

A Science Service Feature

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? WHY THE WEATHER ?

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ENCYCLOPEDIA METEOROLOGY

That unbounded confidence should not be placed in the accuracy of encyclopedias is a lesson that most educated people learn sooner or later. The erroneous statements contained in each of these works probably run far up into the thousands, and a goodly proportion of them relate to meteorological matters.

Shining examples of such mistakes are found in the brief articles devoted to two phenomena of atmospheric optics -- the specter of the Brocken and Fata Morgana -- in the best-known encyclopedia in our language. The meteorologist smiles a weary smile when he finds the former described as an "enormously magnified" shadow of an observer cast on a bank of cloud. The shadow does look enormous to the average observer -- who greatly overestimates its distance -- but it is quite easy to demonstrate with a diagram that the specter is always quite near and never very much bigger than life-size. And the demonstration is an old, old story!

The same work tells us that Fata Morgana is "a mirage frequently seen in the Straits of Messina, consisting of an apparent vertical elongation of an object situated on the opposite shore." That's all we are told about Fata Morgana -- and it's all wrong. The phenomenon has become associated with the Straits of Messina because a certain Dominican friar published, in the eighteenth century, a description of its appearance there that has been widely quoted, but people have spent their whole lives on the Straits of Messina without ever getting a glimpse of it, whereas it is fairly common in some other parts of the world, and commonest of all in the polar regions. Secondly, Fata Morgana involves complex distortions of objects, so that they assume fantastic forms. Mere vertical elongation is not Fata Morgana, but is sometimes called "towering."

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