

A Science Service Feature

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? WHY THE WEATHER ?

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CALIFORNIA'S SUMMER FOGS

By Charles Fitzhugh Talman,  
Authority on Meteorology

Writing of summer fog on the coast of California, Prof. Gayle Pickwell

says:

"It is a curious fact that the ocean water of the Pacific is colder near the shore than at distances farther to the west. This is brought about by upwelling of deep water not far from the coast-line. Because of this the sea breeze that comes shoreward is cooled as it nears the coast. Since the sea air is always nearly saturated with water, any further lowering of its temperature will always cause cloud. So toward noon, or early afternoon, of nearly every summer day, a wall of cloud swings in from the Pacific. Into Golden Gate it regularly pours, giving San Franciscans their daily chilling. Down the Bay it drifts, over the Berkeley Hills and very frequently throughout the length of the Santa Clara Valley. Inland the fog is dissipated on its under surface by the warmth of the land and thus, because there is no cloud near the surface, the cloud becomes a 'high' fog in the valleys, usually most noticeable the following morning. Such a fog is frequent in the Salinas Valley and also in Southern California. Because it is formed over the sea and drifts inland, it is called an 'advection' fog.

"Through the redwoods the summer sea fogs cascade like waterfalls, and from the cloud the redwood extracts a heavy toll of water particles, which drip down to the ground like slow rain. So important are these fogs that redwoods do not exist beyond that strip of coastal country where the fogs occur."

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