

HURRICANE BELLE

ANTHONY J. LAURO

Hurricane Belle was first noted as the 20th tropical storm system of the season on July 28, 1976 off the northwest coast of Africa. It reached the mid-Atlantic area on July 31st.

The storm traveled across the Atlantic at a little more than 20 knots. It then moved northwestward and slowed down, reaching a position just east of the northern Bahamas on August 5th. The diameter of the storm at this time measured three to four hundred miles. Early on August 6th, the surface circulation was defined to upgrade the system to a tropical depression with maximum surface winds of 25 knots.

Intensification of this system was rather steady from August 6th through August 9th, when maximum sustained wind speed was estimated at 105 knots. At this time the storm was classified as a full hurricane.

While Belle was a tropical depression and during her first few hours as a tropical storm, her position remained about 250 nautical miles east northeast of Nassau in the Bahamas. Soon after reaching tropical storm intensity, she accelerated toward the northeast and on August 8th started northward. (See track chart below.) This direction of motion continued for the next two days during which time her forward speed increased to between 20 and 25 knots.

Finally, landfall was made early on August 10th (0100 EDT) on the south coast of Long Island in the vicinity of Jones Beach State Park, Nassau County.

The storm moved northward across Long Island, then over Long Island Sound, reaching the Connecticut coast near Bridgeport. Her course continued across west central Massachusetts into southwest New Hampshire, and finally northeastward into western Maine. During this later period, over New Hampshire and Maine, tropical characteristics were lost.

The storm reached maximum intensity early on August 9th and was weakening as it approached landfall. Estimated maximum sustained winds at landfall were 65 knots and minimum sea level pressure was up near 980 millibars. Thus, as Belle neared land it decreased in intensity from a Category 3 major hurricane to a minimal hurricane during the 24 hours before landfall.

One of the reasons for this significant weakening is due to the fact that Belle's northward motion remained at speeds of less than 25 knots. This allowed for more time spent over the colder waters of the Atlantic Ocean north of the Gulf Stream which veers eastward away from the coast north of Cape Hatteras, North Carolina. Most of the major storms that have affected the northeastern United States have accelerated to speeds considerably higher than Belle and therefore did not have as much time over the water as did Belle.

On the night of August 9/10 the author, along with Bob Smart and Paul Lehman, spent anxious hours watching the tide creep over the top of my dock in Amity Harbor, located due north of the Jones Beach barrier strip. Bob Smart went out in the yard at about 0100 and reported that the rain had stopped and a full moon was out. We were then in the eye of the hurricane, and fearful of being trapped by either high water or falling trees, we left to see what we could see.

The bridge over Great South Bay was closed so we then went to see what was happening at the Shinnecock Inlet. On Sunrise Highway, the main south shore artery, we saw several birds sitting on the road, in the rain, which flew up at the approach of our car. Since it was dark and we only saw the birds fly up in the headlights we could not identify them to species but we could say that one was a "peep" and others appeared to have the configuration of terns.

When we got to the Shinnecock Inlet the bridge leading to the barrier beach was also closed, so we then proceeded to Mecox Bay to await the dawn. No unusual sightings of birds were made and we then decided to try Montauk. At Montauk hundreds of Common Terns and Herring Gulls were sitting on the beach below the lighthouse but there were no exotics in sight.

Hoping that the bridge to the Shinnecock Inlet would now be open, we returned at about 1300. While directly over the low bridge, Bob Smart identified a Wilson's Storm-petrel and immediately after that we saw 10 to 12 Cory's Shearwaters sitting in the water, inside the bay, 300 feet west of the bridge.

At the Shinnecock Inlet, we saw several Leach's Storm-petrels flying off the ocean, up the inlet and into Shinnecock Bay. The winds at that time were from the southwest at 30 to 40 mph.

Heading westward on Dune Road we met Paul Buckley who led us to a bulkhead on the bay side of the road and showed us an immature Bridled Tern he had just found. The bird was surface feeding with several Common Terns.

