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? WHY THE WEATHER ?

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RAINBOW WEATHER SIGNS

The familiar saying

"A rainbow in the morning
Is the shepherd's warning;
A rainbow at night
Is the shepherd's delight"

is unfortunately worded. A rainbow at night would necessarily be a lunar rainbow, but the second couplet undoubtedly refers to a solar rainbow seen late in the afternoon, as is indicated by the corresponding proverbs in other languages. In French sayings we find "soir", in German "Abend", in Italian "sera", etc.

There are two distinct physical explanations of this proverb. The one most frequently offered was thus stated a century ago by Sir Humphry Davy: "A rainbow can only occur when the clouds containing or depositing the rain are opposite to the sun; in the evening the rainbow is in the east and in the morning in the west, and as our heavy rains are usually brought by the westerly wind, a rainbow in the west indicates that the bad weather is on the road by the wind to us; whereas the rainbow in the east proves that the rain in these clouds is passing from us."

The other explanation, probably of more general application, is this: A morning rainbow means that the air is rather humid and a continuance of rain during the day is likely, since the small amount of diurnal convection that could have occurred so early in the day has sufficed to produce a shower. The evening bow, on the other hand, indicates that the air is comparatively dry, since many hours of convective cooling have been required to produce the shower in which the bow is seen.

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