# Scientific Expert Tells Why Tornadoes Happen

BY ALBERT FORD FERGUSON. [Written Especially for The Advertiser.]

A tiny spot appears on the face of

from the surface of the earth, 92,000,-000 miles away! Or a blizzard wraps a dozen states

in its freezing arms! Or a deluge of rain fills the beds of rivers and streams and hurls death and destruction everywhere! No matter which of these happens-

the storm king has somewhere obeyed the command that came to him from the sun-a lackey of Old Sol to jump the instant a button is pressed. It was just such a spot, no doubt, on the far-flung sun, that caused the death-dealing tornado which ripped

last week a great hole in the middle of our map, killing hundreds of persons, splitting thousands of dwellings in twain and destroying millions in property. How is it, you ask, that so distant

a force as a speck on the glowing orb of day can bring such devastation to the "good ship Earth"?

Well, it is the investigations of Father Jerome S. Ricard, S. J., of the Santa Clara University, California, which have proven to the satisfaction of weather experts that sun spots are responsible for great storms on this globe. They, he has shown, cause changes of temperature which affect the earth's atmosphere where it is most sensitive—at the equator and the poles. This, in turn, start a whirl of air that develops in speed-and you have a great storm

The natural question, then, is, Why is there a storm sometimes in Chicago, for instance, while there is none in

The answer sums up the entire matter of weather problems, for the conditions which control the local atmospheres of different sections are entirely different. Thus a spot which causes a deluge of rain in Louisiana Washington, D. C.

The reason for this is that a sun spot has instant effect on two curone from the equator going north-The storm is the battle between place on one side of the mountains, these two currents when they meet.

That battle MAY take place so high

Or they may meet on a battle plain near to us, and a violent storm—gen- given for the prevalence of severe erally of tornado tendencies—ensues. storms in the prairielike section of the severe storm or no storm at all. ······

The Book of the Week

France As She Really Is

[By W. T. Allison ("Ivanhoe.")]

There are two general storm paths United States between the Alleghenies in the world-one north and the and the Rockies.

other south of the equator, long as it remains south of the 30th Iowa, the Dakotas, Minnesota, Immediately a fornado rips a piece parallel on a line with the city of New Orleans. Once across this line, it turns and the western part of the Province and travels northeast until it spends

itself or reaches the polar regions. The same condition holds good with the southern patch, except that the original direction is southeast, and

the change is to the southwest. Sun spots having started air whirls warmer, is to rise, and of the northern whirl to stay close to the surface. If the northern current is thick



ALBERT FORD FERGUSON.

simply makes the weather a bit hot- enough, as it usually is in the winter ter in Yuma, Ariz., or cooler at time, the effect of the southern curters in Yuma, D. C. send the southern current higher into lowed throughout the entire United the air will shield the country directly. States rents of air, or whirls in the air, one Thus a mountain range will sometimes from the North Pole going south, and shoot the disturbing element so high that while a severe storm will take til it blows itself out. the other side is not affected at all.

in the air that there is little or no ever, will permit this southern current effect felt on the surface of the to settle down, if it happens to be very heavy, and so get closer to the earth. That is one of the explanations

It will be noticed that the most severe storms of this sort are met in The northern path starts at the the central section of this flat area, in equator and moves northwestward so Kansas, Missouri, Nebraska, Illinois, Wisconsin, Manitoba and Saskatchewan,

of Ontario. The Great Lakes serve as a deflector of the currents in this country because of the excess of moisture in the air over these great bodies of water. For that reason the storms on the lakes are greater and more frequent from both ends of the path, the ten- in winter than in summer because the dency of the southern whirl, being northern current, which freezes and removes this moisture, has the easier time. The southern current being warmer and lighter naturally passes over the lakes at a high altitude, although, of course, it sometimes cre-

ates big disturbances By means of the daily reports received by telegraph at the weather bureau in Washington, and in the weather services in all of the European countries, in Japan and in the observatory in the Philippine Islands, together with the wireless reports received from stations and ships a rather accurate forecast of the conditions in the northern half of the

world can be made. This is possible because the observers are acquainted with the conditions in each locality where an observation is made, and by close watch extending over a long period of years, are able to tell what certain recognized changes are likely to bring

Thus, if a storm, or whirl of air, is observed by one of the Philippine stations, the direction in which the whirl is travelling is noted, and the forecaster in Japan can tell what effect it what effect similar swirls have had.

