fertilizer-makers would have remained in ignorance of our phosphate lands. English paper-makers are importing pulp woods from Norway which they could get more cheaply from New Brunswick. Instances of this kind might be multiplied. The moral of them is that if Canada's products are to be appreciated abroad, Canadians must make them known, must push them in foreign markets. It is not enough to wait till the managers of some industrial museums invite our authorities to send them specimens of Canadian forest trees, or minerals or cereals or fisheries. Whatever is found between the three oceans and the American boundary line that is of economic value, it is the duty of Canadians to advertise until the whole world knows as much about it as we do ourselves. There never was a better time than the present, moreover, for compiling an exhaustive *catalogue raisonné* of Canada's natural products. Whatever is yielded by our mines, forests, soil, waters, whatever can be used for food or fodder, for clothes, for ornament, in building, in manufacture, in the arts, or may contribute directly or indirectly to the increase of the world's wealth or to the comfort and security of human life, should be published abroad as among the economic resources of the Dominion.

In order to make such a catalogue complete and trustworthy, the coöperation of all the societies already mentioned with the departments of the general and local governments specially concerned ought to be directed to the task of revision. Experts might take in hand the classification of the different sections. We have models for such classification in the statements prepared by the Geological Survey for the great exhibitions. The product is described; the localities where it is found are mentioned; the extent to which it has been developed for home manufacture or export abroad is indicated, and other particulars are added for the satisfaction of inquirers. Our forests, our fisheries, our economic fauna, our agricultural products have also been described in some detail in various publications. But no single book of reference, showing at a glance what products Canada has to exchange with other lands, and in what countries a market has been or might be found for them has yet been compiled. The present crisis in our economic history demands that no expedient which would tend to the advantageous development of all the resources of the Dominion should be left untried, and the first thing necessary is to make sure what those resources are, where they are situated and what their value may be compared with like products in other parts of the world. Every local society which contributes something to the aggregate of such economic data is doing a work that must promote the prosperity of the Dominion.

FROM WORDS TO ACTION.

Some time ago, in connection with the meeting of the Forestry Congress at Quebec, we gave a brief survey of the state of forest administration in Canada, as modified by the movement begun about

nine or ten years ago. How little has really been done, notwithstanding all that has been written on the subject, is disclosed by the recommendations put forward at the Quebec Conference. Most of them are virtually the same that were proposed, discussed and adopted at the Montreal congress eight years ago. The chief advantage gained in the interval is that, thanks to the earnest efforts of a few practical men, officially or through inclination interested in the subject, the public mind is better prepared for the suggested changes than it was in 1882. Of words we have had enough from both experts and amateurs. The forestry agitation has swept over the whole continent and beyond it. Indeed, as we have already pointed out, the movement in Great Britain anticipated the American awakening by several years, and as Great Britain implies a good share of Asia, Africa, Oceania and America, public attention had been directed to the waning of the forest primeval in Australia, Ceylon, India and South Africa, before cis-Atlantic enthusiasts began to spread the alarm. The comprehensive report which we have already summarized is evidence of the fact. We may add that in England the agitation was not fruitless, for the simple reason that it was only necessary to cross the channel to find in operation an admirable system of forestry education and management. It has been computed that, had our Viking Motherland continued to place dependence on wooden walls, long since every oak (not to speak of other timber) would have been exterminated from the face of the "tight little island." On the continent they were more provident. Both in France and Germany it was long ago foreseen that, at the actual rate of destruction, even the apparently endless contiguity of shade which had won the admiration of Roman writers two thousand years ago, would within an appreciable time have disappeared from the Fatherland, thus causing all kinds of damage to the denuded regions. Due precautions were, therefore, taken. Forest conservation and renewal became an affair of state, and the state took care that its salutary provisions were not disregarded.

Some of our readers who visited France last year may doubtless have been attracted to the forestry exhibit of the Exposition, one of its most interesting and instructive features. In the admirable report prepared by M. H. de Parville it may be advantageously studied. We are not surprised, therefore, to find that, among the papers read at the Quebec Congress, one of the most practically valuable (that of Mr. J. X. Perrault) is based on the French administrative system. Mr. Perrault, who has a right to speak with authority, being secretary to the Quebec Forestry Association, counsels the prompt adoption and enforcement in this province of the French plan of forestry regulation and supervision. He recommends the Government to send to the Forestry School of Nancy a few intelligent young men, who in due time would be qualified to take the direction of our forests. He would have the whole provincial domain divided into five forest regions—those of the Ottawa, the St. Maurice, the Saguenay, the Eastern Townships and Gaspésie, and each division placed in charge of a trained superintendent, with a trained staff of assistants. The pith of his paper, however, lies in the recommendation of the "coupe réglée," by which plan the yearly cut is not to surpass a twentieth of the timber growth within any division. The remaining 95 per cent is left to its natural development and strictly protected from aggression. The other regulations concerning the supply of the market, the safe and economical preparation of the timber, guarding against forest fires, issue naturally from the central feature of the system. As the main objection to any innovation of this kind is its expense, Mr. Perrault disabuses the minds of his readers on that point. He urges that, once the system is in operation (and to this end trained experts are a primary necessity) it will be greatly cheaper in the end, saving the country the waste of one of its most precious resources, and preventing (what is sure to come if some plan of precaution be not applied) the gradual exhaustion of our forests—a nemesis that has overtaken lands as richly endowed as our own.