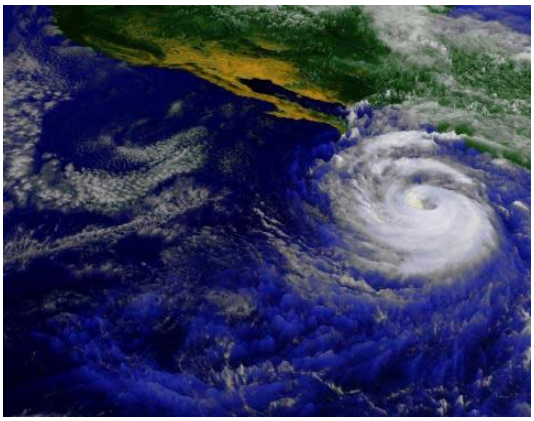
PREDICTING DANGEROUS STORMS



0. PREDICTING DANGEROUS STORMS - Story Preface

1. THE ANDREA GAIL

2. LONG-LINING for SWORDFISH

3. PREDICTING BAD WEATHER

4. PREDICTING DANGEROUS STORMS

5. THE PERFECT STORM DEVELOPS

6. DEATH ON THE HIGH SEAS

7. ANOTHER MAELSTROM

8. RESCUE EFFORTS AT SEA

9. THE UNNAMED HURRICANE

10. NEIGHBORS IN DEATH

Nora, developing in the Pacific during September of 1997, caused spectacular halos and other surprising phenomenon observed as far away as Oklahoma. Image by Laboratory for Atmospheres, NASA/GSFC.

Storms tracked by flight crews include tropical cyclones. Monster tropical cyclones are called hurricanes in the Atlantic, typhoons in the Pacific and cyclones in the Indian Ocean. Such storms first develop over the ocean, 8-15 degrees north and south of the equator.

Tropical cyclones develop into one of three types:

- Tropical depression (sustained winds at 20-33 knots);
- Tropical storm (sustained winds of 34-63 knots); and
- Hurricane (sustained winds of 64 knots or higher).

The weather service gives a name (in alphabetical order) to tropical storms and hurricanes, but only a hurricane has an "eye" at its center. Surrounding the hurricane's eye is its eyewall (where the storm's surface winds are greatest).

Once a tropical cyclone develops into a full-blown hurricane, it can move away from the place where it started. As the storm moves, its intensity can increase. It threatens everything in its path.

Mariners are especially at risk because such storms are more intense at sea. (Follow this link to view the effects of Hurricane Hugo. The photo was taken by a crew aboard a NOAA P-3, flying at 5000 feet, recording waves 60-80 feet high created by winds greater than 100 knots.)

It is possible for a hurricane to travel to the northern section of the North Atlantic, but it will start to dissipate when it passes over cooler waters. That's because the main source of energy for a hurricane is warm ocean water. A hurricane will also begin to dissipate when it makes landfall because the warm water (its energy source) is no longer there.

If a mariner at sea is unable to make safe harbor during a monster storm, the next best thing is to find cooler water as soon as possible. But mariners aren't always so fortunate. Some ships, like the Andrea Gail on October 28, 1991, are too far from land AND too far from cold water.

See Alignments to State and Common Core standards for this story online at:
http://www.awesomestories.com/asset/AcademicAlignment/PREDICTING-DANGEROUS-STORMS-Perfect-Storm-The

See Learning Tasks for this story online at:
http://www.awesomestories.com/asset/AcademicActivities/PREDICTING-DANGEROUS-STORMS-Perfect-Storm-The

Questions 2 Ponder

How Much Courage Does It Take to be a Hurricane Hunter?

When hurricanes approach, meteorologists at the National Weather Service warn of the storm's likely path. Sometimes they are right; sometimes they are wrong. Storms, after all, aren't completely predictable in terms of their path and intensity.

As people who live in the likely path of the storm take precautions, another group of individuals get ready to fly directly into the storm. They are known as "Hurricane Hunters."

In this image, NOAA (the U.S. National Oceanic and Atmospheric Administration) gives us an artist's rendering of a NOAA P-3 N42RF Hurricane Hunter. We can see the plane within the eye of a storm.

What kind of courage would it take to do such a dangerous and scary job? Would a career in this field interest you? Why, or why not?

What is the scariest thing that ever happened to you? How do you think that compares to being a Hurricane Hunter?

Media Stream



Aircraft Storm Tracker
Image online, courtesy the NOAA Photo Library website.
View this asset at: http://www.awesomestories.com/asset/view/Aircraft-Storm-Tracker



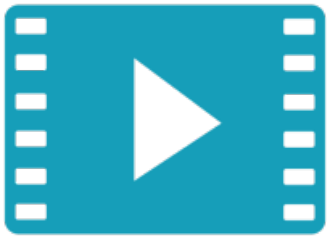
Andrea Gail
Image online, courtesy the downtosea.com website.
View this asset at: http://www.awesomestories.com/asset/view/Andrea-Gail



Eye of a Hurricane - Photo
Image online, courtesy noaa.gov - Hurricane Research Division.
View this asset at: http://www.awesomestories.com/asset/view/Eye-of-a-Hurricane-Photo



Eyewall of a Hurricane - Illustration
Image online, courtesy NOAA.
PD
View this asset at: http://www.awesomestories.com/asset/view/Eyewall-of-a-Hurricane-Illustration



At Sea During a Monster Storm Near Island of Terror

Clip from *Oceans*, a French documentary. Copyright, Jaques Perrin, all rights reserved. Clip provided here as fair use for educational purposes and to acquaint new viewers with the documentary.
Directed by: Jacques Perrin and Jacques Cluzaud
Produced by: Jacques Perrin, Romain Legrand, Nicolas Mauvernay and Jake Eberts
Narrated by: Jacques Perrin (French) and Pierce Brosnan (English)
Music by: Bruno Coulais
Studios: Participant Media, Pathé, Gatetee Films, GAGA, France 2 Cinema, France 3 Cinema and Canal+
Distributed (in the US) by: Disneynature
Release date(s): October 17, 2009 (Tokyo International Film Festival) and January 27, 2010 (France)
Run time: 104 minutes
Country: France
Languages: French and English
Budget: € 49 million (US $ 66 million)
View this asset at:
http://www.awesomestories.com/asset/view/At-Sea-During-a-Monster-Storm-Near-Island-of-Terror