The weather man in Honolulu gets the report of the Japanese observer, together with the Philippine report, and he knows what these conditions have done to affect his country in the past, and so advises his people, passing on his report to the Pacific coast, where the same system is fol-

In this way a storm can be followed from the time of its beginning un-

There are exceptions to these conditions, of course. These caused by A long stretch of flat country, how- purely local disturbances of the atmosphere which must be reckoned might change entirely the character of the effect of the battle of the upper

# eminently the country of women. Wo- well as wives. eminently the country of women. Woman influence is everywhere in politics, man influence is everywhere in politics, arts, literature and commerce." This is shown in the very manufactures of the country, for the principal industries and my husband ate nearly half of it. "Oh, well, don't feel bad about it. A pretty girl like you can always of the country for women and indeed are The bird's-eye-view author has in all social intimacy. "The French," says Mile. de Pratz," are in reality a

is the easiest thing in the world to visit France, America or China and collect a lot of raw impressions, and then serve these up to the reading public at home as pictures of the real France, the bona-fide America, the public at nome as pictures of the real are never aggressively rude, but their france, the bona-fide America, the studied politeness is a proof of their authentic China, while, as a matter of fact, they are crowded with error and loaded with distortion to the French-loaded with distortion to the French-load loaded with distortion to the Frenchman American or Chinaman who understands conditions of life which the
globe-trotter or hurried impressionist
has failed to see or interpret. Next to
the United States of America, France
has suffered more at the hands of the United States of America, France their own in control of their own land. Her powers he in first work was suffered more at the hands of to believe that all strangers who remainly charm; she carefully conceals hurried book-makers than any country side in France have similar reasons from her husband the fact that she has

WHO ARE DISPIRITED AND

WORN-OUT, SHOULD READ

THIS CAREFULLY.

Proof That Health and Renewed Vi

tality Quickly Return When

Right Remedy Is Used.

color and ambition to work returned,

French matchmaking, ship in France is that complete devoeducational methods, the tion to one's family which characterizes Parisians, housekeeping in Paris, etc., all French people. . . The French we are conscious that we are getting family, compared to the Anglo-Saxon an insight into France as she really is. one, is a clan that lives for itself alone—armed against the rest of the alone-armed against the rest of the The reason why so many Englishmen world. And the French bourgeois is go to France and come away with not only eminently respectable, but he false impressions is because the people is terribly conventional too, and can-10 her feminine attraction.

of Gaul do not wear their hearts upon not tolerate any originality their sleeves, do not open up their character.

#### homes to strangers, cultivate even greater reserve than the Englishman This brilliant French authoress de-How the First Dayton Flood Pictures Came to The Advertiser

"I Sleep Soundly, Feel Like New" A nation, in acute suspense while raging waters for days isolated great areas, valued highly the authentic news and pictures of flood damages when

at last they began to come in. But did you give a thought to the effort, the courage, the cost in money and nerve power, it took to supply the first photographs to reach this city from stricken Dayton and which were printed in this newspaper? Don't you think the story would be interesting?

Here it is—the story of Reporter Frank H. Ward, who carried his "message to Garcia"—just as he wrote it, after 56 continuous hours without sleep:

## BY FRANK H. WARD.

day via N. and W. Railroad, accom- a machine at daylight. We only got panied by the governor's secretary, a few miles as far as Mount Sterling, George F. Burba. We reached Chil- when we found it was absolutely imlicothe at 6 o'clock, and after supper possible to go farther. Water was on planning to go via Washington Court three sides of us. started for Dayton by automobile, House and Xenia.

aster than to get spiled once in a log and paddled the best I could with

I hired every photographer in Xenia an hour, and separated from Burba, hiring a A farm

water-bound sides of the triangle had Orient, O., and hired a rig for Colum-After retting the pictures we bus. motored around the hills to the Na- I left the rig at Grove City and got tional Cash Register plant, where the an automobile into Columbus. There

The next job was to get to Cleve- ten miles north of the made. The next job was to get to cleve- tell little on the hills to this point and land, where my pictures could be discircled on the hills to this point and parkhurst, a well-known grocery tributed. Our auto left Dayton at 3:30 then crossed into Columbus. tributed. Our auto left Dayton at 3:30 then crossed into Columbus, to Jamestown, where the chauffeur chartered a special train via the Big balked and refused to go farther. Four to Cleveland. We left at seven balked and refused to go farther. Four to Cleveland. We left at seven Hamilton's Pills, 25 cents per box, 5 leased from the trance engendered by make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washington our destination at 12:15 Friday morn-make the trip as far as Washing make the trip as far as Washington our destination at 12:15 Friday morn-Court House. We got in there about ing.

