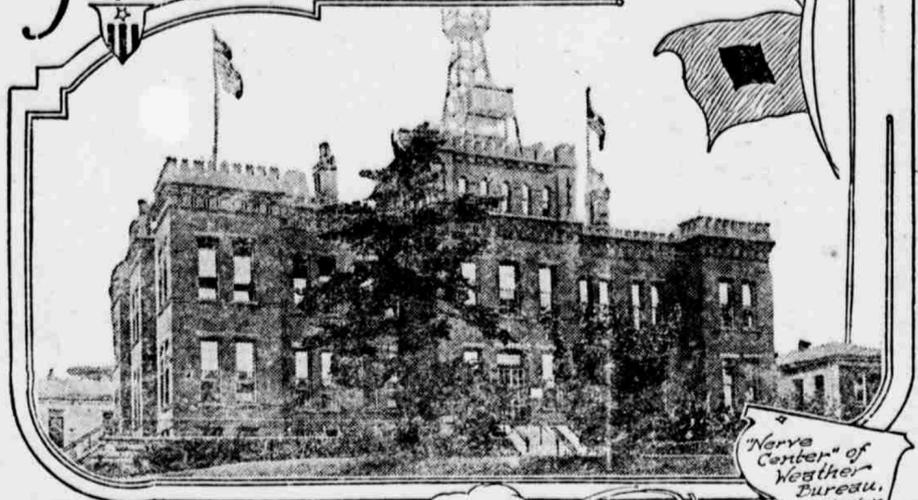


HURRICANE: "Champion of Destruction"



(Prepared by the United States Department of Agriculture.)

POSSESSING a longer arm of destruction than the mightiest of volcanoes, and leaving in its wake a no-man's land, rivaling war's scars across the face of Europe, the hurricane is chief among natural forces contending for the title, "champion of destruction."

To fight the hurricane offensively is folly. For ages mankind has been able to wage only a defensive war against its terrifying "drives" and these efforts have been, until modern times, pitifully feeble. Man's only defense is to be forewarned. That it has been possible in the present generation to reduce death toll of hurricanes to a minimum, is due to the marvelous service maintained by the United States weather bureau.

The headquarters of the weather bureau, located quite to one side of main-traveled thoroughfares in the national capital, are the nerve center of this unique organization which extends across the continent and also far out to sea, since many vessels cooperate with the bureau by making daily reports to it.

Great Storm Sighted.
Early in September a hurricane, destined to devastate a wide area bordering the Gulf of Mexico, reared its head like a great monster a thousand miles to the southeast of the United States, among the islands of the Caribbean. As to what gave it birth not even the scientist knows. The forces that propogate all of these storms are shrouded in mystery. This particular hurricane was born in remote tropical waters, probably about September 5. A few hundred miles north of this center of disturbance the sea was relatively calm and passengers on steamers passing this way had no intimation of the terrific force that was generating off to the south. Likewise, the southland of the United States lay placid, in part bathed in sunshine and in part shaded by far-stretching blankets of clouds, many of them so fleecy that to the casual observer they carried no suggestion of the coming storm. But the hurricane in the tropics gathered strength quickly and lunged itself in fury over the slender chain of islands constituting the Florida keys.

In the face of every such rising peril the meteorologist upon whom rests the responsibility for making daily forecasts, stands like one facing a thief in the dark. Beyond the mainland coast and a few scattered stations in the West Indies, he has no means of learning of the changing atmospheric conditions in those seas to the south and east, save chance reports from ships. Early reports of this hurricane were meager indeed. The first intimation of the coming of disaster was received September 8. The daily forecast for that date stated that a tropical storm had appeared to the southeast of Key West. But as to its extent, or its course, the chief forecaster at that time could only conjecture.

