Station File 607

Miami 32, Florida.

August 10, 1944.

Chief U. S. Weather Bureau,
Washington, D. C.
(Through Official in Charge)

Subject: Report of Tropical Storms, July 1944.

Sir:

Three tropical storms were charted by the Miami office in July. Two of them were about hurricane strength, and the other of lesser intensity.

The First Storm developed east of the Bahamas on the 14th from a wave that had been traced from the eastern Caribbean Sea, where it was first noted near the Grenada Islands on the 11th. It moved through Mona Passage the evening of the 12th without signs of development, and the first evidence of increasing intensity was noted when it was near Turks Island on the 13th. By the 14th there was definite evidence of a center, and the outer Bahama Islands reported fairly high ocean swells at six per minute. At this time our first announcement was made that a storm was forming in the vicinity.

It moved north-northwestward with slowly increasing intensity to about Lat. 31 to 32 N, Long. 76 W, where it slowed to about a standstill, increased further to estimated hurricane force, and gradually turned northeastward. It moved about midway between Cape Hatteras and Bermuda the night of the 17-18th and continued northeastward at a fast rate of speed and was well east of Newfoundland the evening of the 19th. It is believed this storm was hurricane force from about the time it turned northeastward, although no actual reports of hurricane velocity have been received.

We were consistently of the opinion that this storm would turn northeastward and not materially effect the North Carolina coast, but storm warnings were ordered north of Wilmington to the Virginia Capes as a precautionary measure, and because the military has alerted the area for dangerous winds. As expected, our warnings were not justified and they were withdrawn just as soon as the northeastward turn was evident. No strong winds occurred at any coastal station of the U.S. Bermuda had winds of about 40 m.p.h. when the storm was passing over 200 miles northwest of that place.

The Second Storm was noted east of Martinique and Santa Lucia on the 24th, and the small center passed between these islands

607

about 7 p/m. of that date, with a maximum wind of 55 m.p.h reported from Fort de France. It moved west-northwestward at a rather rapid rate and the center was again located by airplane reconnaissance near Lat. 16 N, Long. 67 W, at 2.30 p.m. on the 25th.

From this point the center was not definitely located again, but there were positive evidences that it was near the coast of Haiti not far south of Port au Prince on the morning of the 26th. Wind of 70 knots was encountered by an airplane near this point (exact location and elevation unknown), and the Port au Prince pibal showed east winds aloft of hurricane force, with squalls of 55 m.p.h. reported at the surface. "Considerable Damage" was reported from the town of Jacmel on the coast south of Port au Prince, but no details of wind velocities or pressures were given.

These indicate that the small center struck the high mountains of the Haiti Peninsula and was broken up. At any rate, it could not be traced beyond this point. It is not believed that this storm was hurricane force at the surface, but that velocities were around 60 m.p.h. throughout its course.

The Third Storm of the month formed east of the Bahamas during the night of July 30-31st from a wave that had been traced from a point northeast of Puerto Rico two days earlier. The center was definitely located by reconnaissance about 175 miles northeast of Nassau about 8 p.m. of the 31st, attended by winds of 50 m.p.h. over a small area. It moved northwestward and gradually turned northward, increased slowly in intensity, and passed into North Carolina a short distance southwest of Southport at about 7 p.m. August 1st. The center was very small, but reports indicate that winds were hurricane force.

The coast Guard station on Oak Island reported that the wind reached 59 m.p.h before electricity failed and the wind indicator went out at about 4.30 p.m., but winds increased thereafter to and estimated 70 to 80 m.p.h. at 5.50 p.m. Lowest pressure 29.22 inches (989)Mbs) was reached at 6.30 p.m. The wind veered from east through south to southwest, which indicates that the center passed west of this point. At the Wilmington Weather Bureau Office, about 20 miles inland and to the east of the center, the highest wind was 52 m.p.h. and lowest pressure 29.43 inches (997 mbs). Tides along the coast near and to the east of the center were "very high", and an unconfirmed report stated that waves broke 40 feet high on the coast. This was probably the hight to which water splashed on striking the shore, and not the high height of the waves.

Damage at Southport, Wilmington, and nearby beaches is estimated by the Official in Charge at Wilmington to be in excess of $1,000,000. Press reports puts total damage in the whole area at about $2,000,000, which is probably a fair estimate of the total damage. Beach houses and cottages were distroyed or had their foundations undermined, many trees were blown down, and considerable damage to electric and communications lines was reported. The beaches and other exposed locations were evacuated of more than 10,000 people in advance of the storm, which probably accounts for no loss of life. Several persons were injured, but no deaths were reported.

This indicated the effectiveness of the warnings which were given the area freque-ntly on July 31st and August 1st, emphasizing the damger. Hurricane warnings were ordered at 3.30 p.m. August 1st, but it is not believed that they added materially to the warnings already issued for dangerous winds and high tides. The warnings were timely and effective, considering the extreme smallness of the storm and the difficulties in following it and estimating its intensity.

The storm continued northward across eastern North Carolina to the vicinity of Richmond, Va., where it turned northeastward and passed near Washington and out to sea again near Atlantic City. It lost most of its force in the overland journey, but gave a maximum velocity of 38 m.p.h. at Atlantic City. There was no evidence, however, that it regained force over water as it skirted the southern New England coast.

The paths of these storms have been indicated on the small chart attached. We are also inclosing copies of all advisories, warnings, and bulletins issued by this office.

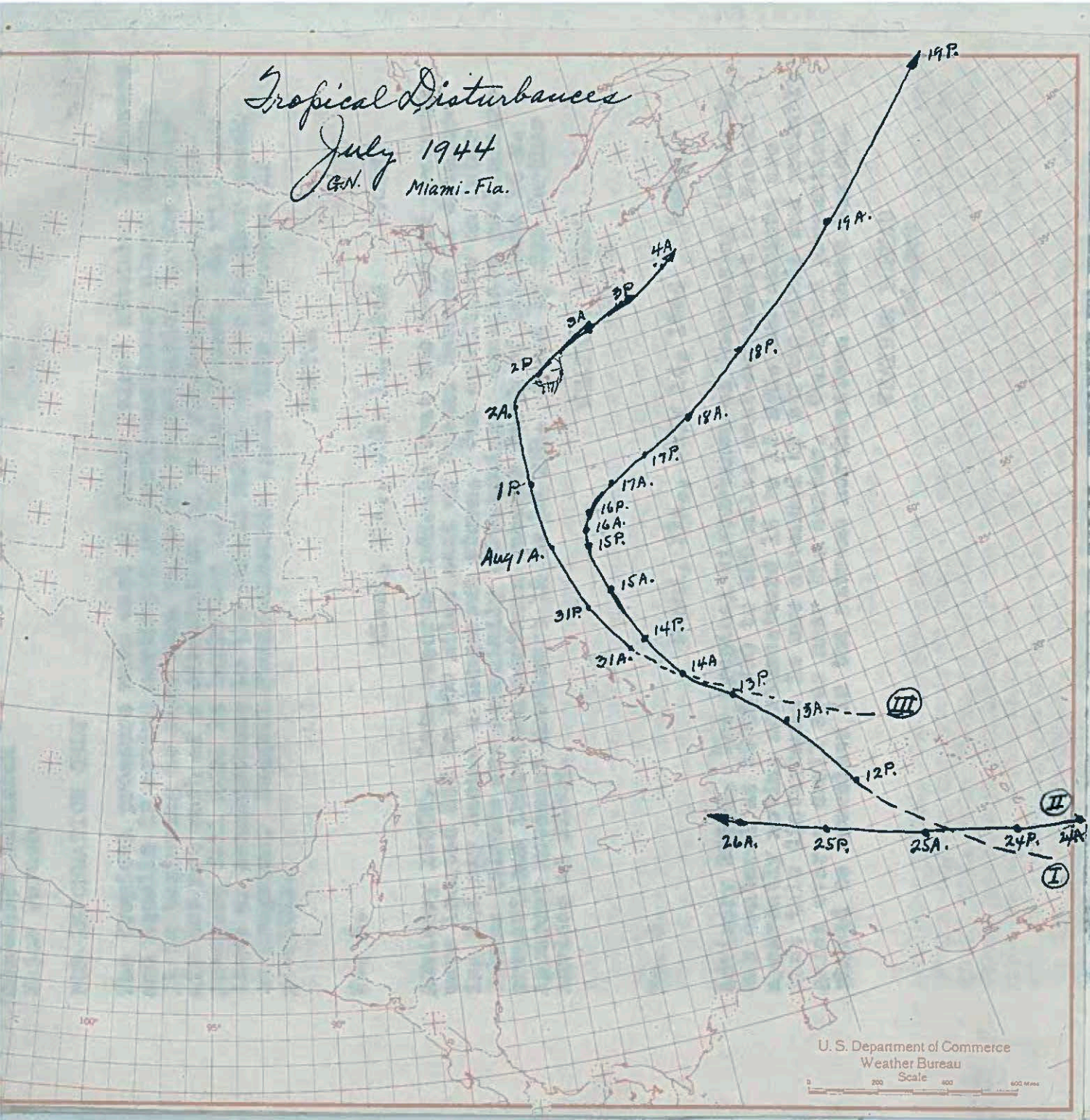
Respectfully,

G. N.

Grady Norton,
Meteorologist.

Incls.

Copy to:
WBAS, New Orleans.
WBAS and RO, Atlanta.