WE HAD THE PICTURES. 10 o'cle'k that right.

I searched the town for two hours I left Columbus at 4:30 p.m. Tues- to get a man to go on and finally got

having a man in hip boots feel the chauffeur went back. I bought one of me. a 20-foot stick. The current was not repeated trials of medicines and mix-At daylight we started for Dayton, strong, so I got across in about half

and separated from Burba, hiring a A farmer informed me the B. and special auto. We reached the south O. tracks were off a mile to the east, end of Dayton and then got after the so I hit across fields to the tracks. Here I got a handcar and hired two Dayton is built in a crook of the men to operate it. I rode on the Miami River, and the levee on both handcar seven miles, leaving it at

was out one bridge left across the Scioto River, called Fishinger's bridge, ten miles north of the city. We plates were developed and prints was but one bridge left across the

at 5 Wednesday night. We went on photographs of the flood there and stomach, kidneys and liver, and you'll tors, which are always lining up for stomach, kidneys and liver, and you'll half a mile outside the Casino are to Jamestown, where the chauffeur chartered a special train via the Big enjoy long life and robust good health. half a mile outside the Casino, are

# Please Publish My Testimonial

### So Other Sufferers Will Take "Fruit-a-tives" And Be Cured

Gratitude - heartfelt gratitude prompted this letter. Madame Langlois was so thankful to "Fruit-atives' for restoring her to health and strength, that she gladly allowed her letter to be published.



Madame Valere Langlois.

St. Romuald, Que., Sept. 23, 1912. "I have pleasure in stating that I have been cured of severe Dyspepsia and Chronic Constipation by using "Fruit-a-tives." I was a terrible sufferer from severe Constipation for many years, and I tried every remedy will have on Japan, because he knows I heard of, and also was treated by physicians without any permanent benefits.

Then I tried "Fruit-a-tives" and this fruit medicine has completely cured both the Constipation and Indigestion. I cannot praise "Fruit-a-tives" enough."

MADAME VALERE LANGLOIS. 50c, a box, 6 for \$2.50—trial size 25c. At dealers or sent postpaid on receipt by Fruit-a-tives Limited, of price

tellectual work in France in which women have no part. They do all kinds of work indoors and out of doors. In the country they work in with to produce certain effects—which the fields side by side with men, and take part in vine growing, silk weaving, and other industries. Half of the air currents for supremacy, causing a employees in the factories are women In Paris they drive taxicabs and motors, sell papers and tickets at staclares that her country glories in its tions, tend crossings of all the railnome life. The revelries and immor- roads, and even do painting and paperalities of Paris give a foreigner an altogether wrong opinion of things, population in France, there are 6,381,because the French nation is rooted in 658 women employed in some kind of its love and veneration for home and professional work, which makes an mother. The cult of woman is the average of nearly half the women of greatest feature of life in France. Of the 7,728,854 married wo-"France," says Mile. de Pratz, "is pre- men, 2,685,796 are wage-earners as

eign lands to the untravelled reader. It is the easiest thing in the world to it is the easiest th

## Mileage Records make Sales Records

Tires are no longer bought for what they are; they are bought for what they will do.

Men buy the tires that have given them the most mileage in the past. Men who have never used automobile tires ask to see their friends' tiremileage records.

In a market like this, a tire that doubles tire-mileage is bound to win. See what mileage-buying has done for No-Rim-Cut Tires.

#### Canadian Sales Jumping Along

In the Fall of 1910 we started to make No-Rim-Cut Tires in Canada. Our out-put was 25 tires a day. In scarcely more than two years after entering the Canadian market we have increased our tire out-put to 500 tires per day.