Despite his long experience in his profession, it was inevitable that the forecaster should be anxious—every meteorologist who is forecasting at such a time is anxious. He had been on duty in seasons past when not a single hurricane appeared. But in other years between July and October more than one such storm had left a trail of devastation across many states. The forecaster knew that millions of dollars worth of cargoes, about to sail from the Atlantic and Gulf ports, might be lost if he failed

to make a proper forecast and issue adequate warnings. The fate of whole cities rested on his decision. As he turned from his study of the telegraphic reports received from the eastern and southeastern section of the country, he joked a little—but in the manner of one whose joviality was a trifle forced, perhaps—about his repeated hard luck at being on duty "every time one of these storms hove in sight." There was an unmistakable tenseness in his manner as he studied the map, pointing to the low barometer area that was moving steadily toward the southern states.

Weather Forecast Correct.
The next chapter in the hurricane's brief history is told in the weather report of September 9: "The tropical storm was central Tuesday night and a little south of Key West where the barometer read 29.08 inches with a wind velocity of 60 miles an hour from the northeast. The storm is apparently moving northward, and will pass into the Gulf of Mexico during Tuesday night."

How speedily and decisively the forecaster had acted in the face of the oncoming peril is indicated by the next sentence: "Warnings to shipping and other interests have been regularly sent since Monday morning when storm warnings were first displayed on the south Florida coast."

The following 48 hours were laden with grave responsibility for the staff of the weather bureau. It was theirs to decide at the earliest possible moment consistent with accuracy in what direction the storm now moving with increasing power and rapidity would travel as it came nearer the mainland. On Wednesday, September 10, the report read: "The tropical storm passed Key West, Fla., about midnight Tuesday night with the barometer reading 28.81 inches, and estimated wind velocity of 110 miles an hour from the east." Here was evidence that one of the most violent storms of recent years was about to strike at some point on the Gulf coast.

This report revealed the meagerness of available information at this date regarding the progress of the hurricane: "Tonight the storm is probably central in the Gulf of Mexico, not far from latitude 23, longitude 85, still moving northwest, and northeast storm warnings are ordered on the Gulf coast from Carrabelle, Fla., to New Orleans, where the winds will probably be strong on Thursday night. Advice has also been issued to this section to prepare for possible very dangerous winds by Friday."

Defensive War Starts.
And so man's defensive war against the mighty force of nature was on. With all its scientific data regarding the course of previous storms, instant-



"Nerve Center" of Weather Bureau, Washington

ly accessible and with reports from all available points of observation tabulated and recorded on the weather map, the weather bureau foretold many hours in advance the peril that threatened the Gulf coast. Thus the people were forewarned.

It will be recalled that storm warnings were displayed regularly on the south Florida coast since Monday morning. How accurate the weather bureau's forecasts had been is shown by the press dispatches dated Wednesday night, September 10: "Lower Florida was paralyzed today as a result of the violent hurricane that passed over that section last night. Not a house in this city (Key West) escaped damage; 320 frame buildings practically were razed, two church edifices wrecked, and five retail stores overturned. The damage is estimated at more than \$2,000,000. Shipping off the coast met with disaster. Several small vessels were sunk and others were driven to the reefs."

By this time the weather bureau, in its fight to keep destruction and death at the minimum, was able to act with more definiteness, even though there was no adequate means of ascertaining atmospheric conditions in the center area of the Gulf of Mexico. The report of September 11, flashed over the wires from Washington, read: "The tropical storm is apparently central tonight in the Gulf of Mexico with latitude 27 degrees and longitude 88 degrees. Absence of reports forbid the definite location of the storm center, and it is therefore impossible at this time to state the portion of the mainland that it will first reach, although it is fairly probable that it will be west of the Mississippi river. Storm warnings are displayed from the Louisiana coast eastward to central Florida and on the northwest coast of Texas."

While the hurricane was moving on its northward course additional news, brief but vivid, filtered in from points in its wake. September 11 the Associated Press representative wired: "Nine members of the Ward line steamer Corydon crew of 36 men were brought to this port this afternoon by the schooner Island Home. They had been adrift on an upturned lifeboat, without food and water for three days. One of the crew, according to their story, had become crazed, from suffering and privation Wednesday night, and sprang overboard."

