

profound, And wit that loved to play not sound," in the preface to "Marmion"; twice in the most striking passage of "Rokeby" (Hertram's death); and in scores of less important contexts, "wound" occurs in resonance with such words as "ground," "hound," "bound."

The word "avalanche" is at present in a transition state; but the inevitable triumph of the Anglicised over the French pronunciation has probably been hastened by Longfellow's couplet:

"Beware the pine-tree's withered branch,
Beware the awful avalanche!"

I consider that the popular song containing the lines,

"I have tried the desert path;
I have seen the storm arise,
Like a giant in his wrath,"

is an efficient ally of those who wish to sentence the pronunciation *verawth* to death or transportation. And every such rhyme as Sir Walter Scott's,

"But Basil's voice the deed forbade;
A mantle o'er his come he laid,"

I view as partly responsible for our divided usage as to the italicised word. From such a rhyme as Tennyson's,

"We left behind the painted buoy
That waves at the harbour mouth;
And madly danced our hearts with joy,
As fast we fled to the South,"

we cannot tell whether the poet himself sounded the *u* in "buoy" or not; but we may infer that he never dreamed of that complicated pronunciation which Webster prefers, and which the orthography *bucoy* expresses as closely as it can be expressed. Hood's pun about the buoy at the Nore and the girl at the Needles shows still more exactly how *he* pronounced the word. In regard to this word I am inclined to prophesy the sailors, poets, and punsters will finally prevail over the orthoepists.

There has always been a common tendency in baffled rhymers to substitute what are rhymes to the eye, for what are rhymes to the ear. Even Milton, in his "L'Allegro," makes "melancholy" rhyme with "holy."

(To be continued).

FISH-GUANO INDUSTRY.

"If we will but solemnly determine to make the most and the best of all our powers and capacities; and if to this end, we will but seize and improve even the shortest intervals of possible action and effort, we shall find that there is no limit to our advancement."

It is a geographical fact that the Newfoundland and Nova Scotian coasts cover an extent of nearly three thousand miles, and that almost half as much again of the Labrador coast is virtually annexed to Newfoundland as "fishing ground."

The Cod and Seal Fisheries constitute in point of importance the principal commercial features of the independent Island, and Codfish, Halibut, Haddock, Mackerel, and Herring, are the produce of the Nova-Scotian Fisheries.

When it is considered that the Province of Nova Scotia alone (taking the average from 3 to 4 years) exceeds a yearly yield of 700,000 quintals of dry fish, equal to 35,000 tons, hence an equal quantity of offal, which worked off, would give nearly 9,000 tons of finished guano, ready for shipment, and that the Cod fishery of Nova Scotia and Newfoundland together, foot up 2,500,000 quintals, or 125,000 tons, which could give out 31,000 tons of guano, there need be no fear that the quantity of offal can ever run short for the machinery at command, or of meeting any increased demand of the commodity. But it is more reasonable to calculate on a supply of one-third of the above quoted total yield, say about 10,000 tons, although even that quantity would call for too much outlay of machinery at first, and might be rather speculative.

The foregoing, added to the fact that the supply and quantity of guano (being the droppings of sea birds) both from the Peruvian Chincha's and Saldanha Bay on the southern coast of Africa, has so materially fallen off of late, and despite the competition of cheap nitrates, opens up an incentive to extend the substitution of fish guano as a better fertilizer, with a certainty of an increasing obtainable quantity of codfish, and hence of offal and waste therefrom, which treated mechanically, so as to concentrate its bulk, secures chemically its essence and purity and its standard strength, so that it can be blended in decimal proportions to enrich the composts and manures that are so extensively prepared and manufactured for the fertilization of lands in all European and American countries. It is well known that the offal or waste of fish properly treated as above can produce a high grade of ammonia and of phosphate of lime, and will maintain them well and fully, to meet all the mentioned requirements. It is equally well known that attempts have been made to produce a composite-guano by mixing green fish offal with peat, either charred or well rotted, and with other substances, but such has only increased the bulk, rendering the fertilizer impure and too expensive for export from North America. Manure from pressed fish-scrap, after expression of the oil or fat, is made to some extent in the United States, particularly from Manbaden fish, in Rhode Island and in Long Island, but that scrap (although often treated with acid) if not further worked by concentration owing to its oiliness, will neither dissolve easily, nor assimilate with the soil at once, which is the great and chief object to obtain.

On the coasts of Sweden and Norway, in the Drontheim Islands and particularly in the "Lofotons" where the codfisheries are very extensive, great expense has been incurred and efforts made to obtain a prime article by such mechanical means and improvements as from time to time have been adopted, and of late the concentrating system has been very successful; and the guano from those islands to the London market, when up to the standard strength, has realized the top rate average prices at the time being.