We were unable to get to the Moriches Inlet area because the road was closed, so we returned to the Captree-Jones Beach area. We were amazed at the incredible numbers of Laughing Gulls flying along the barrier beach, all heading in a westerly direction. They kept coming until nightfall and several thousand must have passed by then. No other unusual sightings were made and upon due consideration of what we had witnessed throughout the day, we concluded that all the unusual sightings had been concentrated in the eastern Moriches Bay and Shinnecock Bay which lie east of the passage of the hurricane.

One final note of interest: without exception the hurricane had flattened the beach sand on the ocean side from Jones Inlet to the Shinnecock Inlet to the consistency and appearance of concrete. From the top of the barrier dunes to the sea, the beach stretched to the horizon east and west unfurrowed and unmarked.

SIGHTINGS OF UNUSUAL BIRDS
IN THE METROPOLITAN AREA
ATTRIBUTED TO HURRICANE BELLE

AUGUST 10

Shinnecock Bay: 15 Cory's Shearwaters, 1 Greater Shearwater, 6 Leach's Storm-petrels, 1 Wilson's Storm-petrel (mob), 1 Sandwich Tern (Barbara Spencer, Barbara Connally), 1 Bridled Tern (Paul Buckley)

Bellport Bay: near mouth of Carmans River: 1 black and white shearwater, 29 Leach's Storm-petrels (W. Graves)

Jones Inlet: 1 Caspian Tern (T. Davis), 1 Avocet (Guy Tudor *et al.*)

Croton Point: 1 Adult Yellow-nosed Albatross (B. Weissman, B. Howe)

Smith Point Park, Fire Island: 100+ Wilson's Storm-petrels, 2 Northern Phalaropes (S. Kontos)

Shark River Inlet, N.J.: 1 Adult **Sooty Tern** sitting on buoy (R. Ryan)

Hackensack Meadows, N.J.: 2 possible **Bridled Terns** flying over N.J. Tpke. (S. Stepinoff)

AUGUST 11

Shinnecock Bay: 5 Cory's Shearwaters, 4 Leach's Storm-petrels (mob)

Moriches Inlet: 1 Adult **Sandwich Tern** (R. O. Paxton)

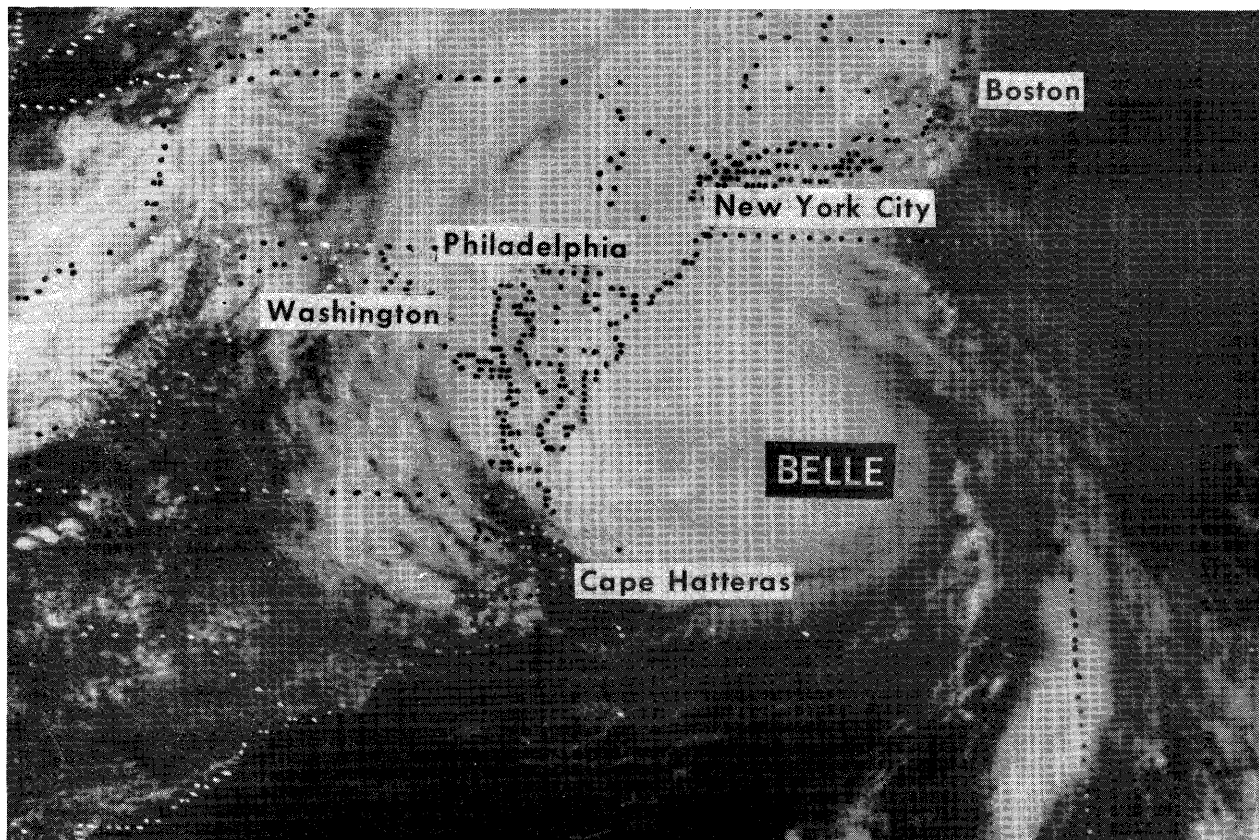
Milford Point, Connecticut: **White-faced Frigate Petrel** (*Pelagodroma marina*), found dead on beach, specimen to Miley Bull at Connecticut Audubon Society.

