

NOAA's National Weather Service, WFO Juneau Alaska

COOP Corner

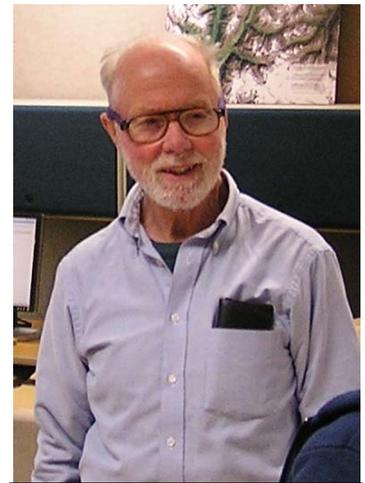
Paul in Haines Receives 10 year Service Award

Special points of interest:

- Haines Observer honored for 10 years of Service
- Is that a cloud or a UFO?
- Meet Cory
- Watching the weather change in a bottle

Hard work, attention to detail and a sincere passion for weather. These are three qualities that describe the Haines #2 observer. Paul has been watching the weather most of his life as he has traveled around the country. Paul and his wife Annie are avid hikers that frequent many of the trail around Haines. They hike year round and have markers on some of the

trails to help measure the snow that has fallen. During the winter of 2007 they tied a ribbon in a tree along one of the trails. By summer that ribbon was far out of reach after the snow had melted away. That was the winter when Haines #2 recorded 309 inches of snow and nearly 357 inches fell at the Haines Customs Station. Paul is always ready to report the



Paul visiting WFO Juneau

weather and we appreciate his extreme dedication. Thanks, Paul!!

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Ice Pellets vs. Hail

You look outside and there are frozen things falling from the sky, what type of precipitation might it be? Here are the descriptions of frozen types of precipitation, a full description can be found in NWS Observing Handbook # 2 at

<http://ww.weather.gov/om/coop/Publications/coophandbook2.pdf>

Ice Pellets: round or irregular shapes of ice with a diameter 1/5 inch or less. They can be transparent or translucent and usually bounce off and be heard when falling on hard surfaces.

Sleet: is a type of ice pellet that consists of hard grains of frozen raindrops or melted snowflakes that have been refrozen.

Snow Pellets: snow encased in ice. They usually do not bounce and are softer than ice pellets.

Hail: round or irregular in shape with a diameter of 1/5 or more. Usually has alternating opaque and clear layers of ice. They can also be clumped together.



Elfin Cove Goes “Wild” About Being December Observer of the Month

Data was collected, recorded, reviewed and transmitted every day. At the end of the month the data is once again reviewed and the B-91 form closed. This is the process that makes Mary Jo and Jim Wild great observers. This duo have a combined 63 years of observing time.

There are many reasons I find that inspirational, but I think the most important reason I find this station so amazing is that they never tire of wanting to do a perfect job.

Mary Jo is never shy about pointing out things that don't seem quite right and will ask

questions when she has them, although the questions are few and far between after doing this for over 34 years. Together Jim and Mary Jo make the perfect team, juggling the many jobs they have and keeping up with their weather observing.

Elfin Cove is one of two

sites we have in Southeast that is also an A-paid station. What is an A-paid, you ask? An A-paid is a manual weather station that reports the weather several times a day, that includes; temperature, dew point, sea level pressure, clouds, visibility and other important weather element to help keep planes safe in the local area.

A big apology is in order as we iron out our Observer of the Month Awards. It came to our attention that we need to have our “year” go from December to November to ensure that the award for Observer of the Year can be awarded before January.



Jim and Mary Jo in their Elfin Cove Cadillac



Kim working on the wind equipment

Pelican Soars to Achieve the Observer of the Month for February



John, Pelican COOP observer

Pelican is one of those places that you can't help but fall in love with. Feet and 4-wheelers are the main modes of transportation. The scenery is gorgeous as you walk along the main boardwalk. John

continually does a great job. He collects the data and then promptly enters it into WxCoder. At months end he reviews his data, closing out his form in WxCoder and finishes up by mailing us his original B-91.

John's reports help our office with making decisions for the Pelican and surrounding area. His entire family chips in as well, reporting the current condition when we have called. Thank you!

Observer Spotlight—Cory Van Pelt

By Nikki Becker

Some of you have had the pleasure of meeting Cory when he is out on COOP visits around Southeast Alaska since he became a Hydro Meteorological Technician at the Juneau Weather Forecast Office in 2008.

Before his meteorology days in Alaska, Cory was a restaurant owner and cook in South Texas, where he grew up. His passion for meteorology lead him to the National Weather Service where he started out as a COOP Observer in 1999. In 2002, he traded in his cooking and COOP observer hats to be a Meteorological Technician at the Weather Service Office in Kotzebue. He

continued his Alaskan tour and transferred to McGrath in 2006.

When Cory is not at work forecasting the weather for Southeast Alaska, he enjoys modeling the weather using a Weather Research and Forecasting Model, participating in distributed computing projects, and reading about astronomy and space exploration.

