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A Science Service Feature

? WHY THE WEATHER ? Mailed January 29, 1934

ICE PRESSURE

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Ice pressure, dreaded by the navigators of ice-infested seas, gives evidence of its enormous power by piling up huge "pressure ridges." Peary claimed to have seen one of these ridges a hundred feet high, but the accuracy of this observation has been questioned. The Rev. J. Gordon Hayes says in his "Antarctica":

"Sea-ice may be piled up against land, or on shoals, to very great heights; but in the open ocean about 40 feet is probably the highest authenticated pressure ridge in the Arctic. Antarctic pressure ridges have not been recorded by scientists higher than 30 feet, and this is very uncommon. Fifteen to 20 feet is the usual height of even the big ridges."

The great distance to which ice pressure may extend from the place of origin is illustrated in a case mentioned by Prof. H. T. Barnes in his book "Ice Engineering," where he states:

"A northwest gale had blown the drift ice at the mouth of the Gulf of Finland into Reval Bay, against the field ice at rest in the bay, thus forming an enormous pack at the mouth of the bay, 15 miles from the mouth of Reval harbor. The result of this great pressure was shown on the outside of the stone mole, or breakwater, of the outer harbor, where the ice was pressed 32 feet in height, destroying a wooden pier used for steamboats. The amount of ice pressed up represented many thousands of tons in weight."

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