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ACROSS THE ISLAND

Storms Often Start From Calm, Quiet Sea

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BEFORE I get into this week's column, I want to extend congratulations and very best wishes to my friend Charles S. MacDonald who will be 100 on Saturday and looks many years younger.

DID YOU ever wonder where storms start? They have to start somewhere, and Lorne Johnston tells me he has seen those things start as harmless looking ripples on the water in a calm sea.

Mr. Johnston lives on the Seven Mile Road in Kings County. He spends the winters in Florida. He fishes lobsters in the East Point area, I believe, when they are in season.

As a quiet fisherman he has viewed the phenomena of storms originating, as he describes it, "from a stationary boat far out to sea, where the water is very turbulent, as in the case of strong tides flowing over shallow reefs. The water comes from much deeper water on both sides of the reef.

Mr. Johnston tells me the reef he has in mind is approximately six miles wide, on the inside, and approximately 20 miles long. On the outside end it is nearly 20 miles wide.

THE AVERAGE depth on top of the reef is 60 feet, it's 150 feet deep on either side. The southwest side rises almost perpendicular and there's a volume of water 75 miles long and 60 miles wide that is hitting the reef at between five and seven miles per hour.

It sounds harmless to me writing it, many miles away, or to you who are reading about it in this column. But Mr. Johnston assures me "the turbulence created" is really something.

Mr. Johnston likes to watch it "on a calm summer day . . . to see and feel the vertical winds of the ocean breathing," as he describes it.

There's a flat calm on either side of the reef, but on top of the reef, where the turbulence is great, the winds come almost straight down – the angle is about 70 degrees – and strike the surface with such force as to cause whitecaps "in great abundance", all over the reef area. These winds vary in velocity from nearly zero to 20 or 30 miles per hour – in some cases "they reach gale force".

Near Vertical Winds

AIR TEMPERATURE on either side of the reef will be around 70 to 80 degrees. Atop the reef, which is pounded by near vertical winds, the reading will be from 60 degrees, all the way down to 45.

The longer the winds blows down, the cooler it gets.

Often, Mr. Johnston tells me, this disturbance will be followed next day by horizontal winds, floating almost at right angles, on one side of the reef (WNW) it will be blowing 20 to 30 miles per hour, the wind will be approximately the same velocity on the other side.

But there'll be no wind or movement of air, atop the reef, though the water will be just as turbulent, "and you will have the rare sensation of having difficulty in breathing".

And here's an interesting observation:

"The vacuum created in such cases is of such great magnitude, that it pulls air from surrounding areas, with such force and speed, that it often results in gale-force winds."

At such a time undeserved criticism is heaped on the weather forecaster. "But how could he possibly know about the low pressure?" Mr. Johnston asks, when the nearest reporting station may be many hundreds of miles away.

The situation exists in Europe, he observes, where the low pressure areas above the Mediterranean often suck the "great Northers" down across France, sometimes with disastrous results".

Storm Born In Calm Area

OFTEN A "storm is born" right in the middle of a calm area. My informant cites the case of one day in May, 1965. The morning was clear, and fine, the wind was WNW at between eight and 10 miles per hour.

The tide was away above normal at 4:30 a.m. and everyone was puzzled why the tide should be off so much, especially on such a fine morning.

The answer came suddenly, he recalls, when the tide turned, the wind hauled into the north and started to "breeze up". At the same time a small cloud started to form a short distance away right in the middle of the turbulent water on the reef, on a range of about 15 fathoms.

The cloud was about 200 feet above sea level and it intensified into a severe storm in less than one hour's time. The storm "developed with terrifying swiftness, the snow cut visibility down to zero in a few minutes."

The wind increased quickly to about 30 mph.

"We knew it was only a local storm", Mr. Johnston explains, because no heavy seas developed.

Even more puzzling, he explains, was the fact that compasses were useless. They acted "like the storm loaded the air". Radios were a mere jargon of noise.

"COULD IT be that the vertical winds of the previous day pulled ions from the atmosphere, or some other form of energy that energized the storm was pulled close to the earth by the same winds, he asks.

A few miles on either side the weather was normally fine.

Freak Storms Are Described

HERE ARE two other examples Mr. Johnston has given me.

In June 1942 there was a most unusual "freak day". The wind came from the south on the south side of the reef, from the north on the north side. The velocity was approximately 25 mph, the temperature was 65. There was no wind at all on the reef. But all along each edge of turbulent water, as far as visibility would permit towards the open sea, as many as eight waterspouts could be counted at any given time, and this lasted for the duration of the rising tide.

In July of 1944 freak local storms produced winds up to 75 mph, and these were accompanied by huge abnormal tides, but there was no precipitation at all. But all of the storms had a very low reading on the barometer, which adds to the strangeness.

IF ANYONE disbelieves the stories told here, Mr. Johnston advises him to go to the area he describes and watch nature perform.

Mr. Johnston feels he may really have got hold of something important in the business of weather observation. He notes that in Capt. David G. Holes's book, "The Story of the Weather", he observes that "The great scientific advances have always been spearheaded by amateurs". All the professions owe their origin to an amateur. Capt Holes adds "for who could be a professional in a field not yet created?"

Incredible Discoveries Foreseen

IN THE same book, Mr. Johnston tells me, "Dr. Fred S. Singer, in his introduction suggests "no doubt we are on the threshold of incredible discoveries in weather science which will have an exciting impact upon the shape of the future."

Mr. Johnston notes that a mystery is no longer a mystery, after you understand it. This article of his, from which I am quoting, "contains a description of a discovery, or breakthrough; the absorbing of the atmosphere, or parts of it, by the oceans."

If weather science wishes to discover the cause of hurricanes, he advises that a submarine should be equipped with all the latest gadgets and have it ready for the next hurricane season.

The most likely place to watch for the nuclei of a hurricane, he suggests, would be where there are very strong tides, flowing over shallow reefs.

After the first stages of the hurricane are formed it will probably move many miles before it is big enough to be photographed by a weather satellite, and even then there might not be enough cloud to make it visible at such heights.

In Vividly Clear Atmosphere

IT'S WELL known that many storms are born at sea. But much less well known is the fact many storms are born in a vividly clear atmosphere. This, he explains, helps defeat the satellites' photography.

Mr. Johnston's idea is to place automatic weather buoys in a few choice locations. The minute "extremely low" pressures are telecast proceed with all possible speed, collect all data on or near the surface, then submerge, so that data can be collected at various depths in the water.

Mr. Johnston has other suggestions, but I'm running out of space. In closing he suggests, "If weather science ever does organize a fact-finding hurricane hunting and chasing submarine project, he'd like to go along as a "handy man".