In that short time from a standing start, we have jumped our total Canadian sales to over 90,000 tires. That is equipment for over 20,000 cars. It is clear that these Tires are saving money for car-owners.

GOOD YEAR No-Rim-Cut TIRES

Save Rim-Cutting Cost -23%

Not one No-Rim-Cut Tire has been ruined by rimcutting. This feature alone has made a saving of 23% in tire-cost to over 20,000 Canadian motorists. Ask one of them.

#### 10% Oversize Saves Another 25%

Add 10% to the air capacity of a tire and you add 30% to its mileage. That is what tire experts have figured. No-Rim-Cut Tires are 10% over the rated size. We claim that with the average car this adds 25% to the mileage of the tiresa conservative estimate. Ask a friend if this provision for overloading has not increased his tire mileage.

These double-mileage tires fit most every style of rim.

Look up the Goodyear Dealer.



#### The Town of Goodyear

1911 and 1912 have seen some changes over in Bowmanville.

To increase our output of tires from 25 to 500 per day in scarcely more than two years involved bringing in hundreds of men and their families.

In that time our pay roll has increased nearly seven fold. In 1911 we employed 89 men. To-day over 600 punch the clock.

This little community of men work in a factory plentifully supplied with light and pure air.

At the same time as we have been building factory additions, we have built homes for these Goodyear men. Last year we built 50, and we realize that this is just a start.

The Balmoral Hotel has just been bought and turned into a Goodyear Club, with swimming tank, billiard room and reading rooms.

The little Town of Goodyear has its own sporting organizations-ball clubs -hockey team-bowling clubs-gun clubs-and its own athletic grounds.

Goodyear men build brains as well as muscle into No-Rim-Cut Tires. We want their home-life to be happy and comfortable.

#### GOODYEAR TIRE & RUBBER CO. OF CANADA Head Office, TORONTO LIMITED Factory, Bowmanville Head Office, TORONTO LIMITED

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of beauty will sink into the souls of everybody until wo are a nation of

for the evils and discomforts of being

poor there would be nothing to urge us

The New Age says this is "cant."

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All kinds of Rubber Belting, Hose, Packing, Bicycle and Motor Cycle Tires, Truck Tires 

It is to the narrow, dirty,

### "We do not want to make London Cannes and Monte Carlo so beautiful and palatial that the habit

Greece.

to get rich

In the Winter Months [By Bertha Christian.]

Cannes is a half-way house between wholesome next day to climb to La hurried book-makers than any country on earth. For this reason, it is a delight to turn the pages of a beautifully listrated volume, "France From Within" (Hodder & Stoughton, London), written by a Frenchwoman, Claire de Pratz, who was educated in England, but has spent most of her life in France She certainly speaks of the pages of the properties of the pages of the properties of the pro England, but has spent most of her that can explain the slower growth of life in France. She certainly speaks friendship between the French than between Anglo-Saxons. Another with authority, and as we read the sprightly chapters on the French charged by the same restaurant. There is a first later." But when made moiseled first later." fiat later." But when mademoiselle becomes a wife, she hastens to make up for lost time, and quietly learns are larger to be a lost time, and quietly learns are larger to be lost time, and quietly learns are larger to be low, dominates its surroundings so how to rule her husband without his mimors backed by the land yellow insolently, sinks from here into insignow to rule ner husband without his mimosa, backed by the perfect contours nificance beside even the smallest of que mme veut. Dieu veut," is essen- of its unchallengable hills. Its speck- the hills on which grizzled peasants, Frenchwoman has individual character harbor, packed with pleasure craft, and travail. A few thousand feet up, and

continually finding fresh sources of pus upon the microcosm, must laught profit for the winter months in the Mediterranean ports. The North Ger-WHERE GERMANY'S STRENGTH IS In proportion to the population, there are far more women who earn man-Lloyd has even established a daily service between Cannes and Monte America. There is no material or in-Carlo, to which all reads lead.

