

A Science Service Feature

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? WHY THE WEATHER ?

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FATA MORGANA

The term "Fata Morgana" has been applied for some centuries to a complex variety of mirage that haunts the shore of the Strait of Messina, where, looking across the strait, one may, with the aid of the imagination, occasionally see "various multiplied objects, such as numberless series of pilasters, arches, castles well delineated, regular columns, lofty towers, superb palaces with balconies and windows, extended alleys of trees, delightful plains with herds and flocks, armies of men on foot and horseback, and many other strange figures, all in their natural colors and proper action, and passing rapidly in succession along the surface of the sea." The description quoted was written by Antonio Minasi in 1773. Some later descriptions are less exuberant.

The name of this optical phenomenon is the Italian equivalent of "Morgan le Fay", and King Arthur's fairy sister is, according to legend, held responsible for the serial phantoms at the Strait of Messina. Nowadays the name is applied generically to similar phenomena elsewhere. Fata Morgana appears to be rather rare at the place with which it is traditionally associated, and it is probably commonest in the polar regions especially at places where streams of relatively warm air rise through cracks in the ice and encounter very cold air above. It is the result of abrupt contrasts of temperature (and hence of air density) in both vertical and horizontal directions; giving a combination of the kinds of atmospheric refraction known as superior, inferior and lateral mirage.

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