

11.—HOW TO STRENGTHEN THE DUNES.*

By G. BOECK.

In an article on the formation of the dunes, in No. 33 of the *Deutsche Fischerei-Zeitung*, the author says in conclusion that, in his opinion—which is shared by many others—"Human power and human art can do nothing or but little to resist the force of the shifting dune." This often-repeated assertion is correct only in so far as it is impossible for human strength to stop a dune *while in the process of shifting its position*, but otherwise it is incorrect, and only serves as an excuse for the crude methods and small experience of the owners of dunes. It is contradicted by the actual facts. Most of the dunes on our coasts, *e. g.*, on the coast of Pomerania, from Kammin to Kolberg, and on the islands of Usedom and Wollin, *were*—as recorded in documents of undoubted authenticity—densely wooded centuries ago, oaks forming the predominant tree (many doorsteps, beams, joists, and stairways of old houses in those regions amply testifying to this fact). But even at the present day there are found in different parts of the dunes along our Baltic coast very compact woods entirely secured against being buried in the sand of the dunes. Such woods are found near Eiersberg, near the new mouth of the Rega, on the islands of Usedom and Wollin, &c.

If any one were to maintain that these woods had been created and sustained by nature, without the aid of human ingenuity and human skill, (this seems, at first sight all the more probable, as, owing to the fact that at present man seems to be powerless when brought face to face with the sand of the dunes), people are too ready to suppose that the magnificent woods which centuries ago clothed our dunes had only been the work of nature. Unfortunately we possess no data to aid us in answering the question whether our ancestors, nature's children, understood, better than we, their civilized descendants, how to plant the dunes with trees. In view of the unchangeable character of the open dunes, we may be justified to suppose that such planting was done in former times, especially as the experience of modern times speaks in favor of this supposition.

In the official reports on the condition of the forests in Pomerania it is stated that at least till within the past twelve years all the efforts made by the Government to strengthen the loose dunes belonging to the state, and again to clothe them with forests, have proved futile, while similar efforts made by private individuals were crowned with success, as is seen in the Eiersberg forest, east of the mouth of the Liebelose, and several other forests on the islands of Usedom and Wollin.

* "*Ueber Dünenbefestigung*," in *Deutsche Fischerei-Zeitung*, Vol. VII, No. 35, Stettin, August 26, 1884. Translated from the German by HERMAN JACOBSON.

In the documents referred to above it is also stated that on the coast of Pomerania, no matter whether it is sandy or clayey, land is constantly being washed away wherever the coasts is not wooded, but that where the coast is protected by a dense forest the sea gradually but undoubtedly deposits soil along the shore.

From the first statement it appears that the theoretical way of fighting the dunes is not correct on general principles. Without making any positive assertion, we must say that many circumstances justify the supposition that the failure of the Government efforts to strengthen the dunes has mainly been caused by the fact that an attempt was made in the very heart of the shifting dunes to fight nature's omnipotence, instead of attacking them at their starting point, from the direction from which the wind principally comes, *i. e.*, from the west, with gradually advancing plantations of trees. Another mistake made by the Government has been to use too few of the highly effective dwarf trees and shrubs.

Only by thus sheltering the dunes against the strongest wind, and by beginning at their outer spurs, they can be strengthened and again clothed with forests. Thus the Eiersberg forest, which at least twelve years ago was in an excellent condition, seems to have been started west of the dunes on the eastern shore of the river Liebelose, whose fertile water has, by producing reeds, alders, and other low trees, made it possible for the beautiful Eiersberg pine forest to grow and flourish.

The fact stated in the documents already referred to, that the sea has deposited soil along the densely-wooded dunes near Eiersberg, near the new mouth of the Rega, &c., is caused by the circumstance that the strength of storms or violent winds from the northwest, the north, and northeast, is broken and weakened by the thick protecting mantle of trees, even before reaching the shore, and that consequently the waves do not rush against the shore with such violence as would otherwise be the case, and, therefore, do not tear or wash anything away, but, on the contrary, deposit sand and mud which has been brought up from the bottom of the sea. Even a very cursory examination of these coasts and its unusually broad strand will prove this fact. According to the official reports, on the bare shores of Pomerania the breadth of *one foot* is annually washed away where the soil is firm and clayey, *e. g.*, near the Horst light-house, and a great deal more where the shore is composed of loose sand dunes; and thus Pomerania or Prussia is *gradually disappearing*, although the Government has it in its power not only to completely prevent this washing away of the shores, but even to *conquer back from the sea* the land which it has robbed in the course of hundreds and thousands of years, by planting trees on all bare coasts, especially as a lateral protection of the sand dunes proper, on the clayey or marshy shores in front of the dunes. Such plantations will in a peaceful manner extend our territory, and will do so still more as they increase in size.

Would that our Government might be induced to fight the encroaching sea in the manner indicated, and regain the hundreds of villages, farms, and towns on the coasts of Pomerania and Prussia, which have, in the course of centuries, been buried in the sand or been washed away by the waves. We possess ample guarantees in the facts stated above that such a thing is possible.

12.—NOTES ON THE ENGLISH HERRING AND MACKEREL FISHERIES, AND THE METHODS OF CURING.

By Capt. J. W. COLLINS.

[From a letter to Prof. S. F. Baird.]

The following notes on the English herring and mackerel fisheries, which I extract from a letter by Mr. Edward Jex, of London, and dated November 19, 1884, may prove of interest to you. I wish particularly to call your attention to the fact that in England they are preparing *kippered mackerel* as well as kippered herring. The latter are a most delicious article of food, and I assume that mackerel would be still better. It seems to me that in seasons when small mackerel are abundant and cheap, as, for instance, they have been the past summer, a large and profitable business might be done by putting them on the market cured as kippers. And there also would appear to be great possibilities in introducing in our markets the kippered herring, which, I believe, would meet with a great demand and remunerative prices as soon as its value was properly understood.

Mr. Jex is the owner of a fleet of smacks sailing from Yarmouth, and is a fish salesman at Billingsgate, where he has an opportunity for seeing the various phases of the trade. He writes:

"Since I wrote last the catches of herring have been very large at Great Yarmouth. Some of the boats, for the season, have taken over 100 last, 'long tale,' 10,000, 152 fish to count as 100 fish, consequently a last signifies 13,200 fish, long tale, as sold by the catcher. The take at Yarmouth alone, up to date of last Friday, November 14, was 20,613 lasts, 7,000 fish, and the prices they have sold at average from £5 to £10 per last. Our curers are very busy at this time in drying their herring, and others are preparing them in their own brine, in barrels, for exportation, particularly the high dried smoked ones, for the Spanish and Italian markets. And I have no doubt [that] your salted mackerel, also your dried cod, would sell well in those Catholic countries, also in South America. * * * The catches of herring have been equally as large at Lowestoft as at Yarmouth, and the take of mackerel this autumn has been very large. But all have been sold fresh, or split and smoked—what they call kippered here. There is a great demand for them when they are full of fat and done this way."

WASHINGTON, D. C., December 2, 1884.