All That Glitters. By universal testimony, Monte Carlo has changed greatly in the last fifteen years, and it is changing still, always in the same direction. Austerity was ALL WHO LACK VIGOR, THOSE gradually yielding to the new facilities fc1 travel. Monte Carlo, in fact, is bestill its centre, but the rest of the town is no longer their annexe. The won-derful system of identifications are for Germany her place in the world, says Price Collier in Scribner's Magaderful system of identification at the Casino, which secures the name of every visitor and can trace it in instant over a generation, still works in its old perfection. But no longer canone roam, once armed with a gratuit-"I am only thirty years old, yet for almost two years I have felt more like ous ticket of admission, over the whole to sleep at night, and in the morning been given over to the 'Salles Privees," on the entry to which the administrafelt so depressed and heavy that eftion impartially levies the same charge fort was difficult. My hands were always clammy and perspiration on of £4 for the whole season or for a It was raining pitchforks, but by len until it was 60 feet wide. My slight effort would break out all over single evening. No one seems to worry having a man in hip boots feel the chausteur went back. I bought one of the should begin to brood over the far as the crowd at the tables goes, way in advance across each bridge, we his rubber window curtains, wrapped chance that I should be unfit to do the superficial difference is negligible. managed to get to Aenia at 3:30 Wed- my precious photographs up in it, and my work, and this dread made my the superficial difference is negligible.

The stranger, believing firmly that gold sleepless pights perfect misery. After the number of sober, elderly and rather tures, Dr. Hamilton's Pills gave me grubby gentlemen, who look as if a the first gleam of hope. From the bus fare might be a consideration, and tures, Dr. Hamilton's Pills gave me very first I could see they were diffirmly making their way among the ferent in action from other pills. They butterflies of Paris unpack fat pocketdidn't gripe and acted as naturally as books, and play for thousand-franc notes. There may be hidden tragedy if nature and not the pills were cleansing my clogged-up system. My spirits rose. I felt much better. The underneath, but what one sees and wonders at is the imperturbable presluggish action of the system gave cision with which the business of the way to normal activity. Dizziness Casino, based on its founders' celeand headaches ceased, appetite, good brated maxim, "rouge gagne quelque-

> the morning till the first stroke of Then the great doors swing for the last time, the ranks of the costly mo vice, use Dr. Hamilton's Pills for your heavy temperature of the rooms. It is sion bell.

fois, noir gagne quelquefois, mais Blanc

less promenade leads down to its toy tending their vines, eat the bread of Frenchwoman has individual character harbor, packed with pleasure craft, and travail. A few thousand feet up, and her first endeavor is to conceal that for the leviathans of the British and gic is exhausted. How the high gods, German-American liners, which are deigning to cast a glance from Olym-

> "Seek not for Germany's strength first in her fleet, her army, her hordes of workers; nay, not even in her philosteachers, and musicians, ophers, though they glisten in the eyes of all the world, for you will not find it there. It is in those quiet and simple homes that so few Americans and Englishtain unique exclusiveness, which is men ever enter that you will find the sweetness and the sternness, the indomitable pride of service, and the selfsacrificing loyalty that won, that keep,

### WHAT NORMAN ANGELL IS DOING

"Mr. Norman Angell has developed perhaps better than anyone of our time the view that the state systems of war seventy-five. I have found it difficult Casino. Half of the space has now to sleep at night, and in the morning been given over to the 'Salles Privees', cially considered, barriers of international commerce," says the Manthester Guardian. They may-and do-obstruct commerce, but they leave absolutely untouched the causes that make the greatness or even the wealth of a modern nation. Mr. Angell is doing a great service by driving home this point by every means that dialectic ingenuity can suggest."





WORLD. "He cheered and comforted a tire These words are to form part of the inscription on Mark Twain's monument at his birthplace in Missouri. Their propriety is questioned by

MARK TWAIN AND A TIRED

the Springfield Republican, artists," says the Standard. "Let us doubts whether this is, after all, a avoid the inculcation of beauty in the remember the fate of tired world. Skirts are from 1 to 31/2 inches from grimy streets of London that the Empire owes its progress. If it were not the ground,

Trains will be from 4 to 12 inches in ength.

In width not more than 11/2 yards around the bottom will be allowed. Bias lines mark tailored skirts.

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NA-DRU-CO Royal Rose Baby's tender skin as it is to Mother's wind-chafed cheek or Father's chin smarting after a shave. Its remarkable fineness its pronounced healing, antiseptic qualities - and its captivating odor of fresh-cut roses - have won for Na-Dru-Co Royal Rose Talcum the favored place on the dressing tables and in the nurseries of the most discriminating people.

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