

Why the Waves Break Why the Ocean is Salty



MANY persons—even those who bathe at the ocean beach—do not know why the waves “break” when they reach the shore.

Out on the ocean, a long distance from the shore, the waves are broad and low unless there is a high wind. As the waves get nearer to the shore, they get taller and narrower, until at last they strike the shore, one after another, with a booming roar.

The reason of this is that as the waves approach the shore, the under part of the wave drags on the sloping, sandy bottom. This causes the top of the wave to go faster than its base, until it finally loses its balance and “breaks.” If the slope of the shore is very gradual, the waves will break farther out at sea than if the approach to the shore is sudden and steep.

The size of the wave, also, affects its breaking point. The larger waves begin to feel the effect of the drag on the bottom sooner than the small waves, and so, usually,

WHEN rain strikes the earth, it is pure water. It sinks into the ground and on the way picks up some salt. This water finds its way into a river sooner or later, and then into the ocean.

All the time this water has been carrying the tiny bit of salt which it picked up in going through the ground. When the water is in the ocean it is taken up by the sun. That is called evaporation. When the water is taken up by the sun, it leaves its salt.

This has been going on for thousands and thousands of years, so that the amount of salt has been increasing in the ocean all the time.

The same thing happens in certain lakes in different parts of the world. These lakes have no outlet, so the salt remains behind. Two salt lakes are the Dead Sea in Palestine and the Great Salt Lake in the state of Utah in the United States.

In this lake the water is so salty that if 5 gallons of the water is evaporated, 14 pints of salt will remain. That is, almost one-third of a gallon of this water is salt.

the larger waves break farther from the shore than the little ones.

It is great fun to play in the waves on nice, bright days, but when there is a storm, the waves, mountain high, are quite dangerous. Storm waves have been known to toss blocks of granite weighing 50 or 60 tons, lifting them as much as 20 feet in the air.—Adapted from *The Christian Science Monitor*.