In these hours the thoughts of the chief forecaster instinctively turned to Galveston, which in the past had suffered terribly from similar storms. Dispatches from that city indicated that the tide was rising rapidly. Water was flooding the low places on the island and people were fleeing the city. A 30-mile northeast storm was blowing. But for the weather bureau's timely warnings which had reached Galveston before the gale struck the city, millions of tons of cargo and scores of ships would have put to sea and would have been lost.

In the next 24 hours the storm burst upon the Texas coast in full fury. While the papers the next few days were filled with accounts of the damage and death caused by the hurricane the fact of greatest significance, and which the public has come to take almost as a matter of course, only partially realizing the skill and responsibility involved, was that the weather bureau had been able to anticipate this storm long enough in advance to prevent a loss that probably would have totaled thousands of lives and millions of dollars in shipping.

In 1828, Sir John Nicholl, giving judgment in an English divorce case, remarked that "conduct highly blameable and distressing to the feelings of a husband had been proved; but although 30 witnesses had been examined, no indecent familiarity beyond kissing had been proved. The shaking of hands when they met was now a practice so frequent between persons of different sexes, however, opinions might differ as to its delicacy, that no unfavorable inference could be deduced thence."

Not Allowed to Shake Hands.
Although today we all shake hands on meeting as a matter of course, there was a time when purists held that friends of opposite sexes should not salute one another by shaking hands.

EUROPEAN BORER IS DESTRUCTIVE

Estimated Loss of Million Dollars Daily if Insect Once Gets Established.

FOUND IN EASTERN STATES

Larva is Dirty White Caterpillar, About One Inch Long, With Brown Head—Ears of Corn Are Bored Through.

A million dollars' worth of damage a day is conservatively estimated as the effect of the European corn borer if it once gets established in the corn belt of the United States. This is the statement of George A. Dean, head of the entomology department in the Kansas State Agricultural college.

The insect, which has done tremendous damage in Europe and Asia, has been introduced into New York and Massachusetts and is looked for in other regions.

Larva is White Caterpillar.
The larva of the European corn borer is a dirty white caterpillar, about an inch long, with a brown head. It passes the winter in a nearly full-grown condition within its food plants. In the spring its growth is completed and it then bores its way to the surface of the food plant, where it makes a slight hole to serve as an exit for the resulting moth.

The larva now forms a cocoon in the burrow, passes into the pupal stage, and in about two weeks the adult moth emerges. The moth, which lives about two weeks, deposits 300 to 700 eggs on the food plant. In about five days the eggs hatch, and the young larvae at first feed on the tender shoots of the plants, but finally bore their way into the main stem of the plant. In about six weeks, after burrowing through all parts of the plant, the larvae pupate as before and emerge as moths about the middle of summer.

The female moths of the second brood do the greatest damage to corn, since they attack not only the stalk, but also the tassel and the ear, and continue feeding until cold weather.

Destroy Ears Completely.
The ears of corn are bored through from bottom to top and from side to side, the borers feeding on the kernels while they are soft. Complete de-



A Good Harvest of Corn, With Good Organic Matter Left, Which, if Plowed Under, Will Make Next Crop a Better One.

struction of the ear is generally accomplished either by the borer or through decay which follows the injury. One moth which emerges in the spring may be responsible for from 100,000 to 300,000 larvae later in the same season.

Every farmer and gardener should be on the look-out for the insect. Professor Dean urges, and upon discovering signs of its presence should immediately inform his state entomologist or experiment station, sending in the insect or the plant on which it has evidently worked.

INSULATE HIVES IN WINTER

Ample Protection Should Be Supplied to Keep Out Cold Winds—Leave Entrance Open.

Protect hives from prevailing cold winds, and insulate hives to retain the heat generated by the bees. A grove of trees, an adjacent hill, or nearby fence may serve as a windbreak. The packing usually done should completely surround the hive, including the bottom, but the bees' entrance should remain open, though reduced in size. Cork chips, sawdust, fine shavings, dry leaves, chaff, and similar material should be used and packed tightly in a box built about the hive, allowing from six to eight inches space for the insulation.

QUARTERS FOR YOUNG STOCK

Preferable to Have Calves Separated From Main Part of Cow Barn—Mothers Not Disturbed.