Tropical Disturbances
July 1944
C.N. Miami. Fla.
19P.
19A.
18P.
18A.
17P.
17A.
16P.
16A.
15P.
15A.
14P.
14A.
13P.
13A.
12P.
4A
3P
3A
2P
2A.
1P.
Aug 1A.
31P.
31A.
26A.
25P.
25A.
24P.
24A.
III
II
I
U. S. Department of Commerce
Weather Bureau
Scale
Carolina coast should stand by for further advice early Sunday.
WEATHER BUREAU - Johnson

Station File 607

Miami 32, Florida

August 30, 1944.

Chief U. S. Weather Bureau,
Washington 25, D. C.
(Through Official in Charge)

Subject: Report of Tropical Storms, August 1944.

Sir:

Two storms were charted in August. The small hurricane of August 16-24 across the Caribbean Sea and into Mexico, and a minor disturbance in the southwestern Gulf of Mexico on the 21-22nd.

The Caribbean hurricane was first noted east of Barbados on the 16th. It passed south of Barbados and over the Grenada Islands during the night and by 0830Z of the 17th had entered the Caribbean not far from St. Vincent. It moved on a west-northwest course and struck Jamaica on the 20th, passed near Grand Cayman on the 21st, and entered the Yucatan Peninsula a short distance south of Cozumel Island on the morning of the 22nd. It lost force over land, but entered the Gulf of Mexico intact between Merida and Campeche and moved westward into Mexico north of Vera Cruz on the 24th.

Throughout it's course in the Caribbean Sea this storm had a very small center, with winds about hurricane force. The center was so small that it's existence would not have been more than suspected from reports 100 miles distant. It was very definitely located, however, on several occasions by airplane reconnaissance, which enabled us to follow it's course very accurately and give accurate advance warnings of it's approach to all areas affected.

Damage reports are incomplete and mostly obtained from press dispatches. These indicate the loss of a British sailing vessel near the Grenada Islands with 74 persons aboard, all of whom are presumed lost. On Jamaica 30 persons were reported killed and "thousands" were made homeless. Property damage is given as $1,000,000, with great loss to the banana and coconut crops. The maximum wind at Kingston 60 MPH from WSW, lowest pressure 999 mbs.

No reports have been received of damage at Grand Cayman, where the wind reached 80 to 90 MPH in gusts with more than 20 gusts above 80 MPH. Neither have reports of damage been received from the Yucatan Peninsula area visited by the storm. However, the 110-ft. MS ISLAND TRADER out of Miami for Belize was reported lost in the hurricane off Yucatan, but details of loss of life and cargo, if any, are lacking.

From these reports, a total loss of life of more than 100 is indicated, and property damage of several million dollars. At least two fair sized vessels were lost, and there were reports of others damaged.

The minor disturbance in the Gulf of Mexico developed on the 21st several hundred miles southeast of Brownsville, and moved into Mexico south of that place on the 22nd. It never developed more than moderate gale force in squalls. A detailed report on this storm will be made by New Orleans since it was wholly within that district.

Advices issued by this office, and those issued at San Juan in accordance with coordinating arrangements, are inclosed. The storm tracks have been indicated on the small charts.

Respectfully,

G.N.

Grady Norton,
Supervising Forecaster.

GN:Go
Incls.

Copy to: WBAS, New Orleans.
WBO, San Juan, P.R.
RO, Atlanta, Ga.

UNITED NATIONS AIR FORCES

FROM Tropical Storms TO _____ VIA _____

STATION Miami Fla DATE Aug 1944

FORECASTER G.M. TIME _____ G.M.T.

FORM UNF-SM (CB AND SA) U.S.W.B.

22P 22A 21P 21A

23A 23P 22A 22P 21P 21A 20P 20A 19P 19A 18P 18A 17P 17A 16P

Turks Island 050

Puerto Plata 017

San Juan 015

St. Thomas 013

St Martin 011

St Kitts 010

St Croix 012

Ponce

Oaxaca 120

San Jeronimo 118

Liberia 082

Cocos I.

ZONE 93 ZONE 94 ZONE 95 ZONE 98

File 607

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

Airport Station,
New Orleans 17, La.

September 5, 1944

Chief U. S. Weather Bureau,
Washington 25, D. C.
(Through Official in Charge, New Orleans, La.)

Subject: Tropical Storms, August 1944

Sir:

One tropical storm developed over the southwest Gulf of Mexico and another moved into the New Orleans District from the Caribbean during August 1944.

Development in the Gulf of Mexico occurred during August 20 within an isallobaric wave which was evident over the Windward and Leeward Islands on August 13. This wave moved westward across the Caribbean without development, and was over Yucatan on the 19th. Increase in intensity and the existence of a circulation was evident on the 20th. The disturbance passed inland about noon south of Brownsville on the 22d. The highest winds observed at coastal stations were 34 mph at Port Isabel and 32 mph at Brownsville. No damage has been reported.

The second storm was first noted on August 16 and moved across the northern Caribbean and entered Yucatan a short distance south of Cozumel Island on the 22d. The storm, which was small in diameter but was attended by winds of hurricane force over a small area, apparently lost intensity crossing Yucatan but maintained its identity, although we do not believe it regained hurricane intensity. Navy reconnaissance flights were made during the 23d; some of them were confusing, doubtless because the pilots in the bad weather were unable to obtain their exact positions. One pilot who flew through the center estimated the surface wind at 60 mph.

The storm apparently moved inland near midnight south of Tuxpan. No severe winds are contained in our incomplete coastal reports. According to newspaper reports at least 12 deaths were caused inland as a result of heavy rains and melting snow.

Paths of the two storms and the advisories issued are inclosed herewith.

Respectfully,

WRS

W. R. Stevens,
Supervising Forecaster

(Incl.)

cc: Regional Office, Fort Worth
Weather Bureau Office, Miami

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

File No.
U. S. WEA
Miami, Fla.
Received
SEP - 9 194

URFACE MAP

UNITED NATIONS AIR FORCES

FROM _____ TO _____ VIA _____

STATION _____ DATE _____

FORECASTER _____ TIME _____ G. M. T.

FORM UNF-SM (CB AND SA) U.S.W.B.

August 1944

Tropical Storms in New Orleans District

22a
21p
21a
20p
23p
23a
22p

ZONE 93 ZONE 94 ZONE 95 ZONE 96 ZONE 97 ZONE 98 ZONE 99 ZONE 00 ZONE

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

Airport Station
New Orleans 17, La.

October 3, 1944

Chief, U. S. Weather Bureau
Washington 25, D. C.
(Through Official in Charge, New Orleans, La.)

Subject: Tropical Disturbance, September 8-10, 1944.

Sir:

Cyclonic curvature of the isobars and a partial wind circulation over the southwest Gulf of Mexico at 1430Z of September 7 was evidence that there was danger of a tropical storm developing in that area.

Within the next thirty hours isobars with cyclonic curvature covered the entire west Gulf and the surface map, as well as 5,000 and 10,000-foot charts, suggested that a complete wind circulation had developed about latitude 23, longitude 94.

We wish to emphasize that the storm did not develop as an extratropical wave on the stationary front that extended through southeastern Louisiana and the extreme northwest Gulf of Mexico as has been claimed in some quarters. The following evidence is submitted to clarify any confusion that may have arisen as the result of such claims:

(1) Moderate continuous rain and thick altostratus were reported in the west-central Gulf on September 7 and later--obviously not associated with the front.

(2) Cyclonic curvature was developing hundreds of miles south of the front.

(3) Extratropical wave cyclones do not have small centers with such steep gradients. The difference in pressure between Burwood and Pilottown, Louisiana at 1430Z, September 10, was approximately 12 millibars.

(4) Extratropical wave cyclones do not have calm centers--Pilottown reported wind 3 knots, pressure 29, 30 inches in the center.

Reports above from Pilottown were furnished by the Navy.

File No. 607
U. S. WEATHER BUREAU
Miami, Fla.
Received OCT 6 1944

VICTORY
BUY UNITED STATES WAR BONDS AND STAMPS

The strongest winds reported were 32 MPH at Fort O'Connor, 34 MPH at Burwood, 34 MPH at Pilottown, estimated about 40 MPH at Point a la Hache and Fort Sulphur, 47 MPH at Pensacola WBO, and 54 MPH at Pensacola Naval Air Station.

The tide in Mobile River reached a height of 3.8 feet which is the highest since September 1, 1932.

Considerable damage was caused by heavy rains. Some of the heavier 24-hour amounts reported the morning of September 11 are:

Alabama

Mobile WBO	7.00	inches
Springhill	9.50	"
Bellingrath Gardens	11.00	"
River Falls	10.15	"
Brewton	7.53	"

Florida

Pensacola WBO	6.67	"
Crestview	5.15	"
Valparaiso	8.73	"

Losses to crops in Mobile and Baldwin counties, Alabama, as reported by the Official in Charge at Mobile, are:

Corn crop reduced	15%
Soy beans crop reduced	10%
Hay crop reduced	40%
Peanut hay crop reduced	30%
Fall potatoes crop reduced	40%.

