

A Science Service Feature

Released upon receipt
but intended for use
Nov. 19, 1934

Mailed Nov. 12, 1934

WIND AND WAVES

By Charles Fitzhugh Talman,
Authority on Meteorology

How does the wind make waves on the surface of a body of water? The explanation, at least in part, is as follows:

The wind is never a perfectly smooth flow of air. It always contains eddies, which involve more or less vertical motion. Thus an initially level water surface is subjected to unequal pressures at various places and becomes humped into small waves. When such waves are produced, they, in turn, increase the turbulence of the wind by opposing obstructions to its flow. Thus eddies in the air make waves in the water, and waves in the water make eddies in the air.

Dr. Manfred Curry, in his book "Yacht Racing," says of this process: "The wind that blows over the water is retarded by friction, while the energy withdrawn from it is transformed into eddies. These eddies, as they hasten over the water, burrow into its surface and form wave troughs. The greater the strength and the extent of the wind over the water, the larger and stronger will be the eddies developed, and the higher and longer the waves thereby formed."

Dr. Curry notes that, because of the eddies associated with waves, gulls soar easily over the latter although in general they do not soar so well over land. The eddies are made further evident by the fact that in the lee of a large wave a sailing vessel not only loses the wind but sometimes has her sails "taken aback" by a reversal of its direction.

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