

A Science Service Feature

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? WHY THE WEATHER ?

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DEW PONDS

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The so-called dew ponds on the summits of the chalk downs of southern England, which provide water for sheep and cattle in protracted droughts when ponds at lower levels have dried up, are not fed to any important extent by dew. Part of their water supply is obtained by the process of "fog-drip." Heavy mists drift in at night from the sea and their water, caught by shrubs, drains into the ponds. The principal reason, however, why these ponds, all of which are artificial, hold water through dry summers is that their bottoms are water-tight, being made of a layer of puddled chalk or clay treated with lime. Sometimes a layer of straw is placed below the water-tight bottom.

The average rainfall of the region is something like twice as great as the average loss by evaporation from a water surface. Moreover, though the ponds are on hilltops, there is often a certain amount of somewhat higher land around from which rainwater drains into them; in other words, the "catchment area" is larger than the area of the pond itself, and in many cases several times as great. As there is no loss of water by seepage through the bottom, the shortage of rainfall needs to be extreme to permit the ponds to dry up. In the most severe droughts, many dew ponds fail.

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