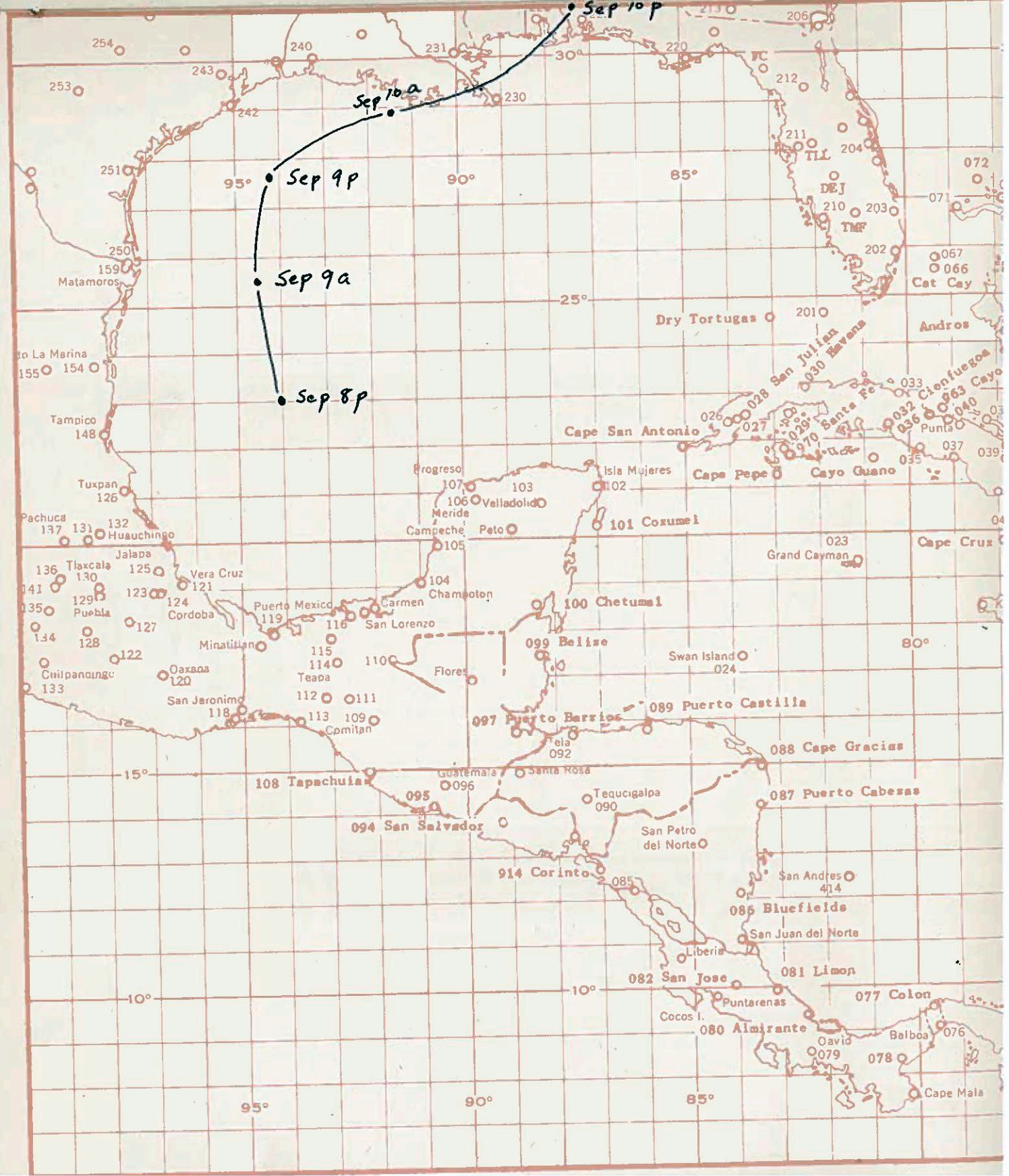
Path of the storm and all advisories issued are inclosed herewith.

Respectfully,

W. R. Stevens,
Supervising Forecaster.

Incls.

Copy to RO, Ft Worth, Texas
Copy to RO, Atlanta, Ga.
Copy to WBO, Miami, Fla.
Copy to WBO, Mobile, Ala.
Copy to WBAS, Mobile, Ala.
Copy to WBO, Pensacola, Fla.


Sep 10p
Sep 10a
Sep 9p
Sep 9a
Sep 8p
Matamoros
Tampico
Tuxpan
Vera Cruz
Tlaxcala
Puebla
Jalapa
Huauchinango
Cordoba
Orizaba
Minatitlan
Coatzacoalcos
Oaxaca
Teapa
Villahermosa
Tapachula
Progreso
Isla Mujeres
Cape San Antonio
Cape Pepe
Cayo Guano
Cape Crux
Grand Cayman
Dry Tortugas
Andros
Havana
Cienfuegos
Cayo
Cat Cay
Campeche
Merida
Peto
Valladolid
Cozumel
Chetumal
Carmen
Champoton
Puerto Mexico
San Lorenzo
Flores
Belize
Swan Island
Puerto Barrios
Puerto Castilla
Cape Gracias
Guatemala
Santa Rosa
Tegucigalpa
Puerto Cabezas
San Salvador
San Pedro del Norte
Corinto
San Andres
Bluefields
San Juan del Norte
Liberia
Limon
San Jose
Puntarenas
Cocos I.
Almirante
Colon
Balboa
Cape Mala
David
Comitan
San Jeronimo
Chilpancingo
Pachuca
Huauchinango
Santa Fe
Punta
TFC
TLL
DEJ
TMF
95°
90°
85°
80°
30°
25°
20°
15°
10°

Station File 607

Miami 32, Florida

September ~~28~~ 30, 1944

Chief U. S. Weather Bureau,
Washington 25, D. C.
(Through Official in Charge)

Subject: Report of Tropical Storms - September 1944.

Sir:

Two hurricanes were charted in September 1944. The first was the "Great Atlantic Hurricane" of September 9-15th that lashed the Atlantic seaboard from North Carolina to Newfoundland. The second was a small hurricane that formed in the northwestern Caribbean Sea near the Yucatan Channel on the 19th, crossed Yucatan on the 20th, and moved southwestward into Mexico on the 21st.

THE GREAT ATLANTIC HURRICANE was first suspected on the 8th, when a pressure fall was noted advancing into the Windward Islands, and the winds become erratic and later showed a circulation pattern. At first it was thought that a storm was moving toward these islands and, in fact, a weak circulation did appear to move through them. However, this weak false circulation did not justify the more pronounced indications that a strong disturbance existed somewhere in the vicinity. Accordingly, a reconnaissance plane was dispatched on the 9th to fly northeastward from these islands and scout for a storm further north. This flight resulted in locating the storm in the vicinity of Lat. 21 N, Long. 60 W. Later reconnaissance showed it to be a fully developed hurricane and moving on a west northwest course.

From this location it was followed by plane observations, with at least one good location of the center daily, until it came under the influence of land stations on the coast of North Carolina on the 14th. This hurricane was evidently one of the Cape Verde family of storms, similar to the New England hurricane of 1938 in both intensity and general course followed. This great hurricane gave damaging winds of hurricane force from Cape Lookout, N.C. to Newfoundland, a distance of more than 1200 miles, and about 900 miles of

the coast of the United States was affected. Fortunately, however, in contrast to the New England storm of 1938, this hurricane did not move directly inland. The center remained off-shore, except at Cape Hatteras and Cape Cod, which placed nearly all coastal points of the United States on the western, or weaker side. This hurricane was so large and so violent that we soon adopted the term "The Great Atlantic Hurricane" in our advisory messages in an effort to convey a proper description of it. When it was off the northern Bahama Islands on the 12-13th, hurricane force winds had a diameter of at least 150 miles, and the area of gale force 8 or above was 500 miles in diameter. A weather officer aboard an Army reconnaissance plane that became involved in the storm near the center when it was near latitude 27, long. 74, estimated the wind at about 140 MPH. He reported turbulence so great, that with the pilot and co-pilot both at the controls, the plane could not be kept under control, and several times it was feared the plane would be torn apart or crash out of control. When they finally got out of it and returned to base, it was found that 150 rivets were sheared off in one wing alone. So dangerous and terrifying was this experience that they advised future reconnaissance planes not to approach closer than 75 miles of the center.

The master of a sea-going tug on a rescue mission became involved in the storm near the same location and estimated the wind at 150 knots. We are of the opinion that this estimate was somewhat too high, due to the fact that the rather small boat was so violently lashed by the mountainous seas and winds that an accurate estimate was difficult to arrive at. It will be clearly apparent, however, from the experiences of these observers that the storm at this time was indeed a monster of violence.

It is worthy of note that the experience of the plane described above is at considerably variance with that reported in a magazine article as made by Dr. Wexler aboard a plane that flew into the storm when it was off the middle Atlantic coast several days later. If this report is correctly stated, it appears that much of the turbulence and tropical violence had been lost by the time it had moved into extra-tropical latitudes.

At this time (12th), it was moving very slowly westward and, though we were reasonably certain of a northward turn before it reached Florida, it was deemed advisable to place all sections of the coast from Hatteras to Miami on the alert. About 9 p.m. of the 12th, the northward turn had become evident and the alert was cancelled on the Florida coast

with the statement that the northward turn would carry the storm well east of the coast, but that the Carolina and Georgia coast should remain on the alert. At 10 a.m. of the 13th storm warnings were ordered on the coast from Savannah to Hatteras, and at 5:00 p.m. hurricane warnings were displayed from Myrtle Beach, S. C. to Cape Hatteras with statement that the hurricane center would be near the southern North Carolina coast by early morning of the 14th. The 10 p.m. advisory on the 13th emphasized warnings of hurricane force winds on the coast north of Wilmington to Hatteras and northward.

The center passed very near Cape Hatteras about 8-9 a.m. on the 14th. Hatteras pressure 27.97 inches was much the lowest ever recorded at that place, and winds were "the highest ever experienced" according to oldest inhabitants. The wind instruments of the Weather Bureau failed after reaching 66 MPH. Hurricane force winds occurred from Cape Lookout northward over all the tide-water section of North Carolina. Thus hurricane winds were experienced in about one-third of the area of the coast where warnings were displayed by this office the previous day. This was about as expected, but owing to the great size and extreme violence of this storm it was thought best to warn a larger area than we really believed necessary.