Distributed computing is when people allow their

computer to interact with a computer network to achieve a common goal, which is usually done to solve some type of science problem that would normally need a supercomputer to complete the task.¹ A few of the projects that Cory helps with are modeling for potential cures for AIDS, modeling the Milk Way Galaxy and Universe, and searching for spinning neutron stars to confirm part of Einstein's Relativity

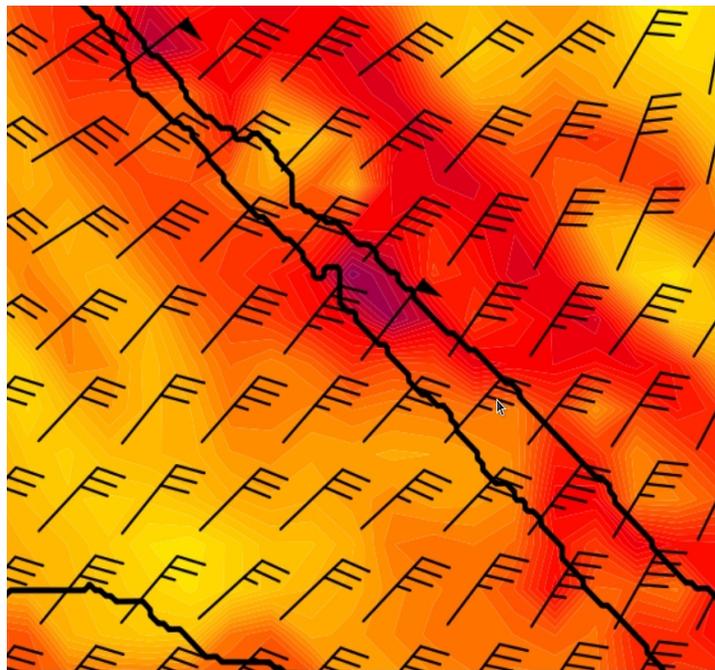


Theory.

Cory also enjoys getting outdoors for a hike or some disc golf. He has even given kayaking and snow machining a try since moving to Alaska.

Cory ventures back to South Texas every chance he gets to spend time with his family. What will Cory's next adventure be?

¹ Source: BOINC. University of California, 2010. <http://boinc.berkeley.edu/>.



One of the many Weather Research and Forecasting Model outputs that Cory has done. This shows the strong Taku winds in Gastineau Channel near downtown Juneau.



Cory's Fitzroy Storm Glass forming a feather shape in advance of a strong low pressure system in 2005

FITZROY STORM GLASS

BY CORY VAN PELT

Before the advent of modern weather forecasting, many methods were used to attempt to foretell the weather; most of them based on signs from nature that we now consider to be folklore. However, a curious weather instrument known as a “storm glass” appeared around 1750 at a small shop in London named “Under the Goat and Compasses” that was put into widespread use.

The instruments were composed of a sealed glass tube filled with a solution of chemicals. The chemicals were near saturation, and the various shapes that formed in the clear liquid, such as ferns, feathers, leaves, stars, and snowflakes, were thought to be signs of impending weather changes.

Vice-Admiral Robert Fitzroy, pioneering Meteorologist and captain of Charles Darwin’s famed HMS Beagle ship, later discovered these instruments, studied their patterns, and

experimented with the chemical formula to fine tune its behavior. In 1859, after a series of destructive storms struck the British Isles, “Fitzroy’s Storm Glasses”, as they were known by then, were widely distributed to be consulted by ships before leaving port.

There are several theories as to how these chemical weather forecasters work, such as pressure or temperature changes, but no one has been able to clearly explain its operation. In his 1863 *The Weather Book*, Fitzroy proposed that changes in the wind and the changing electrical properties of the atmosphere before approaching storm systems cause the

changes in the glass. Some of the traditional weather indicators are: “Fair weather is indicated by a layer of sugar-like crystals on the bottom, with clear liquid above. Stormy, unsettled weather is predicted by feather or tree-like crystals extending upward from the bottom of the glass. The higher these reach, the worse the coming weather. Star or snowflake crystals floating in clear liquid indicate possible thunderstorms and severe weather”.

It is unknown if these mysterious instruments really do forecast the weather, but they continue to exist as a curious example of the attempts to forecast weather in the days before computer models, satellites, and radar.



Vice-Admiral Robert Fitzroy, 1805-1865

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Check us out on the web!
<http://pajk.arh.noaa.gov>

Share Lair By: **Nikki Becker**

Here is a great picture sent in from the Gustavus COOP. Thanks for sharing this spectacular moment, Chris and John!

A view from the Gustavus beach area with Altocumulus Standing Lenticular clouds in the distance over the mountains. Standing Lenticular clouds are mountain wave clouds formed by wind at or near the ridge tops blowing perpendicular to the mountains. These clouds can be in various forms, with the most common being almond shape or like stacks of pancakes. Oddly enough, they



have even been mistaken for unusual aircraft.



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