

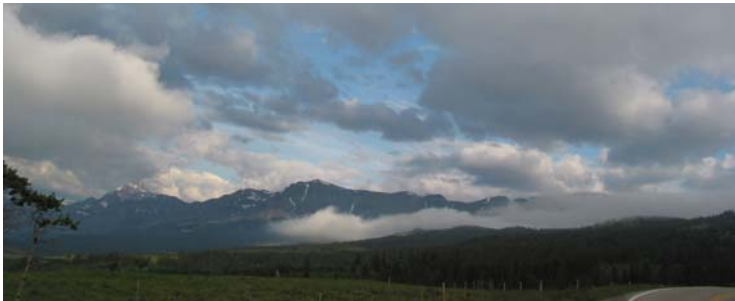
The Silent Beauty Of Fog

by Peg Zenko



Shrouds of gauze, creeping fingers across fields at dusk, a wall hiding nefarious events in mystery novels and scary movies: Fog fascinates us and stirs our imaginations. It has the ability to soften an otherwise harsh scene, to call into action the Fresnel Lenses of the Great Lakes lighthouses, make fantastic shadows of ordinary objects, and create stunning optical effects.

Fog is, by WBAN (*Weather Bureau, Air Force, and Navy*) definition, the same as a cloud, but with its base close enough to the earth that it restricts visibility to less than 1 kilometer, or .62 miles. In the panoramic view below, we were driving into a thick bank of upslope fog in western Montana that was a lower extension of the clouds above a range in the Rocky Mountains. The peaks are about 8000 feet above sea level.



Many manifestations of fog exist, and each has their own aesthetic characteristics. We can find descriptions of fog types in *The AMS Glossary of Meteorology*; that does not describe changes to the context of a scene. <http://amsglossary.allenpress.com/glossary>



Fog is produced in a variety of ways. Advection fog is the result of moist air passing over a cold surface, commonly seen in our area over the water of Green Bay. Radiation fog forms over land when the air temperature falls below the dew point, and can manifest itself in thick “pea soup” hazardous driving conditions on a clear sky night. Steam fog is a common sight in fall, the result of very cold air flowing over relatively warm water. Sub-zero temperatures can produce steam fog over ice masses. A likely scenario for this is a drive along the Michigan Lakeshore on a bitterly cold morning. Most of us would tend to avoid the Two Rivers and Manitowoc area at all costs on a sub-zero morning, but it is worth getting up and out for a drive to enjoy that spectacular view against a wintry sunrise. Fog in freezing temps can also create a crystallized wonderland, like in the photo at left.

Continued →

(Fog continued)



Morning haze softens the Green Bay shoreline



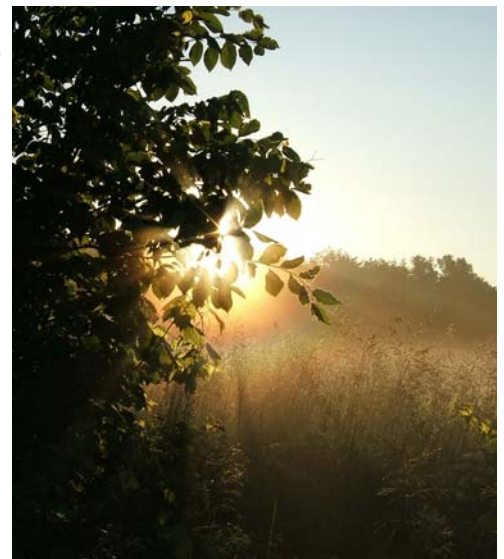
Sunrise mist rising off the Fox River

Haze droplets are much smaller than the suspended water droplets of fog, and the categorization of mist falls between fog and haze. A much less glamorous mixture is smog: Both fog and smoke combined in the atmosphere.



The optical effects created by fog are also dependent on the size of the suspended water droplets. The droplets in the advection fog photo at left were large, scattering the sunlight. Note how the sky is pink with sunset color, while the foggy area over the water is gray.

The photo at right however, shows a corona with distinct color rings that are made by smaller, uniform sized droplets that reflected the sunlight only once. In similar fashion, fog can create a bow, just as clouds create a rainbow in full sunlight. Fogbows are elusive, ghostly apparitions with very little color. Look for one when the sun



is low and directly behind you. They can also appear around your car's headlight beams. Stop in a dark spot on a foggy drive and look through the windshield for an artificial fogbow.



When the landscape is obscured by fog, don't give up on sightseeing! The silent beauty of the secret world created by suspended water droplets is all around you.

← *Winter fog over snowbanks*

A Spring day in Sturgeon Bay →



Learn more about fog optics at Les Cowley's Atmospheric Optics <http://www.atoptics.co.uk/>