Damage to coastal sections in the Miami District (south of Latitude 35) was not great, and no lives were lost on shore so far as known. Loss and damage north of latitude 35 were very severe, but these will be made the subject of reports by the Forecast Districts Centers and other officials concerned.

Damage to shipping in the Miami District was heavy, with heavy loss of life. We are not fully informed regarding these, due to war-time censorship restrictions. Full details are in the hands of the Navy Department. It is known, however, that a destroyer was lost with around 200 of her men, and that a number of other ships were heavily involved in the storm and suffered damage. This disaster occurred when the storm was east of Florida on the 12-13th.

Airplane Reconnaissance. This great hurricane, while in the Miami District, moved over open ocean from the time it was first located until it struck the North Carolina Capes. We were entirely dependent on airplane observations to locate and follow it. If it had not been for the excellent reporting by planes of the Army, Navy, and Royal Air Force it would have been virtually impossible to follow the storm over this blind stretch of ocean. With these daily reconnaissance reports, however, it was possible to follow the storm with a high degree of accuracy and issue timely warnings. This is also true of all

the storms we have had to deal with this season, a total of eight so far. In all my experience, I can recall no season when storms were charted with greater accuracy than this year, and it has been dependent in every case on reports obtained by aircraft. This method of securing information on tropical storms has proven itself one of the best and quickest so far developed. In pioneering and perfecting this method of securing reports, the men have flown many hazard missions into these storms to obtain the observations. We believe the highest commendation is due these pilots, weather officers, and crews for their great service.

THE YUCATAN STORM of the 19-21st, formed in the Caribbean Sea near the Yucatan Channel from a wave that had been traced for several days through the Caribbean. It quickly developed a small center of about hurricane force and moved into northern Yucatan on the 20th. Thereafter it curved to the southwest, passed south of Merida and entered the Gulf of Mexico at Campeche near midnight of the 20-21st and continued southwestward into Mexico again between Carmen and Puerto Mexico in the late afternoon of the 21st. Reports received from Yucatan and from aircraft indicated a very small center, with winds of about 75 MPH throughout its course.

No damage reports have been received at this office on this storm. Since the storm was in the New Orleans District during most of its course, that office will report more fully. Only two advisories were issued at Miami before it was turned over to New Orleans.

Copies of all Miami Advisories and Warnings are attached, also track charts and some interview notes.

Respectfully,

G. N.

Grady Norton
Supervising Forecaster.

GN:Ge
Encl.

NOTES FROM AN INTERVIEW WITH A WEATHER OFFICER
ON HURRICANE RECONNAISSANCE
HURRICANES OF SEPT 1944

The following observations in regard to meteorological aspects of hurricane reconnaissance are listed here as a matter of record following an interview with Lt. Victor Klobucher. Mr. Klobucher was weather officer aboard an Army reconnaissance plane which flew through the Great Atlantic Hurricane of September 9-15, 1944, and also took part in reconnaissance through the smaller tropical storm of September 19-21, 1944.

In the flight through the Atlantic hurricane, the plane took off from Bermuda, flew southeastward against strong cross and headwinds into the center of the storm on the afternoon of the 14th. Extreme turbulence was encountered and it was felt that further reconnaissance through the center of the storm should not be undertaken. Examination of the plane at destination revealed that over 120 rivets were missing from the wing.

Features of both storms, from a meteorological standpoint, were virtually the same, although the intensity was of course much less in the Yucatan storm. The topics below embody the specific observations common to both storms:

TURBULENCE: Extreme turbulence was encountered in the Atlantic storm, but only moderate turbulence in the one near Yucatan. The turbulence was characterized essentially by choppiness of rather short period, but was free from major drafts, either up or downward. No appreciable variation in the character of turbulence was apparent in various sectors of the storm, and the intensity was regarded as essentially the same at the center as outside the center within the principal periphery of the storm, and apparently did not vary with flight elevation.

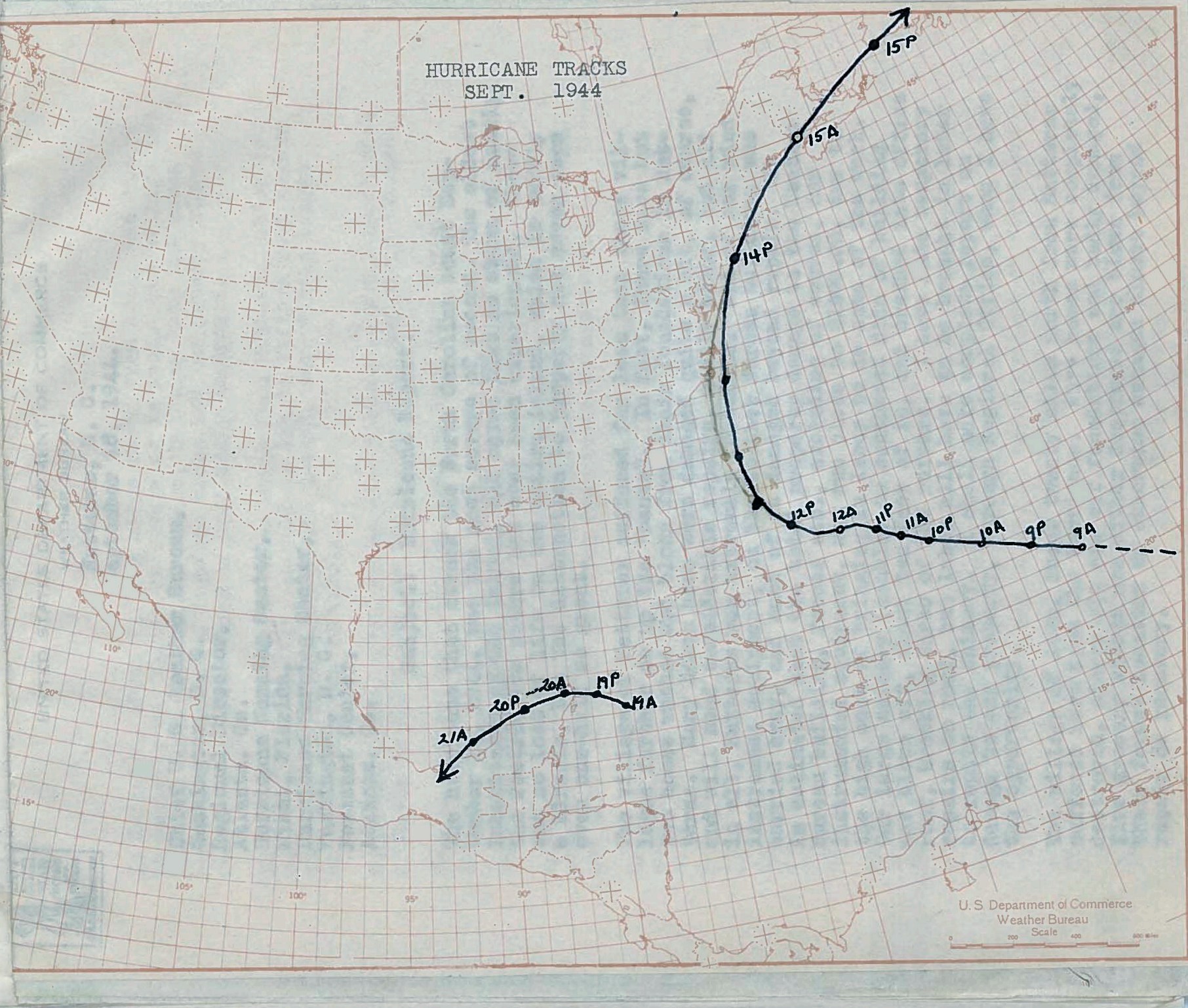
CLOUDINESS: Upon approaching the Atlantic storm area tall cumulus and cumulonimbi were observed in lines extending to an estimated maximum height of 15-20 thousand feet. Mr. Klobucher was surprised to find that meteorologists at this office regarded the storm depth or vortex as approaching 40 thousand feet at the time of the reconnaissance. In his opinion, the clouds within the storm area could have been topped everywhere at around 20,000 feet, except for some thin cirrus at higher altitudes.

ELECTRICAL PHENOMENON: No evidence of lightning flashes, or electric discharges was observed anywhere in the vicinity of, or within, either storm, although considerable static was

present at all time, possibly due to precipitation.

NAVIGATION AND SURFACE WIND DETERMINATIONS: All navigation was done by dead reckoning. All upper air determinations were made by double drift methods flying 10 to 15 seconds on each leg of the drift. The taking of observations was directed by the weather officer aboard who occupied the bombadier's position in the nose of the plane. He was equipped with a large magnetic compass with which he obtained the orientation of the major crests of the sea. Direction of the sea spray could not be observed. At no point were cross-seas sufficiently in evidence to confuse the major crests except in the center where tumultuous seas existed and it was difficult if not impossible to get a line on the orientation. As the storm center was approached, a new observation was usually made as soon as the weather officer in the nose of the plane was able to determine that the wave crest had shifted 10 to 20 degrees from its previous orientation.

EYE OF THE STORM: No enlightening of the sky was found in the center of either storm, although the sharp shift in winds encountered gave excellent indication of the position of the center. No drafts were encountered in the center.


HURRICANE TRACKS
SEPT. 1944
15P
15A
14P
12P
12A
11P
11A
10P
10A
9P
9A
21A
20P
20A
19P
19A
U.S. Department of Commerce
Weather Bureau
Scale



UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

Hatteras, N. C.
September 18, 1944.