I wish to thank Tom Davis for the above list of sightings and also thank the Associated Press for the photograph of Hurricane Belle and the National Hurricane Center in Miami for the technical description and track of the storm.

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ABOUT THE AUTHOR

Tony Lauro is already known to the readers of *The Kingbird* as the Co-editor of Region 10. He is in the general contracting business. Tony maintains a very active banding station in the John F. Kennedy Memorial Wildlife Sanctuary in the Town of Oyster Bay. He has been involved in a long-term study of the wintering populations of Yellow-rumped Warblers, among other projects. Among his affiliations are the Linnaean Society of New York and the Eastern Bird Banding Association. One unique point about Tony Lauro is that he is rarely seen in the field unless accompanied by his daughter Brook, making for the only father-daughter birdwatching team known to the editors.



Satellite cloud picture recorded at 4:30 p.m. EDT shows Hurricane Belle about 150 miles south of New York City.
—Wide World Photos

TRACK CHART OF HURRICANE BELLE

DATE	TIME EDT	POSITION LAT. LONG.	GEOGRAPHIC LOCATION	WIND (Knots)	CLASSIFICATION
8/6	0200	26.0 72.8	250 n.m. ene of the Bahamas	25	Tropical Depression
	0800	26.3 73.0		25	
	1400	26.0 73.4		30	
8/7	2000	25.6 73.2		40	Tropical Storm
	0200	26.0 73.2		45	
	0800	26.2 73.7		55	
	1400	26.6 74.2		70	
8/8	2000	26.9 74.6	250 n.m. ese of Sea Island, Georgia	80	Hurricane
	0200	27.4 75.1		90	
	0800	28.1 75.1		95	
	1400	29.5 75.3		100	
8/9	2000	30.9 75.3		105	
	0200	32.5 75.2		105	
	0800	34.4 74.7		95	
	1400	36.6 74.2		90	
8/10	2000	38.8 73.8	45 n.m. e of Cape May, N.J.	80	Tropical Storm
	0200	41.0 73.2	10 n.m. s of Bridgeport, Conn.	60	
	0800	42.6 72.4	Northern Massachusetts	35	
	1400	Northern New Hampshire Southwest Maine			