The Admiral Fitzroy Storm Glass

This kind of Storm Glass came into general use during the early 1700s. Sailors attached this instrument to the mast of their ship and by interpretation of the constantly changing crystal formations within, relied upon it to forecast good weather and bad for nearly 250 years.

Admiral Robert Fitzroy, Captain of the HMS Beagle, the ship which had Charles Darwin on board for his historic 5 year expedition from 1831 to 1836, conducted a detailed study of the instrument. He refined the formula and published observational guidelines:

- If the liquid in the glass is clear, the weather will be bright and clear.
- If the liquid is cloudy, the weather will be cloudy as well, perhaps with precipitation.
- If there are small dots in the liquid, humid or foggy weather can be expected.
- A cloudy glass with small stars indicates thunderstorms.
- If the liquid contains small stars on sunny winter days, then snow is coming.
- If there are large flakes throughout the liquid, it will be overcast in temperate seasons or snowy in the winter.
- If there are crystals at the bottom, this indicates frost.
- If there are threads near the top, it will be windy.

How does the storm glass work?

The most probable explanation is the influence of so called sferics, broadband electromagnetic impulses that occur as a result of natural atmospheric lightning discharges and can be received for example by radio antennas thousands of kilometers from their source.

We hope you take as much pleasure in this historic instrument as we did in rediscovering it.

Warning: This instrument should be handled with care and kept out of the reach of children. In case of accidental ingestion seek professional assistance or contact a Poison Control Center Immediately. Contains Ammonium Chloride, Potassium Nitrate, Camphor, Distilled Water and Ethanol.

When you receive the storm glass it will be in a state of disruption and may take a week or more to settle down into its new home. After having been in a warm surrounding it may present as a clear liquid already. If not, gently warm it with a hair dryer, occasionally inverting it until it is clear. DO NOT heat the glass until it‘s hot. When the instrument is crystal clear, place it in an area of your home that is not subject to sudden temperature changes and is out of direct sunlight. For instance, don‘t put it on an outside wall, close to a heating or cooling vent or in a window that gets direct sun. Long exposure to sunlight may disintegrate the subtle balance of the chemical composition.

Gradually, as the temperature of the storm glass stabilizes to room temperature, white matter will begin precipitating out of the solution. It will do this for hours and may fill nearly the entire tube, presenting what appears to be an almost solid white mass. Don‘t worry, that‘s normal. It‘s also normal for some crystals to collect at the top. However, occasionally the precipitate may choose to rise rather than sink. If you notice after a few hours that the precipitate has risen rather than settled, agitate the solution and set the storm glass back. It will benefit from repeating the complete procedure above, perhaps two or three times per year.

The optimal temperature range for crystal formations is from 5°C (41°F) to 30°C (86°F). Below and above these temperatures the crystal formula will dissolve and the liquid will appear clear. Once the glass has returned to the optimal temperature range, crystals will return.

Once the instrument has stabilized to room temperature, the storm glass, though it looks as though it is doing nothing at all, is in fact quietly busy aligning molecules and transforming itself. Leave it undisturbed. Over the next week, it will begin doing its job, helping you predict the weather.

Hands-On Science

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