Chief U. S. Weather Bureau,
Washington, D. C.
Regional Director,
Atlanta, Ga.
Hurricane Warning Center,
Miami, Florida,
Hurricane Warning Center,
Washington, D. C.
Forecast Center,
Atlanta, Ga.

Subject: Hurricane Report.

The hurricane that struck the North Carolina coast September 14, 1944, was the most severe of record. The oldest inhabitants of the island, all agree that no storm of nearly the destructive nature has ever been experienced. There was no loss of life on the entire island, which is surely a miracle, but the destruction to property has never been even one-half so great.

The village of Hatteras suffered far less than those villages farther on up the "banks". In fact, there were but two homes washed and blown from their foundations in Hatteras. Many homes here were damaged quite a bit, of course, and will need considerable repairs, mostly minor, but all in all, Hatteras was extremely fortunate. All of our wind instrument equipment, on the Weather Bureau building, was carried away, and much of it damaged beyond repair. It is estimated that the total property damage to the Weather Bureau building, fences etc., excluding of course, our instrumental equipment, may run close to $1000.00, due to the high cost of bringing in labor to do some of the work. Our large chimney (double) on southwest side of building was blown off, about ten feet of it, and crashed into office roof, breaking three of the rafters. I have made temporary repairs to roof, but labor will have to be brought in later to repair the chimney. I shall make complete report on damage to our property, through Regional Office, when I have the opportunity.

The village of Avon, about twenty miles north from Hatteras suffered most from the hurricane. Five homes were completely destroyed, ninety six are off foundations and badly damaged, five grocery stores are either destroyed are blown from their former location or otherwise damaged almost beyond repair or recovery.

Very truly yours,

R. B. Bailey,
Assistant Meteorologist

In Rodanthe, about fifteen miles north from Avon, the damage to property was almost as severe as in Avon. The village is not more than one-third the size, but they have but seven homes left standing. Eighteen homes and two grocery stores were either washed down or completely destroyed.

In Buxton, about twelve miles north from Hatteras, which is very thickly "wooded", as well as ten to fifteen feet higher than the other villages on the island, very little damage of importance was suffered.

Ocracoke, twenty miles south from Hatteras, on the south side of Hatteras Inlet had ten homes destroyed and fifty damaged.

From the above, you will see that we were very fortunate indeed, in Hatteras.

The rise in tide above normal was approximately as follows:

Ocracoke 7 feet, Hatteras 7 feet, Buxton not affected, Avon 9 feet, Rodanthe 9 feet. These villages are listed in the order of their location from Ocracoke northward.

Hatteras has experienced higher tides, but never a wind of such force. Fortunately the high wind did not hold up for many hours. We did not have the maximum velocity until 5:00 a.m. EST. Then it began to increase steadily until our wind instrument support was carried away, at 8:55 a.m. At that time it was maintaining 66 miles right along, and steadily increasing. The wind shifted, or backed from NE to N at 8:00 a.m., to NW at 8:25 a.m. and to W at approximately 9:35 a.m. It was from the west that we had the strongest wind.

While we have seen no weather map showing the path of the hurricane, it is plainly evident from the wind direction that it passed off-shore from our station.

947 Mb

I personally watched our barometer and read it at its lowest point, 27.97 sea-level, at 8:20 a.m. EST. This was by far the lowest barometer ever recorded on this station. The previous low record being 28.26, in the hurricane of September 16, 1933. I was obliged to adjust our barograph twice to prevent it going off the sheet.

If there is any further information desired, that we are able to supply, it will be a pleasure to do so.

Very truly yours,

R. B. Dailey

R. B. Dailey,
Assistant Meteorologist

P.S. Warning service was excellent RBD

File 607

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU

Airport Station
New Orleans 17, La.

October 9, 1944

Chief, U. S. Weather Bureau
Washington 25, D. C.
(Through Official in Charge, New Orleans, La.)

Subject: Hurricane, September 19-21, 1944.

Sir:

This storm originated in the northwest Caribbean Sea within a katalloparic wave that had moved from the Windward Islands. The wave intensified rapidly, coincident with the formation of a circulation, during the 19th.

An abrupt change to the southwestward in the path of the storm occurred during the 20th. During the morning of the 21st, the following message was received from Pan American Airways at Campeche:

"2400-0200Z wind northeast 50 MPH barometer falling rapidly stop 0200-0400Z wind absolutely calm lowest pressure 1001 MBS at 0400Z stop 0500Z wind began from east 75 MPH with heavy showers."

This hurricane moved inland a short distance west of Carmen during the early afternoon of the 21st, apparently with undiminished intensity. The area of severe winds was small.

No direct reports of damage have been received but according to newspaper reports 200-300 people were drowned in the mountains of the Isthmus of Tehuantepec. It seems probable that melting snow was a factor in the severe flooding.

We are deeply grateful for the excellent reconnaissance flights and reports that were made during the daylight hours in the area of the storm. This was the best work of this kind that has ever been performed in connection with a storm in the Gulf.

Path of the storm and all advisories issued by this office are attached.

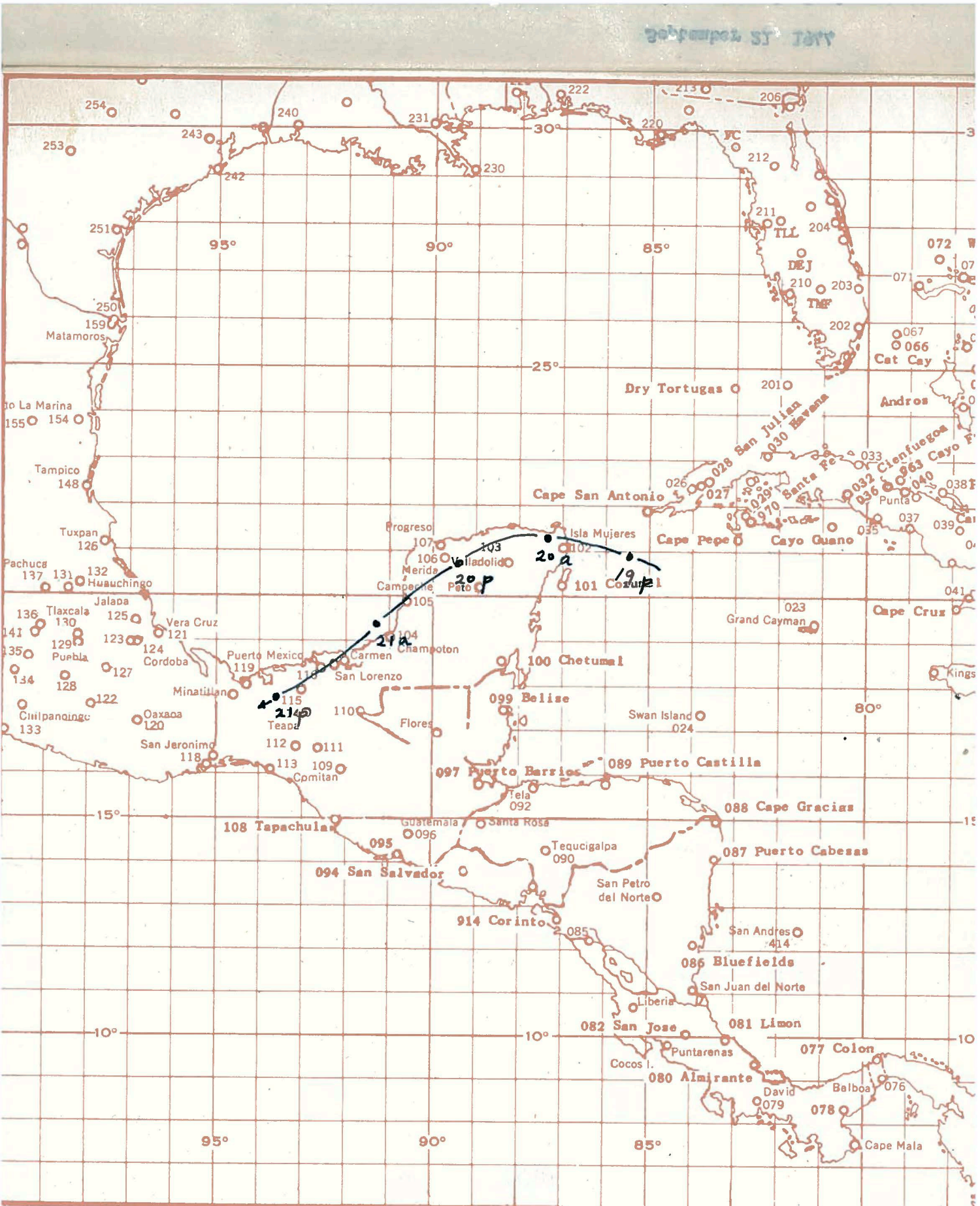
Respectfully,

W. R. Stevens,
Supervising Forecaster.

Incls.

Copy to RO, Ft Worth, Texas
Copy to WBO, Miami, Florida.

