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A Science Service Feature

? WHY THE WEATHER ?

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Authority on Meteorology.

WARM WATER OFF CALIFORNIA

Measurements of sea-water temperature at La Jolla, on the coast of California, have been utilized for some years by Dr. George F. McEwen, of the Scripps Institution of Oceanography, as the basis of experimental forecasts of the wet-season rainfall in that state. A temperature of 78.4, registered July 30, 1931, is said to have been the highest thus far observed at the station. Why the ocean temperatures vary in that locality and why the water was so warm last summer is explained as follows by Dr. McEwen:

"Normally each summer there is a development of high barometric pressure over the North Pacific centered roughly about 1500 miles west of San Francisco. Winds blowing outward spirally from this center of action cause an anticyclonic circulation of the air and water with a strong component to the south along the coast of California.

"Such a wind system implies a drift from the north of the general mass of off-shore water forming a remnant of the Japan current and causes upwelling of cold deep water along the coast, thus forming the cold California current which broadens out from a width of a few hundred miles in northern California, to a width of possibly as much as 2,000 miles off Lower California. Intensification of the summer high pressure strengthens the California current, resulting in low temperatures along the coast.

"Conversely when, as happened last summer, something arises to oppose the building up of the high pressure system, there is a tendency for the water to be drawn up from the south in response to the low pressure over the Gulf of Alaska. At such times the prevailing winds along the California coast are from the southern quadrant and the cold upwelling current is replaced by a warm current."

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