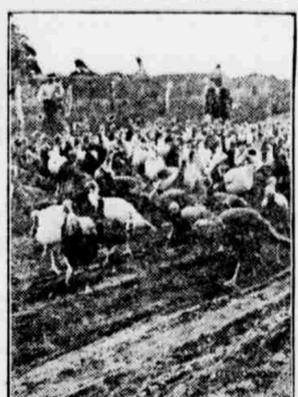
Some dairymen fail to consider housing the young stock when they build their barns. It is preferable to have the young stock separated from the main part of the cow barn because of odors and because calves near their mothers will cause the cows to become restless. The quarters for the calves should be connected with the dairy barn, and a location on the south or east side of the barn is desirable.

GRASSHOPPERS MAKE FINE POULTRY FEED

Especially Relished by Turkeys and Guinea Fowls.

Fowls Consume Millions of Destructive Insects During Course of Year—With Minimum Amount of Trouble to Farmers.

Grasshoppers are beginning to pay big cash dividends in North Dakota through the medium of poultry, especially in turkeys and guinea fowls. The experiment has been successfully tried at the state agricultural college and numerous farmers have taken the cue.



Fattened Turkeys Being Driven to Market.

Wherever there are green fields, there are grasshoppers and other insects. G. R. Greaves of the agricultural college, who has conducted the experiments, says:

"It seems the inexorable law of nature that wherever there is something good to eat there is something to eat it, and man's existence is a continual struggle for supremacy over the creatures that are determined to consume the food he requires."

During past years in North Dakota, prairie chickens, sage hens and grouse held the grasshoppers in check, and their plumpness and the delicious quality of their meat attested to the superiority of their food.

Now the prairie chickens especially are going the way of the buffalo, and Mr. Greaves was assigned to find a substitute that would keep down the insect pests with a minimum of trouble and expense to the farmer. The answer is turkeys and guineas.

Mr. Greaves declares that flocks of turkeys and guineas consume millions of grasshoppers and other insect pests, and naturally do their own foraging. Early in the season the experimental flocks at the agricultural college have grown fat and strong on the young insects.

Later in the season they have received the abundant exercise necessary for their proper market conditioning by chasing the elusive hoppers, have saved the field corps and provided a new, big source of income.

"Three old turkeys kept through one winter," said Mr. Greaves, "produced a flock of young turkeys the following season which kept the fields near their house clear of grasshoppers, and fulfilled their destiny by gracing Thanksgiving tables."

BEST PRACTICE IN PLOWING

According to Minnesota Expert It is Best to Deepen Furrows Gradually Each Year.

The nature of the soil and the crop to be grown should determine the question of whether to plow deeply or more shallow. As with most other farm problems, the farm operator's judgment and experience must be called into play in determining which practice is best on any farm.

Andrew Boss, vice director of the Minnesota experiment station, believes that deep furrows turned on edge, or "three-quarters over," furnish the best conditions for pulverizing and sweetening the soil. "It is not good practice," he says, "to deepen the plowing greatly in any one year. It is better to deepen it by one-half inch or an inch each year until a sufficient depth has been reached. Rarely is it necessary to plow deeper than seven or eight inches, except for certain deep-rooted crops like sugar beets, carrots, potatoes and like crops."

"Where it is desirable to incorporate in the soil water-holding material, such as a green manure crop or a dressing of coarse barnyard manure, deep plowing is wise. Either a very sandy or a very heavy dense clay would be benefited by such treatment periodically."

FALLACIOUS IDEA OF SHEEP

Animals Will Consume More Weeds and Shrubs Than Other Animals, but Need Some Feed.

Many farmers who have failed with sheep have gone into the business with the fallacious idea that sheep will eat anything, simply because some misinformed person started the tale. Sheep will consume more weeds and shrubs than any other class of animals, but to turn them into the woodlot and expect them to thrive on sprouts and dry leaves is asking too much of their digestive systems. However, there is usually waste land on most farms on which the sheep may be kept at certain periods of the year very profitably.