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS


254
240
231
222
213
206
253
243
30°
220
FC
212
242
230
251
211
TLL
204
95°
90°
85°
DEJ
210
203
072
071
THF
250
202
159
Matamoros
067
066
Cat Cay
25°
Dry Tortugas
201
Andros
155
154
La Marina
030 Havana
028 San Julian
033
Cienfuegos
Tampico
148
026
027
Cape San Antonio
029
Santa Fe
032
036
Punta
037
039
Tuxpan
126
Progreso
107
Isla Mujeres
102
Cape Pepe
Cayo Guano
035
Pachuca
137
131
132
Huauchinago
106
103
Valladolid
20a
19
Merida
Campeche
Peto
20p
101
Cozumel
105
041
Jalapa
125
136
Tlaxcala
130
Vera Cruz
121
023
Grand Cayman
Cape Cruz
141
129
123
124
Cordoba
21a
104
Champoton
Puerto Mexico
119
Carmen
100 Chetumal
135
Puebla
127
134
128
San Lorenzo
Minatitlan
115
099 Belize
122
Chilpancingo
133
Oxaoa
120
21p
Teapa
110
Flores
Swan Island
024
80°
112
111
San Jeronimo
118
113
109
Comitan
097 Puerto Barrios
089 Puerto Castilla
Tela
092
15°
088 Cape Gracias
108 Tapachula
Guatemala
096
Santa Rosa
095
Tegucigalpa
090
087 Puerto Cabezas
094 San Salvador
San Petro
del Norte
914 Corinto
085
San Andres
414
086 Bluefields
San Juan del Norte
Liberia
10°
082 San Jose
081 Limon
077 Colon
Puntarenas
Cocos I.
080 Almirante
David
079
Balboa
076
078
95°
90°
85°
Cape Mala

FORECASTER'S REPORT ON HURRICANE OF OCTOBER 12-22, 1944

By Grady Norton and R. H. Simpson
Weather Bureau Office, Miami, Fla.

RECEIVED
NOV 16 1944
Weather Bureau Airport Station
Hialeah, Fla.

The hurricane of October 12-22, 1944, was of major proportions, and the most destructive storm to visit Cuba and Florida in recent years. Property and crop damage will run well over $100,000,000 in Cuba and Florida, and the death total will exceed 300, with many more injured and homeless.

This storm formed in the Caribbean Sea south of Grand Cayman Island on the 12-13th, and lingered in that vicinity with very little movement until the 16th. During this time it intensified to a major hurricane. Grand Cayman had four days of rain and gales with a total rainfall of 31.29 inches, and the wind finally reached a maximum velocity of 95 mph. By the 16th the center had drifted to the vicinity of latitude 19 N. and longitude 83 W. and northward movement began. The center passed over the Isle of Pines and western Cuba during the night of the 17-18th and was a short distance west of Havana around 8 to 9 a.m. of the 18th. Havana (Batista Field) reported lowest pressure 28.36 inches at 8:00 a.m. with wind 85 mph and gusts to 125 mph.

The hurricane was very destructive in the Isle of Pines-Cuba area and the greatest loss of life occurred here. Upward of 200 were reported killed on the Isle of Pines, 24 in the Havana area, and possibly a total of 300 for the whole Cuban area. Havana harbor was a shambles of wrecked and sunken vessels of all types, and had to be closed to traffic until it could be cleared. In addition, thousands of homes were reported destroyed and damaged. These data are taken from press, Army, and Navy sources. The official report from Dr. Millas of the Cuban National Observatory has not as yet been received.

The calm center passed over Dry Tortugas from 4:00 p.m. to 6:00 p.m. of the 18th, where the lowest pressure reading so far reported occurred - 28.02 inches, (aneroid uncorrected). The wind on a special airways type anemometer recorded 120 mph for two consecutive hours before it was finally blown away. Northward movement continued and the center passed into Florida on the west coast near Sarasota during the early morning hours of the 19th and was over Tampa from 6:00 a.m. to 7:00 a.m., over Ocala from about 10:30 a.m. to 2:00 p.m., Jacksonville from 1:30 p.m. to 5:00 p.m., and over Savannah, Ga. from about 9:00 p.m. to 12:55 a.m. All times EWT.

It is noted that the calm center took a very unusually long time to pass over a given place for a storm that was moving approximately 20 mph. A careful preliminary examination of available data indicates that after the storm left Cuba, the vortex was no longer symmetrical or circular, but rather it was distorted and elongated to an oval or even a shear-line stretched out along the path of advance. At the time the center was between Ocala and Jacksonville, the calm center reached nearly the entire distance between them, or about 70 mile airline. At Savannah it took nearly four hours for the center to pass.

The entire Florida peninsula from the Keys to Georgia and westward nearly to Tallahassee, as well as the coastal sections of Georgia and of South Carolina, experienced winds of gale to hurricane force. The areas of strongest winds and greatest damage in Florida occurred in a belt 20 to 50 miles east of the path of the calm center, although no section of the peninsula escaped damaging winds. There is attached a map of Florida and tables showing the path of the storm center, with extremes of wind and pressure at a number of places.

It will be seen that the area of strongest winds swept the great citrus and truck producing areas of the State. This belt extends roughly from Ft. Myers and Sarasota through Arcadia, Sebring, Bartow, Lake Wales, Winter Haven, Lakeland, Lake Alfred, Auburndale, Haines City, Kissimmee, Orlando, Mt. Dora, and on to Daytona Beach, Palatka, St. Augustine, Jacksonville and Fernandina.

DAMAGE TO CROPS.

The damage to citrus and truck is conservatively estimated at $50,000,000. A total of around 25,000,000 boxes of fruit was blown from trees, bruised, thorned, and otherwise damaged. Of this vast amount, only a small percentage could be salvaged. The fall truck crop was damaged by wind and rain to the amount of 70 to 75 percent. This damage figure is the field price to the growers, and does not reflect the loss to packers, handlers, etc.

DEATHS AND INJURIES.

The Red Cross reports a total of 18 deaths in Florida as a direct or indirect result of the storm. Ten of these were marine casualties, and the remaining eight were on land. However, one marine death and two on land were so indirectly related to the storm that it is doubtful if they should be included in the list. Only 24 persons sustained injuries that required hospitalization.

For a storm of major intensity and covering so much of the State we believe this casualty list is remarkably small, if not a record. This small loss is undoubtedly due to the thorough precautionary measures taken throughout the effected area well in advance of the storm by evacuations and otherwise. The Red Cross sheltered 35,000 persons evacuated from danger areas, and this number represents only a small percentage of people who sought safer locations for shelter during the storm.

BUILDINGS DESTROYED AND DAMAGED

Type of Building	Destroyed	Damaged.
Dwellings	253	10,887
Barns.....	61	543
All others	605	1,977
Totals.....	918	13,407

The monetary damage to buildings, including a few cattle, hogs, and poultry lost in collapsed barns and otherwise, is estimated at around $8,000,000. The loss of livestock was remarkably small, which reflects the extraordinary measures taken to protect them. The list includes 12 cattle, 150 hogs, and 5,700 poultry.

DAMAGE TO POWER AND COMMUNICATION LINES

The power and communications companies suffered heavy damage over the entire storm area, especially to lines, poles, transformers, etc. The final damage figures are not all as yet available, but taking such figures as are available and using them as a basis for estimating the remainder, we arrive at a total of over $800,000. We believe this is a conservative estimate and probably under the actual amount rather than above it.

DAMAGE TO HIGHWAYS AND BRIDGES

The Florida State Road Department reports relatively small damage to roads and bridges. It is believed that this will not exceed $200,000.

DAMAGE TO TREES, ORNAMENTALS AND SHRUBBERY

It is difficult to estimate the damage in this catagory due to the widespread and extensive area, and to the varied types of trees and ornamentals involved. The town of Bartow, for example, lost over 300 giant live oaks which was probably the greatest beauty asset of the city. Ornamental palms were down in great numbers in such places as Key West and Ft. Myers. Forest timber was blown down over extensive areas. It is believed, therefore, that $3,000,000 is a conservative estimate of this type of damage.

MISCELLANEOUS DAMAGE

Added to these impressive figures of property and crop damage, is damage sustained by small boats, piers, docks, eroded beaches, bulkheads, seawalls, fences, etc. Here again it is difficult to arrive at a total, but we believe a very conservative estimate would be $1,000,000.

DAMAGE SUMMARY FOR FLORIDA

Crops	$50,000,000.00
Buildings, (including live stock)	8,000,000.00
Power and Communications companies	800,000.00
Highways and bridges	200,000.00
Trees, ornamentals and shrubbery	3,000,000.00
Miscellaneous	1,000,000.00
Total damage	$63,000,000.00

DAMAGE IN GEORGIA AND SOUTH CAROLINA

Reports of damage for the areas of Georgia and South Carolina affected by the storm are incomplete, but considerable damage occurred over the coastal area of Georgia and Southern South Carolina, from wind and heavy rain. Damage was largely confined to power and communication lines and flooding of low coastal areas by high tides.

WARNINGS AND ADVICES

The Miami office issued a total of 39 warning and advisory bulletins from the time the hurricane was first announced on October 13th until all wire service to the office failed when the storm was over northern Florida on the 19th. On the 18th and 19th, when the storm was over Cuba and Florida, advices were issued every two or three hours, and even more frequently on some occasions. These warnings and advices were broadcast at frequent intervals by all commercial broadcasting stations in Florida. Six stations had microphones in the Miami office and broadcastswere made over these every two hours by members of the station force. Intermediate broadcasts were made every few minutes by station announcers. Copies of all warnings and advices are attached.

One of the most important means of distribution to Florida, was the microphone in our office connected with the Police and Highway Patrol network. By this means the warnings and advisory information was carried to all law enforcement officials and Highway Patrol cars throughout the State directly from our office immediately on issue.

