

## **Fata morgana mirage**

**By NEIL DAVIS**

Fata Morgana, also known as Morgan le Fay, was a fairy enchantress skilled in the art of changing shape. In one traditional story she was King Arthur's sister and learned many of her skills from Merlin the Magician.

A special type of complex mirage, one that sometimes gives the impression of a castle half in the air and half in the sea, is named after Fata Morgana. She was known to live in a marvelous castle under the sea. Sometimes the enchantress made this castle appear reflected up in the air, causing seamen who mistook it for a safe harbor to be lured to their deaths.

The fata morgana mirage is one that can occur only where there are alternating warm and cold layers of air near the ground or water surface. Instead of travelling straight through these layers, light is bent towards the colder, hence denser, air. The result can be a rather complicated light path and a strange image of a distant object. A fata morgana actually is a superposition of several images of one object. Typically one image is upright more or less above two inverted images that may be mingled together. The images may undergo rapid changes as the air layers move slightly up and down relative to the observer.

In Alaska the best chance of seeing the relatively rare fata morgana is in winter when temperature inversions develop in the larger valleys. When seeing a complex mountain image out across a valley or bay one can attempt to sort out in the mind the paths that the light rays must have taken. Perhaps it's best just to acknowledge that it is Morgan le Fay beckoning.

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