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A Science Service Feature

? WHY THE WEATHER ?

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CALM EVENINGS

On coastal or inland waters the wind usually goes down with the sun. . This truth is often brought quietly to the attention of people sailing on inland lakes when they find themselves becalmed shortly after sunset. The brisk breeze which pushed their boats so easily during the afternoon has flattened out. During the day the sun heats the earth, which by radiation and conduction heats the layer of air lying next it. This air expands, becomes lighter and is pushed up by cooler and heavier air. In other words convectional circulation is started. Convection takes place most readily when the air next the earth is hottest, at about two in the afternoon. Consequently, at that time the greatest amount of air from aloft is coming down. It moves with greater velocity than that originally near the earth because it comes from a level where its motion has not been checked by friction with any rough surface. Therefore, the summer breezes will blow strongest in the early afternoon. Then when the sun goes down, and no longer heats the earth, convection stops. The upper air with its greater velocity ceases to reach the surface and the wind dies down. Amateur mariners should remember that a brisk breeze at three o'clock does not necessarily mean one at eight, and should plan their trips accordingly.

(Tomorrow: Exploding Buildings)

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