All other means of distribution were widely and extensively used to disseminate the warnings. The press services and daily newspapers were especially cooperative. So effective was the warning distribution that no person in the State was without complete warnings and information. I do not believe that a storm in Florida was ever more widely and repeatedly announced, and the protective measures were never more complete and effective in safeguarding life and property. The Army and Navy evacuated from the state all planes that were in flying condition and all other military property and personnel were evacuated or secured to best possible advantage. It is impossible to estimate the vast amount of property and life saved by these measures, but it will doubtless run into the hundreds of millions of dollars and thousands of lives. At Key West, for example, 150 smaller naval vessels were so effectively secured, after personnel was removed to safety, that none were lost and only six vessels were beached or grounded. These can be salvaged without great expense.

LIAISON WITH THE MILITARY.

The closest and most cordial liaison was maintained throughout the storm with the Navy and Army aerological offices at Miami. Captain Davisson of the Gulf Sea Frontier, and Major Porush of the Army Air Force, were in constant touch with our office. All observational material was promptly exchanged between us, and all advices and warnings were coordinated as far as practicable before release. The result was a smooth, deliberate, unhurriedly executed plan of action by both military and civilian interests. No hysteria or panic was evident, and wild and confusing rumors were kept to a minimum. This was very gratifying to us, and resulted in the best possible protective action by all concerned.

REACTION OF THE PRESS AND PUBLIC.

No adverse editorial comment, or word of criticism has come to our attention regarding the Bureau's warning service in connection with this storm. The comments of press and public have been favorable without exception, so far as we have observed. This is something of a record for a major Florida storm. The comment of the Miami representative of the Associated Press is typical -"Perfect warning service - It couldn't have been better". Perhaps in our own councils we would not be so extravagant, but it is highly pleasing to have universally favorable public reaction to our efforts.

RAWIN IN HURRICANE FORECASTING.

The two major hurricanes of the 1944 season, the September hurricane, and the one covered by this report, had circulation depths well above the top of ordinary pilot balloon observations. It was the RAWIN data reaching to much greater heights that told the story of future movements, and without them future movements could not have been indicated with as much certainty in the forecasts. The Great Atlantic Hurricane of September had evidence of a vortical circulation to a height of 50,000 ft., and the currents carrying it along were even higher. The October storm was not quite so deep, but when northward movement began the vortical circulation approximated 30,000 ft., and it was carried in a current a few thousand feet higher. After it crossed Cuba, the vortex extended only to about 25,000 ft. and it was carried in a current between the 25 and 30 thousand foot levels.

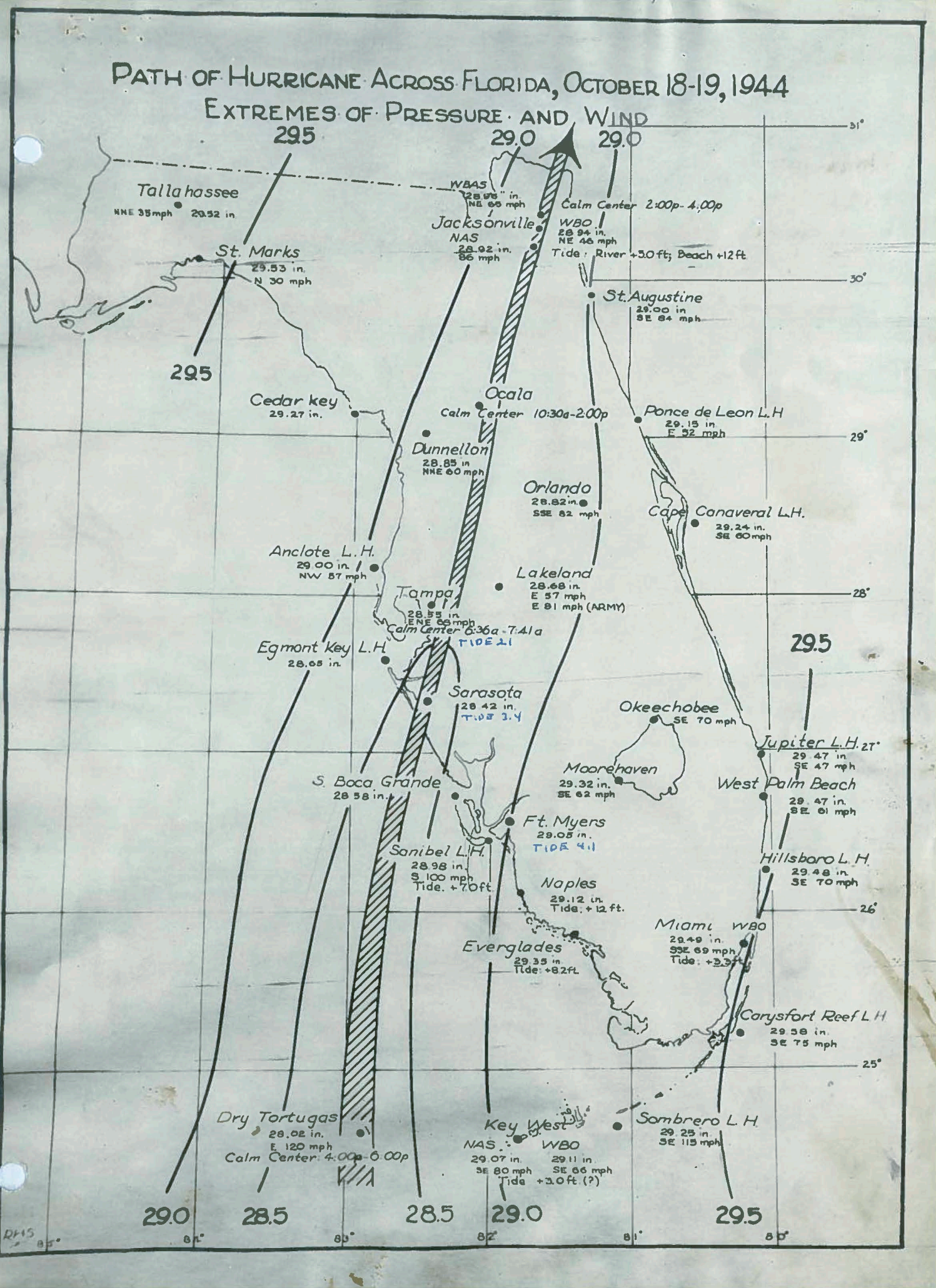
Mr. Simpson of this office has made copies of our RAWIN charts to accompany this report (for restricted distribution) and has made some pertinent comments on their use and value in forecasting the hurricane movement. These will emphasize the urgent need for extending the RAWIN network, especially in the tropical areas, as an invaluable aid in hurricane forecasting. It is urgently recommended that the Weather Bureau lend all possible support to the establishment of additional RAWIN stations in the Caribbean and Gulf area to further implement the hurricane warning service.

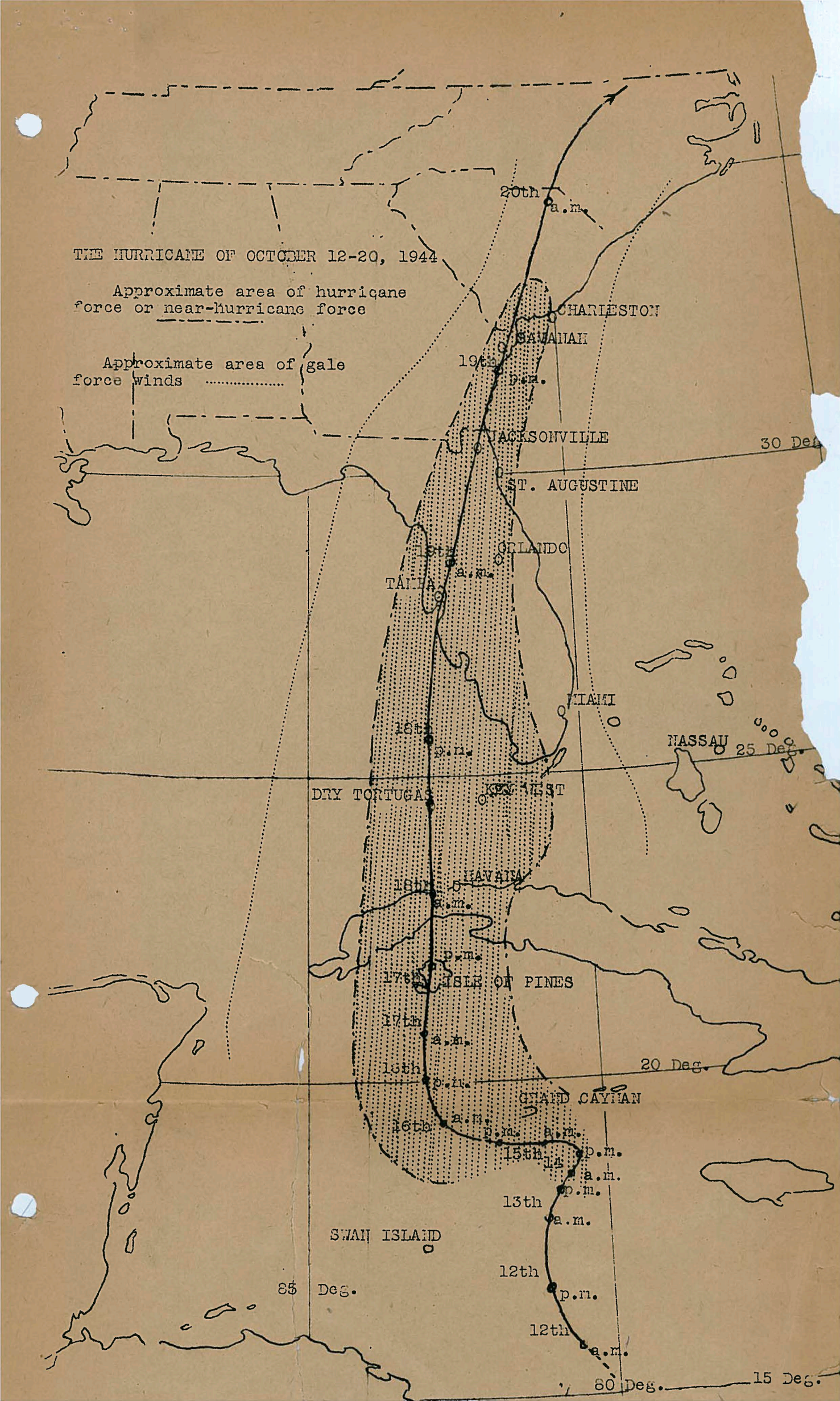
STATION AND DATE	LOWEST PRESSURE (inches)	TIME OF LOWEST PRESSURE	WIND DIR. & SPEED AT TIME OF LOWEST PRESSURE mph	5-MIN. MAX. WIND DIRECTION AND SPEED mph	TIME	1-MIN. MAX. WIND DIRECTION AND SPEED mph	TIME	EXTREME GUSTS mph	DURATION OF GALES (39 MPH OR HIGHER) HRS.	MISC. DATA
Oct. 15.										
Grand Cayman	29.06	6:30p+	E-55			E-95	8:00p.	118		4 Days rainfall. 31.29
Oct. 18.										
Havana										
(Natl. Obsvty)	28.50					140		163		
(Batista Field)	28.36	8:00a.	SSE-80			SE-85	6:45a.	125	17	
Dry Tortugas	28.02	6:00p.		E-120++	2:00-3:00p.	E-120	2:00-3:00p.		72	Calm center 4:00-6:00p.
Key West (WBO)	29.11	3:50p.		SE-56	3:37p.	SE-66	3:11p.		13	
Key West (NAS)	29.07	3:45p.				SE-80		111		
Boca Chica Key				77x	3:00-5:00p.					
Sombrero Light	29.25	5:00p.	SE-110	SE-115	7:00-8:00p.	SE-115	7:00-8:00p.		30	
Alligator Light	29.47	7:30p.								
Everglades	29.35	8:00p.								
Naples	29.12	11:30p.								
Oct. 19.										
Carysfort Light	29.58	12:01a.	SE-70	SE-75	2:00a.	SE-75			30	
Miami (WBO)	29.49	2:57a.	S-60	SSE-65	1:03a.	SSE-69	1:04a.		20	
Miami (WBAS)	29.48	2:30a.				SSE-45		56		
Hillsboro Light	29.48	5:00a.	SE-56	SE-70	2:00a.				16	