Nasty Colds

Get instant relief with "Pape's Cold Compound"

Don't stay stuffed-up! Quit blowing and snuffling! A dose of "Pape's Cold Compound" taken every two hours until three doses are taken usually breaks up a cold and ends all gripe misery. The very first dose opens your clogged-up nostrils and the air passages of the head; stops nose running; relieves the headache, dullness, feverishness, sneezing, soreness and stiffness. "Pape's Cold Compound" is the quickest, surest relief known and costs only a few cents at drug stores. It acts without assistance. Tastes nice. Contains no quinine. Insist on Pape's! Ad.

FOUND IN AMHERST COLLEGE

Discovery of Audubon Collection of North American Birds Will Delight Ornithologists.

The famous Audubon collection of North American birds, which was misplaced thirty or more years ago, was discovered a short time ago in Appleton cabinet at Amherst college. In the collection are more than 800 type specimens of birds, from which, it is believed, Audubon painted the illustrations in his edition of "Birds of North America." Fifty of the specimens bear labels containing Audubon's own handwriting and are dated 1834.

The collection was originally sold by the Audubon estate for \$600 to "Ward's Natural Science" establishment, following which it was sold to H. H. Farnum who, forty years ago, presented the specimens to Amherst college.

Curator Bangs, of the ornithological collectors at Harvard, will take possession of the collection, which contains specimens of practically every kind of North American bird.

LONG FACES

"Cascarets" for Liver and Bowels bring back Smiles

Turn the "kill-joys" out—the headache, biliousness, indigestion, the sick, sour stomach and misery-making gases—turn them out tonight and keep them out with Cascarets.

Millions of men and women take a Cascaret now and then and never know the misery caused by a lazy liver, clogged bowels, or an upset stomach. Don't put in another day of distress. Let Cascarets cleanse your stomach; remove the sour, fermenting food; take the excess bile from your liver and carry out all the constipated waste matter and poison in the bowels. Then you will feel great.

A Cascaret tonight straightens you out by morning. They work while you sleep.—Adv.

Well Done.
"I understand both your daughters have been satisfactorily married."
"Yes; one married a baker, who, of course, can always raise the dough, and the other married a butcher, who knows how to make both ends meet."

Important to all Women Readers of this Paper

Thousands upon thousands of women have kidney or bladder trouble and never suspect it.

Women's complaints often prove to be nothing else but kidney trouble, or the result of kidney or bladder disease. If the kidneys are not in a healthy condition, they may cause the other organs to become diseased.

You may suffer pain in the back, headache and loss of ambition. Poor health makes you nervous, irritable and may be dependent; it makes any one so.

But hundreds of women claim that Dr. Kilmer's Swamp-Root, by restoring health to the kidneys, proved to be just the remedy needed to overcome such conditions.

Many send for a sample bottle to see what Swamp-Root, the great kidney, liver and bladder medicine, will do for them. By enclosing ten cents to Dr. Kilmer & Co., Binghamton, N. Y., you may receive sample size bottle by Parcel Post. You can purchase medium and large size bottles at all drug stores.—Adv.

Kind Advice.
Belle—I am having trouble keeping my complexion all right.
Nell—Are you, sure your jars are alright?

Watch Cuticura Improve Your Skin.
On rising and retiring gently smear the face with Cuticura Ointment. Wash off Ointment in five minutes with Cuticura Soap and hot water. It is wonderful sometimes what Cuticura will do for poor complexions, dandruff, itching and red rough hands.—Adv.

Most people who grant a favor expect two in return.

Often the explanation has nothing to do with the case.

Was This Dog a Ghost?

At Umbayo, South Africa, John Jeter, an English settler, owned a very fine hound that was run over and killed by a train. For months after the Jeter family was much annoyed by the wild whistling of the passing trains. On complaining of this, they were told by the engineers that they should keep their dog at home, that the whistling was merely a warning to the dog, which was always on the

tracks. The engineers described the dog with such accuracy that the family was greatly mystified, especially when the engineers added that the dog would always refuse to leave the track until the engine was almost upon him.

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