Some years ago attempts were made with more or less success, but on a limited scale in different parts of Newfoundland, by Mr. W. Wingfield Bonny, C. E., but in default of sufficient capital, machinery and adequate organization for the collection of the offal, his efforts were somewhat foiled, and by degrees were almost abandoned for want of encouragement.

In Nova Scotia Mr. Bonny, who had had a long prior experience on the coasts of Sweden and Norway, and who was well acquainted with the capabilities of the Canadian and Newfoundland fisheries, backed by some English capitalists, put up works at Capo Canso, increasing the machinery by degrees, as he succeeded in educating the fishermen to collect and set aside the offal at their splitting stations, thus securing work for each machine during a season, his success fully met his anticipations as to "quality" produced, but he was much disappointed as to the "quantity" of offal collected, which fell very short during three consecutive seasons, but the enterprise will yet prosper as the fishermen have learnt to appreciate the increasing income they now reap, actually out of what they were in the habit of throwing away!

In 1832-3, one of the principal first-class firms in St. John's, Newfoundland, after Mr. Bonny had left the Island, endowed with the laudable desire of opening up a new industry and ameliorating the condition of the fishing population, had the courage to build and fit up three distinct factories, one of which on the Labrador coast, with expensive machinery, so as to manufacture fish guano on a large scale, and in fact to establish that kind of commercial enterprise with all assiduity and diligence. But unfortunately the firm became entangled in the meshes of a designing individual, who assumed the management of a business of which it turned out he had no practical knowledge although he succeeded under certain representations to induce the confiding firm to purchase and sanction the erection at a very large outlay of extensive and complicated machinery which resulted both useless and inefficient for the object. The effect was a great disappointment, which frustrated all the hopes and good intentions, but the firm suffered its loss with manliness, and wisely shut down the works to free itself of the dishonest man who had so ignominiously deceived it.

However, nothing daunted, the same firm quite lately resolved to fit up one of the factories experimentally with similar kind of concentrating machinery successfully adopted by Mr. Bonny at Capo Canso, and it is hoped that a revival of the fish guano industry in Newfoundland may yet be permanently and profitably secured, and become a source of employing many of the fishing population of the Island and of inspiring them with more thrifty and diligent habits.

When it is considered that it requires fully two pounds and a half of fresh fish to make one pound of dried fish, it becomes quite evident that the quantity of offal and waste fish, if systematically collected and rendered seductive as a means of gain to the fishermen, will more than meet the requirements of any mechanical appliances for guano making in the different parts of Newfoundland and Nova Scotia.

The collective 125,000 tons weight of dried cod fish annually produced, simply means more than 125,000 tons of offal and waste, there is therefore no reason why in due course of time by collecting the offal, either on the Grand or other barks, and eventually having more than one floating factory on large ships (stationed or cruising on the Banks), Newfoundland and Nova Scotia might produce and export over 30,000 tons of fish guano yearly. Again, in addition to cod fish offal, the carcasses of seals, porpoises, sharks, dog fish, cat fish, sculping, skates, and other inedible fish which constitute "waste fish," would considerably increase the production of good guano, as it is now ascertained by careful assays that they all contain the required standard strength of ammonia and a very high grade of phosphate of lime, making a fine guano, and essentially keeping up a pure unadulterated fish fertilizer.

Finally, to secure a safe and remunerative business, it must be most carefully borne in mind that the first object and consideration is to have in advance the certain collection of more offal than the machinery at disposal can work off, this will only be arrived at by working up the fishermen to understand that they may have a chance of profit, the possible great extent of which it would be difficult to determine, but that it depends entirely on their exertions, moderate pretensions, zeal and application, to establish a fine business from which they will derive the first advantages whether from the Banks, which are sure to yield in excess of requirements, or from the shore fisheries which, however, are more or less problematical as to quantity any one season.

Mr. Bonny states that the demand for the fish guano in Europe, the West Indies, and the Southern United States of America, by far exceeds the possible supply at present, even though he had ten times the machinery at his command, but by securing a more extensive collection of offal on the Banks and shores he has every chance of a gradual greater production.

During the last two years it appears Mr. Bonny has devoted much attention in producing a fertilizer for local use and broadcast spreading, as top dressing for grass fields, and for increasing the potato, oat and barley crops in Nova Scotia and Prince Edward Island. He has evidently succeeded, as can be verified at General Laurie's Oakfield farm, in White's farm at Canso, in McNab's Island, Yarmouth, and in the Annapolis Valley, but the demand is so much above the supply, that it is intended to increase the production by additional works to meet it, an advertisement in our columns edifies our farming readers and the public in general.

Did you ever think of how much work is required to count a billion or the length of time it would take? An arithmetician makes this calculation: Had Adam counted continuously from his creation to the present day he would not have reached a billion, for it would take 9,512 years.