\+ All times are EWT. All wind velocities in MPH.
++ Anemometer blown down at 120 MPH.
x Hourly movement for hours indicated.

STATION AND DATE	LOWEST PRESSURE (inches)	TIME OF LOWEST PRESSURE	WIND DIR. & SPEED AT TIME OF LOWEST PRESSURE mph	5-MIN. MAX. WIND DIRECTION AND SPEED mph	TIME	1-MIN. MAX. WIND DIRECTION AND SPEED mph	TIME	EXTREME GUSTS mph	DURATION OF GALES (39 MPH OR HIGHER) HRS.	MISC. DATA
(Oct.19--cont'd)										
Ft. Myers	29.05	1:30a.								
So.Boca Grande	28.58	1:00a.								
Punta Rassa	28.95	2:30a.								
Sanibel Light	28.98	1:30a.	S-100	S-100	1:30a.	S-100	1:30a.		13	
Nakomis	28.60	3:30a.								
Sarasota	28.42									
Sarasota (Army)	28.46									
Egmont Key	28.65	5:00a.							18	
Tampa (WBAS)	28.55	6:00a.	NE-6	NE-56	5:10a.	NE-68		90-100	5	Calm center 6:30-7:00a.
Lakeland (Army)	28.62					E-81		86		
Lakeland (WBO)	28.68	6:30a.	E-45	E-49	5:35a.	E-57	5:38a.		3	
Lakeland (WBAS)	28.67					E-57	5:30a.	78		
Moorehaven	29.32	5:30a.	SE-62	SE-62	5:30a.					
Okeechobee				SE-70						
W. Palm Beach	29.47	7:00a.		SE-61						
Jupiter Light	29.46	5:00a.	SE-46	SE-47	1:00a.				18	
Cape Canaveral	29.24	1:00p.	S-54	SE-60	7:00a.				30	

STATION AND DATE	LOWEST PRESSURE (inches)	TIME OF LOWEST PRESSURE	WIND DIR. & SPEED AT TIME OF LOWEST PRESSURE mph	5-MIN. MAX. WIND DIRECTION AND SPEED mph	TIME	1-MIN. MAX. WIND DIRECTION AND SPEED mph	TIME	PEAK GUSTS mph	DURATION OF GALES (39 MPH OR HIGHER) HRS.	MISC. DATA
Orlando (WBO)	28.82	8:30a.	ESE-62			SSE-82	10:05a.	108		
Orlando (Army)	28.93	8:30a.	SE-41			SE-60	7:30a.	80	6	
Anclote Light	29.00	7:00a.	NW-47			NW-57	12:00 Noon		14	
Dunnellon	28.85	10:35a.	NNE-60			NNE-60	10:30a.	80		
Cedar Key	29.27	10:30a.								
St. Marks	29.49	3:00p.	N-30			N-30	1:00p.			
Tallahassee	29.52	2:30p.				NNE-35	11:17a.	45		
Ponce De Leon Light	29.15	1:00p.	SE-40	E-52	1:00a.				24	
Ocala										Calm center 10:30a-2:00p.
St. Augustine	29.00	2:00p.	30	SE-84	11:02a.				12	
Jacksonville NAS	28.92	3:00p.				NE-86	8:29a.			
Jacksonville WBO	28.94	4:00p.	10	NE-41	9:02a.	NE-46	8:45a.	60		Calm center 1:30-5:00p.
Jacksonville WBAS	28.96	4:20p.				NE-65	9:30a & 1:30p.	81		
Brunswick, Ga.	28.94					63				
Oct. 20:										
Savannah, Ga.	29.15	12:55a.		42		51		80		Calm center 9:00p-12:55a.


PATH OF HURRICANE ACROSS FLORIDA, OCTOBER 18-19, 1944
EXTREMES OF PRESSURE AND WIND
29.5
29.0
29.0
Tallahassee
NNE 35 mph 29.52 in
WBAS
28.96 in.
NE 66 mph
Calm Center 2:00p- 4:00p
Jacksonville
NAS
28.92 in.
86 mph
WBO
28.94 in.
NE 46 mph
Tide: River +5.0 ft; Beach +12 ft
St. Marks
29.53 in.
N 30 mph
St. Augustine
29.00 in
SE 84 mph
29.5
Cedar key
29.27 in.
Ocala
Calm Center 10:30a-2:00p
Ponce de Leon L.H
29.15 in
E 52 mph
Dunnellon
28.85 in
NNE 60 mph
Orlando
28.82 in.
SSE 82 mph
Cape Canaveral L.H.
29.24 in.
SE 60 mph
Anclote L.H.
29.00 in.
NW 57 mph
Lakeland
28.68 in.
E 57 mph
E 81 mph (ARMY)
Tampa
28.55 in.
ENE 88 mph
Calm Center 6:36a - 7:41a
TIDE 2.1
29.5
Egmont Key L.H.
28.65 in.
Sarasota
28.42 in.
TIDE 3.4
Okeechobee
SE 70 mph
Jupiter L.H.
29.47 in
SE 47 mph
Moorehaven
29.32 in.
SE 62 mph
S. Boca Grande
28.58 in.
West Palm Beach
29.47 in.
SE 61 mph
Ft. Myers
29.05 in.
TIDE 4.1
Sanibel L.H.
28.98 in.
S 100 mph
Tide. +7.0 ft.
Hillsboro L.H.
29.48 in.
SE 70 mph
Naples
29.12 in.
Tide: + 12 ft.
Miami WBO
29.49 in.
SSE 69 mph
Tide: +3.3 ft.
Everglades
29.35 in.
Tide: +8.2 ft.
Corysfort Reef L.H.
29.58 in.
SE 75 mph
Dry Tortugas
28.02 in.
E 120 mph
Calm Center 4:00a-6:00p
Key West
NAS
29.07 in.
SE 80 mph
WBO
29.11 in
SE 66 mph
Tide +3.0 ft. (?)
Sombrero L.H.
29.25 in.
SE 115 mph
29.0
28.5
28.5
29.0
29.5
31°
30°
29°
28°
27°
26°
25°
85°
84°
83°
82°
81°
80°


THE HURRICANE OF OCTOBER 12-20, 1944
Approximate area of hurricane force or near-hurricane force
Approximate area of gale force winds
20th a.m.
CHARLESTON
SAVANAH
19th p.m.
JACKSONVILLE
30 Deg.
ST. AUGUSTINE
ORLANDO
TAMPA
MIAMI
18th p.m.
NASSAU
25 Deg.
DRY TORTUGAS
KEY WEST
HAVANA
18th a.m.
p.m.
17th ISLE OF PINES
17th a.m.
16th p.m.
20 Deg.
GRAND CAYMAN
16th a.m.
p.m.
p.m.
15th p.m.
14 a.m.
p.m.
13th a.m.
SWAN ISLAND
12th p.m.
12th a.m.
85 Deg.
80 Deg.
15 Deg.